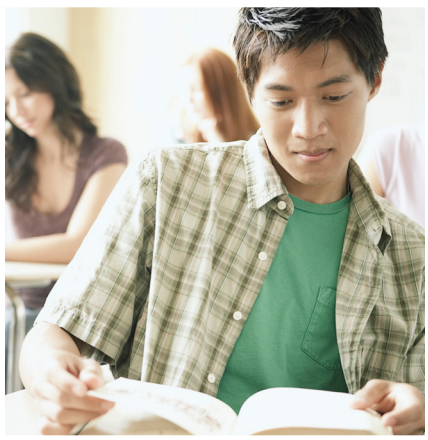
South Carolina College & Career Readiness Toolkit



Prepared by the Educational Policy Improvement Center on Behalf of the Center of Excellence for College and Career Readiness

About the Educational Policy Improvement Center (EPIC)

EPIC's mission is to improve educational policy and practice to increase student success, particularly for students historically underserved by public schools. EPIC conducts a range of policy-related research studies and develops practical tools and techniques to support an improvement in college and career readiness for all students. In 2007, EPIC began working with the South Carolina Commission on Higher Education to establish the South Carolina Course Alignment Project and continues to collaborate with educators in the state to this day.

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About the Center of Excellence

In 2014, the Center of Excellence for College and Career Readiness (the Center) was established at Francis Marion University in Florence, South Carolina. The Center is a professional development initiative funded by the South Carolina Commission on Higher Education under the auspices of the Education Improvement Act (EIA) Centers of Excellence Grant Program and is designed to work with teachers and students to improve students' readiness for postsecondary opportunities.

In its inaugural year, the Center partnered closely with teachers, students, and administrators from two local school districts to offer a special readiness course for teachers and a summer readiness academy for rising ninth graders. The Center will provide expanded professional development opportunities to teachers throughout the state, leverage and expand the work of the South Carolina Course Alignment Project, and serve to coordinate and facilitate relationships among P–20 initiatives throughout the state. The Center is codirected by Dr. Meredith Love and Dr. Matthew Nelson, both from the English Department at Francis Marion University.

Dr. Meredith Love is a Professor of English at Francis Marion University. She has overseen curriculum development, assessment, and professional development of the university's first-year composition program for the past ten years. Additionally, she has codirected a GEAR UP Summer Institute, developed the Connections mentoring program in Marlboro County, and coordinated the university's University Life 100, a program that helps freshmen develop skills, strategies, and study habits that will enhance their ability to succeed in their degree programs. Dr. Love has been an active participant in the SC Course Alignment Project since 2011.

Dr. Matthew Nelson is an Associate Professor of English at Francis Marion University. He serves as Director of the Swamp Fox Writing Project, a local affiliate of the National Writing Project professional development network. As part of this work, he has planned and facilitated professional development workshops for teachers from across grade levels and subject areas, with a focus on helping them become better teachers of writing. Dr. Nelson has served as President of the South Carolina Council of Teachers of English, and he has been an active participant in the SC Course Alignment Project since 2008.

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SC EDUCATION OVERSIGHT COMMITTEE

Reporting facts. Measuring change. Promoting progress.

In South Carolina, earning a high school diploma is no longer the end or focus of our public education system. Instead, it is just the beginning.

In Fiscal Year 2014-15, the General Assembly of South Carolina funded, the Governor approved, and the Commission on Higher Education awarded Francis Marion University with the Center of Excellence for College and Career Readiness. The statutory goal of the Center is to transform the public education system to "create a college-going and career readiness culture that prepares students for postsecondary education and the world of work." Clearly, the Center of Excellence for College and Career Readiness is critical for educators who lead and students who learn. But, in addition, college and career readiness in South Carolina represents a renewed focus on the importance of partnerships between all postsecondary institutions and the business and industry of our state.

The Education Oversight Committee (EOC) who recommended the creation of the Center of College and Career Readiness hopes that this toolkit will generate conversations in communities across South Carolina about the importance of preparing all our students for college, careers, and citizenship in the 21st century!

Sincerely,

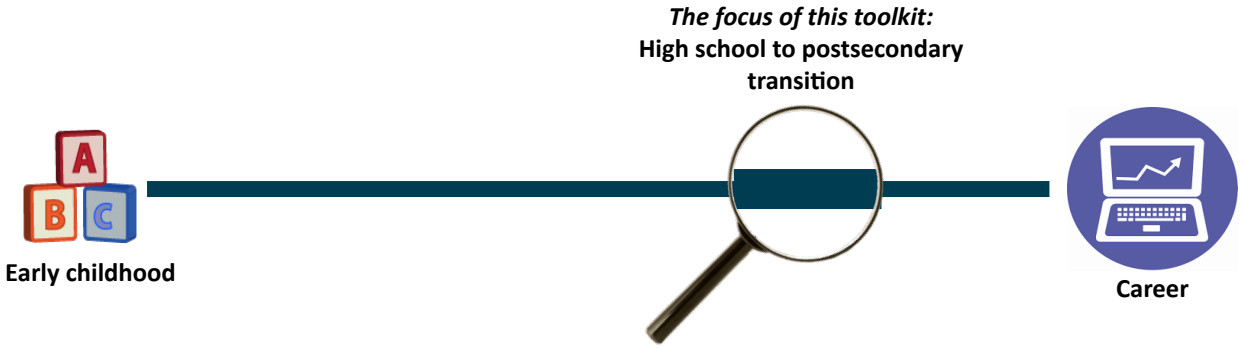
Melanie Barton

Melanie D. Barton
Executive Director

Introduction

The South Carolina College and Career Readiness Toolkit was designed to foster conversation among leaders from school districts and higher education about what it means to be college and career ready, and to help develop action plans for new and strengthened partnerships. The Center of Excellence for College and Career Readiness (the Center) worked with the Educational Policy Improvement Center (EPIC) to develop these materials in support of statewide comprehensive planning efforts.

The Center is working to improve coordination along the continuum of education from preschool/early childhood into college and career in order to increase educational attainment. Every transition along the continuum from preschool to kindergarten through high school to college and career is crucial for student success—each lays the necessary foundation for the successful next steps in one's journey. The intention of this toolkit is to focus on the transition at the latter end of the continuum—from high school into postsecondary education and careers.



This toolkit provides information, data, and strategies for educators and communities to help improve the college and career readiness of their students. Specifically, the toolkit is designed to

- raise awareness about key issues influencing college and career readiness;
- encourage data-driven decision making;
- build partnerships among secondary, postsecondary, and workforce professionals; and
- support successful, comprehensive action planning to make measurable improvements in students' college and career success.

In this toolkit, *postsecondary* refers to any formal program of study an individual pursues for additional instruction beyond high school, including two- or four-year degree programs, certificate or licensure programs, apprenticeships, and military programs.

Why Is Improving College and Career Readiness Important?

- By the year 2020, 65% of all jobs in the United States will require some postsecondary training beyond high school.[1] For all students to remain competitive and for South Carolina to meet its future workforce needs, more students must graduate ready for postsecondary education.
- Historically, secondary and postsecondary educational systems have operated independently, creating gaps and misalignment between the two systems.
- The proportion of students going on to postsecondary education has steadily increased over the past 100 years and will likely continue to increase.
- Students in the U.S. must negotiate the world's most complex system of admission to higher education.
- Today's young people will need to be better educated and prepared as the U.S. continues to move toward a knowledge-based economic model.
- National educational policy is emphasizing college and career readiness in addition to basic skills instruction.
- Nearly four out of five jobs eliminated by the recession were held by workers with a high school diploma or less.[2]
- South Carolina's development of English Language Arts (ELA) and mathematics standards in 2015 provides a timely opportunity to implement data-driven college and career readiness initiatives.
- Despite recent improvements, there remains an achievement gap among students in South Carolina. For example, in 2014, 12% of white students received a score of *F* or *failing* on the Biology 1/ Applied Biology 2 South Carolina End-of-Course Examination, while 35.3% of African American students scored in this lowest performance category.[3] This achievement gap directly affects college indicators, such as degree attainment. In 2013, 23.2% of African American adults in South Carolina aged 25–64 held an associate degree or higher, as compared to 41.5% of their white counterparts.[4]

How can I use this information?

We are all facing this challenge together. Students, educators, families, community leaders, employers, and more—everyone has a contribution to make in building successful educational pathways that span early childhood to adulthood. You can use these talking points to avoid the "blame game" that too often surfaces when communities discuss challenges in schools and the education system. By moving away from fault-finding and instead emphasizing the need for shared responsibility, you can help shape constructive conversations that pave the way for student and community success.

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1 Carnevale, A., Smith, N., & Strohl, J. (2013). *Recovery: Job growth and education requirements through 202*0. Retrieved from https://cew.georgetown.edu/wp-content/uploads/2014/11/Recovery2020.ES_.Web_.pdf

2 Carnevale, A. P., Jayasundera, T., & Cheah, B. (2012). *The college advantage: Weathering the economic storm*. Washington, DC: Georgetown Public Policy Institute, Center on Education and the Workforce.

3 South Carolina Department of Education. (2014). 2014 high school assessment program test scores. Retrieved from http://ed.sc.gov/data/hsap

4 Lumina Foundation. (2015). *A stronger nation through higher education*. Retrieved from http://www.luminafoundation.org/files/publications/stronger_nation/2015/south-carolina-brief-2015.pdf

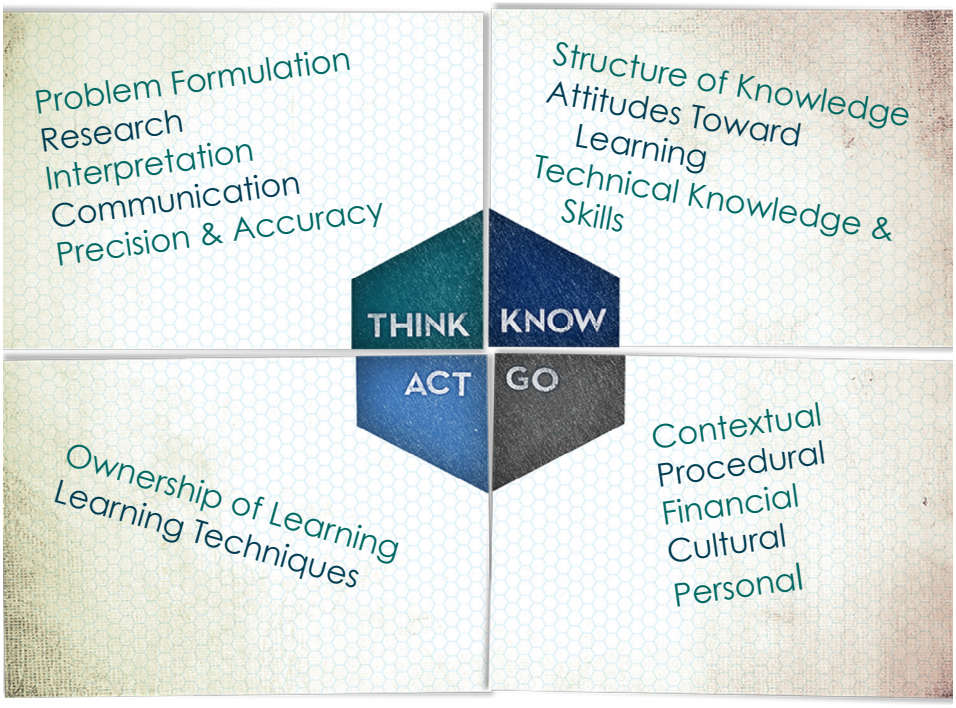
What Is College and Career Readiness?

The measure of a sufficiently prepared student is one who has the knowledge and skills to keep learning beyond secondary school, first in formal settings and then in the workplace throughout their careers, so that they are capable of adapting to unpredictable changes and new economic conditions and opportunities.[5] A crucial distinction is that college eligibility is not the same as college readiness. Historically, many high schools have emphasized eligibility—getting students accepted into college, with a heavy focus on meeting criteria for admission.

College and career preparation extends beyond just eligibility and emphasizes what students need to know in order to graduate from a postsecondary program. College and career readiness is a multifaceted concept that includes factors both internal and external to the school environment.

Based on extensive research, Dr. David T. Conley and his colleagues at EPIC developed an operational definition of college and career readiness that goes beyond course titles, grades, and test scores.[6] This model, termed the *Four Keys to College and Career Readiness*, includes Key Cognitive Strategies (THINK), Key Content Knowledge (KNOW), Key Learning Skills and Techniques (ACT), and Key Transition Knowledge and Skills (GO). Although there are certainly other factors that influence college and career readiness, these are the ones that can be most directly affected by schools and for which schools can be reasonably expected to take primary responsibility.[7]

Four Keys to College and Career Readiness



How can I use this information?

Share this definition with secondary and postsecondary colleagues. Use the Four Keys as a framework to discuss and guide conversations about teaching. Sharing common language and a framework is critical to effective, comprehensive planning. Without a comprehensive approach, efforts to prepare students for their postsecondary experiences may be fragmented, duplicative, or otherwise insufficient.

5 Conley, D. T. (2013). *Getting ready for college, careers, and the Common Core: What every educator needs to know*. San Francisco, CA: Jossey-Bass.
6 Conley, D. T. (2007). *Redefining college readiness* (Vol. 3.). Eugene, OR: Educational Policy Improvement Center.
7 Conley, D. T. (2013). *Getting ready for college, careers, and the Common Core: What every educator needs to know*. San Francisco, CA: Jossey-Bass.

The Four Keys to College and Career Readiness

Key Cognitive Strategies

Problem Formulation
- Students develop hypotheses independently, solve problems that have more than one right response, and select strategies to solve a problem from among multiple possibilities.

Research
- Students collect information from multiple sources and evaluate the quality of the sources.

Interpretation
- Students organize, analyze, and evaluate information adeptly.

Communication
- Students develop products through a variety of media, with audience in mind.

Precision and Accuracy
- Students complete multiple drafts and review work for high quality.
- Students apply subject-specific rules for precision and accuracy.

Key Content Knowledge

Structure of Knowledge
- Students develop ways of knowing that help them retain information and generate ideas.
- Students apply foundational knowledge in novel and non-routine ways.

Attitudes Toward Learning
- Students approach learning content knowledge with an effort-based mindset.

Technical Knowledge and Skills
- Students can apply foundational knowledge in other disciplines.

Key Learning Skills and Techniques

Ownership of Learning
- Students connect assignments to their interests.
- Students seek help when needed.
- Students set and pursue goals effectively.
- Students think about the learning strategies they are using.
- Students accurately assess their own learning.
- Students persist when given challenging tasks.

Learning Techniques
- Students manage their time.
- Students prepare and study efficiently for tests, alone and in groups.
- Students take notes using a variety of formats.
- Students consciously monitor their learning effectiveness.
- Students use a variety of strategies to memorize key material.
- Students use technology effectively.
- Students read strategically.
- Students work collaboratively with diverse partners.
- Students consciously monitor their learning effectiveness.

Key Transition Knowledge and Skills

Contextual
- Students engage in planning for the future by aligning college and career choices to their interests and aspirations.

Procedural
- Students know about college and career options and have the knowledge necessary to apply to programs that align with their aspirations.

Financial
- Students are familiar with the admission process for college and financial aid options, and the cost differences of community colleges, state universities, and private institutions.

Cultural
- Students are aware of the benefits they will gain from their college and career pathways.

Personal
- Students know how to advocate for themselves proactively and strategically within organizations—both in colleges and their careers.

The Four Keys in the Classroom

Secondary instructors can use the following examples to adjust their assignments and classroom practices to align more closely with college and career readiness expectations. For example, a college- and career-ready student can

- read with understanding a range of nonfiction publications, textbooks, and technical materials;
- independently complete an extended assignment, such as a three- to five-page research paper structured along a cogent, coherent line of reasoning; and
- create and maintain a personal schedule that includes a prioritized “to do” list.

Profile of a South Carolina Graduate

The Profile of the South Carolina Graduate was developed through a partnership between key state business and education leaders to help shape policy and curricular decisions. The framework that supports the profile of a South Carolina graduate is vital to helping our state stay competitive in today's global economy; it addresses the need and solution for a sustainable, educated, and qualified workforce.

World Class Knowledge

- Rigorous standards in language arts and math for career and college readiness
- Multiple languages, science, technology, engineering, mathematics (STEM), arts, and social sciences

World Class Skills

- Creativity and innovation
- Critical thinking and problem solving
- Collaboration and teamwork
- Communication, information, media, and technology
- Knowing how to learn

Life and Career Characteristics

- Integrity
- Self-direction
- Global perspective
- Work ethic
- Interpersonal skills

transformSC tomorrow won't wait for our students

South Carolina Council On Competitiveness

Spotlight on Cougar New Tech Entrepreneurial Academy

Cougar New Tech Entrepreneurial Academy (CNT) is a grant-funded high school in Walterboro, SC, that has doubled in size and success since its inception in 2013. Not only has the school advanced the academic accomplishments of students, but it also sent students to statewide and national conferences, provided college courses on campus, and pioneered a schoolwide literacy program. Much of the school's success can be attributed to focusing on elements included in the Profile of a South Carolina Graduate.

Conversation Point

Look at the Four Keys and the Profile of a South Carolina Graduate. What similarities and crossovers do you see between the two frameworks? What parts of the two models are different?

CNT is a progressive school where learners use technology to complete group projects as they would in a professional work environment. Courses are taught in double classrooms by pairs of facilitators who integrate subject content to create projects that are both standards-based and relevant to students' lives. Dedicated to student-centered learning, CNT instills self-direction through real-world project-based learning focused on genuine global and community issues, which fosters creativity, critical thinking, and collaboration. To evaluate students, CNT adopted New Tech's five learning outcomes: collaboration, written communication, oral communication, knowledge and thinking, and agency. While written/oral communication and knowledge seem an obvious evaluation for a student, agency and collaboration offer a more holistic approach to education. Collaboration (the ability to be a productive member of diverse teams) and agency (the confident application of effort to meet challenges and use obstacles to grow) cultivate college- and career-ready classroom citizens. As in the real world, students must be willing to work with diverse personalities in order to succeed and solve important issues, which helps students develop strong interpersonal skills.

Mini Diagnostic

Completing the Mini Diagnostic activity will generate a brief but actionable report that summarizes where a high school falls in terms of postsecondary student preparation.

Answer Key

1 = Not at all like my school 2 = A little like my school 3 = Somewhat like my school
4 = A lot like my school 5 = Very much like my school DK = Don't know

Key Cognitive Strategies (THINK)

Educators in my school:	1	2	3	4	5	DK
intentionally discuss or assign problems in class that have more than one right answer.	O	O	O	O	O	O
expect students to use evidence to support opinions.	O	O	O	O	O	O
encourage students to review their work before turning it in so that they catch common mistakes, omissions and errors.	O	O	O	O	O	O
link course content with problems or issues in other subjects or beyond the classroom.	O	O	O	O	O	O
emphasize multiple modes of communication, including speaking and listening.	O	O	O	O	O	O
require a research project that includes collecting evidence, constructing an argument, and rewriting at least one draft.	O	O	O	O	O	O

TOTAL SCORE FOR KEY COGNITIVE STRATEGIES _____

Key Content Knowledge (KNOW)

Classes in my school:	1	2	3	4	5	DK
have a curriculum that emphasizes the structure of knowledge in each subject area.	O	O	O	O	O	O
emphasize the value of academic achievement.	O	O	O	O	O	O
have real world applications of content knowledge.	O	O	O	O	O	O
have syllabi that identify explicitly prerequisite knowledge and skills necessary for success in each course.	O	O	O	O	O	O
emphasize multiple modes of writing including expository, descriptive, and analytic, in addition to narrative writing.	O	O	O	O	O	O
emphasize individual effort over aptitude.	O	O	O	O	O	O

TOTAL SCORE FOR KEY CONTENT KNOWLEDGE _____

Answer Key

1 = Not at all like my school 2 = A little like my school 3 = Somewhat like my school
4 = A lot like my school 5 = Very much like my school DK = Don't know

Key Learning Skills and Techniques (ACT)

Students in my school:	1	2	3	4	5	DK
are aware of how they learn successfully.	O	O	O	O	O	O
seek help when they need it.	O	O	O	O	O	O
identify possible strategies for solving problems rather than expecting teachers to give them the strategy or answer.	O	O	O	O	O	O
know the expectations in each course for tests, assessments, and assignments.	O	O	O	O	O	O
learn specific strategies for memorizing and retaining key facts, dates, vocabulary, and terminology.	O	O	O	O	O	O
set goals for themselves and create plans for how they are going to achieve them.	O	O	O	O	O	O

TOTAL SCORE FOR KEY LEARNING SKILLS _____

Key Transition Knowledge and Skills (GO)

Adults in my school:	1	2	3	4	5	DK
have a publicly stated vision or goal to promote college and career readiness for all students.	O	O	O	O	O	O
see that all students complete a practice college application by tenth grade.	O	O	O	O	O	O
begin providing college financial information to all students and parents immediately upon enrollment and yearly thereafter.	O	O	O	O	O	O
encourage teachers to invite speakers who help students learn about careers and workplace expectations.	O	O	O	O	O	O
publicize college acceptances and career choices of seniors.	O	O	O	O	O	O
emphasize going to college by encouraging staff to decorate public spaces in ways that support college-going.	O	O	O	O	O	O

TOTAL SCORE FOR KEY TRANSITION KNOWLEDGE _____

TOTAL OVERALL SCORE: _____

Score Key

120–97	=	HIGHLY COLLEGE AND CAREER READY
96–73	=	STRONG, WITH ROOM FOR IMPROVEMENT
72-49	=	NEEDS IMPROVEMENT
< 49	=	CHALLENGED

Mapping Your Context

Think about the current college and career readiness practices, initiatives, and efforts in your local educational setting. Map these efforts to the Four Keys categories: THINK, KNOW, ACT, and GO.

College and Career Readiness: Same or Different?

Throughout most of the 20th century, college readiness and career readiness were more or less separate, and what we now call career readiness took the form of vocational education. Under the assumption that the two required different skills, vocational students were mostly separated from college-bound students in high school.[8] While each distinct career pathway and college degree requires knowledge, skills, and abilities that are unique to that area, emerging research identifies a foundational set of knowledge and skills that all high school graduates need to be prepared to succeed beyond high school, regardless of the setting. In particular, the evidence suggests that graduates need not only a solid grounding in the content knowledge specified in college and career readiness standards, but also key thinking and learning skills and strategies that are critical for collegiate and workplace success.[9]

The National Association of Colleges and Employers (NACE) recently conducted a survey asking employers to rate the most important skills or qualities for job candidates. Survey participants rated the ability to "work in a team structure," "make decisions and solve problems," "plan, organize, and prioritize work," and "verbally communicate with persons inside and outside the organization" as the most important skills.[10] Other surveys show similar results, sometimes also including leadership, work ethic, and written communication skills. These skills identified by employers are also critical for success in any type of postsecondary learning environment. Postsecondary instructors at a range of two- and four-year institutions stress the importance of these same skills across subject areas and programs.

In short, although college readiness and career readiness are not exactly the same, they share many important elements. The goal is for high school graduates to be both college ready and career ready, enabling them to pursue any opportunity they desire. As explained by the Partnership for 21st Century Skills, "Employers, educators, and policymakers agree that the skills necessary for entering postsecondary education today are virtually the same skills necessary for success in the modern workplace. The results that matter apply to all students."[11]

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8 Conley, D. T., McGaughy, C. (2012). College and career readiness: same or different? *Educational Leadership, 69*(7), 28–32.

9 Conley, D. T., McGaughy, C., Cadigan, K., Forbes, J., & Young, B. (2009). *Validation study II: Alignment of the Texas College and Career Readiness Standards with entry-level career and technical education college courses at Texas postsecondary institutions*. Eugene, OR: Educational Policy Improvement Center.

10 National Association of College and Employers. (2013). Job outlook 2014: the candidate skills/qualities employers want. Retrieved from https://www.naceweb.org/

11 Partnership for 21st Century Skills. (2006). *State leaders action guide to 21st century skills: A new vision for education*. Retrieved from http://www.p21.org/storage/documents/stateleaders071906.pdf

Seven Principles of College and Career Readiness

In 2007, EPIC received a grant to study the programs and practices of high schools that demonstrated greater-than-expected success in preparing students for college and careers. Researchers participated in thorough site visits at a sample of 38 schools nationally, where they held interviews, conducted classroom observations, and gathered an extensive collection of documents. Based on what they learned from these visits, EPIC researchers synthesized seven principles that describe what successful educators and administrators do to prepare their students for college and career readiness.

1. Create and maintain a college and career readiness culture in the school.

2. Create a core academic program aligned with and leading to college readiness by the end of 12th grade.

3. Teach key self-management skills and academic behaviors and expect students to use them.

4. Make college and careers real by helping students manage the complexity of preparing for and applying to postsecondary education.

5. Create assignments and grading policies that more closely approximate college and career expectations each successive year of high school.

6. Make the senior year meaningful and appropriately challenging.

7. Build partnerships with and connections to postsecondary programs and institutions.

How can I use this information?

Faculty members, counselors, and administrators can use each principle to begin conversations about improving school performance. Postsecondary institutions should take particular note of Principle 7 and consider how they can contribute to such partnerships.

Principles in Practice

Principle 1. Create and maintain a culture of college and career readiness in the school.

"The mission of Dorman High School is to create 21st-century lifelong learners who are college, career, and citizenship ready, while providing a challenging, nurturing, and safe learning environment."

College and career readiness is at the root of Spartanburg County School District Six's philosophy. From elementary through high school, the district's mission is to prepare students for life after graduation. At the end of eighth grade, middle schoolers attend the high school's College Pep Rally. They sign a pledge to graduate on time and wear their "Class of 2019" bracelets with pride. The staff in District Six wants every student to understand that with hard work and the school's support their goals are possible.

Dorman High School is a union of five schools of study (including the School of Medicine and Human Services and the School of Law and Public Services), much like a small college. The dean of each school offers students the opportunity to participate in special programs, such as Mini Med schools, in cooperation with the local medical school; business courses through Junior Leadership that are taught by local business leaders; and internships in local enterprises.

The hub of Dorman's college and career culture is the C-wing building. This College, Career, and Fine Arts Center opened at the beginning of the 2014–2015 school year and is home to the college/career center, where students have access to career counselors, college admissions visitors, and other guest speakers. The building also houses the school store, where students in the Business and Accounting classes learn firsthand about the challenges of running a retail business as they are responsible for all aspects of the store. After paying expenses during the first year of operation, the store made a profit of $5,000.

Students at Dorman can take courses through the dual enrollment program, which has a partnership with three local colleges offering more than 33 sections during the 2014–2015 school year. Dorman awards college credits through this program, and several students have graduated with more than 60 hours of college credit before leaving high school. Project Lead the Way and STEM courses are also held in this building. There are even some arena-style classrooms that allow students to experience the kinds of lecture classes they may have at college. Dorman's diverse student population adds to the real-world experience students receive when attending the school. Having such a varied student population means that the school is fortunate to have a student body with a wealth of interests, talents, and abilities.

Dorman continues to receive positive feedback from students, parents, faculty, and the community as the school builds its college and career culture. Dorman is proud that education goes beyond the classroom curriculum and that its well-rounded students are expected to and should be allowed to have experiences in the community.

Principles in Practice

Principle 4. Make college and careers real by helping students manage the complexity of preparing for and applying to postsecondary education.

The South Carolina Commission on Higher Education has two statewide initiatives, College Application Month and College Goal SC, that help raise awareness around college access. High schools across the state host College Application Month between September and November to assist students with the college application process. The goal of College Application Month is to provide a forum for all South Carolina seniors to complete and submit college applications. Although much of the focus of the initiative is geared toward first-generation college students and students who may not otherwise apply to college, the program encourages participating high schools to include activities for all students, including freshmen, sophomores, juniors, and seniors who have already applied to college.

College Goal SC is a program that provides free information and assistance to students and families who are applying for financial aid for postsecondary education. College Goal SC helps students and families complete the Free Application for Federal Student Aid (FAFSA). This form is the first step to receiving federal aid and is a critical requirement for students who plan to pay for college with financial assistance. The sessions also provide advice from financial aid experts and share information regarding scholarship opportunities.

Principle 7. Build partnerships with and connections to postsecondary programs and institutions.

South Carolina Gaining Early Awareness and Readiness for Undergraduate Programs (SC GEAR UP) has teamed up with several technical colleges across the state to offer defined enrichment to GEAR UP students. This college prep enrichment program will provide a pre- and post-assessment along with an academic and workforce skills enrichment component, which will address student deficiencies and increase workforce readiness. The assessments will use the ACT Compass exam, which is a computer-based assessment that allows educators to evaluate student skills in reading, writing, English, and mathematics. This assessment is used to assist with student placement in appropriate courses and connects students with the resources they need to achieve academic success.

From this pre-assessment information, secondary and postsecondary instructors collaborate to build an enrichment program that infuses both high school state standards and college readiness. Teachers follow a curriculum and use a pacing guide during the course to stay focused and in sync with one another.

Current research indicates that students do not have the skills needed to be successful in college-level coursework and/or workforce training. The majority of jobs today are classified as “skilled,” meaning they need some level of training beyond the high school level. The college prep enrichment program will address these deficiencies and begin to prepare students for curriculum-based courses upon entering college. The data obtained from this program will be used to identify strategies that may be used in the future to prepare the GEAR UP students before the ACT and WorkKeys exam is administered in the 11th grade.

How to Use This Toolkit

Taking action to improve the college and career readiness of students can be exciting but challenging. Without a clear, comprehensive framework to guide the work, the action planning process can lack focus and coordination. The result is a piecemeal approach to college and career readiness, one that unintentionally leaves out subgroups of students or overlooks critical needs.

To avoid these problems, EPIC recommends a systemic approach to college and career readiness action planning, one that is outlined below and in the pages that follow. This approach prompts educators and stakeholders to take three steps that have emerged from our research: analyze, align, and partner. There are other elements that inform effective planning, but a plan that incorporates these three steps is likely to address many of the areas in which systems most often fall short in preparing students.

The Partner section contains Action Planning Templates, which are designed to guide you through comprehensive action planning. Each template represents a step in the planning process. These templates can be used to establish goals with new partners or to expand on previous planning efforts. Using a template mapped to the Four Keys to College and Career Readiness will help generate a comprehensive, evidence-based action plan.

ANALYZE

This section shows how to take a deep look at data guided by the Four Keys to College and Career Readiness. Working with data allows for more informed and targeted decision making and provides a baseline for measuring progress.

ALIGN

This section provides strategies for planning curriculum and instruction that build logically and continuously toward college and career readiness (vertical alignment). It also prompts educators to evaluate whether all students have the same opportunities to learn necessary content and skills regardless of which instructors they are assigned (horizontal alignment). For the purposes of comprehensive action planning, vertical and horizontal alignment strategies must address not only content knowledge but also appropriate cognitive demand and consistent student expectations. Not only do instructors need support to overcome gaps or duplication in the material, but they must also understand student performance levels necessary to meet postsecondary expectations.

PARTNER

This section shows how to use the results of analysis and alignment activities to improve high school–college connections. Without transparency and collaboration between educational professionals at all levels, comprehensive action planning for college and career readiness is impossible. The partnership examples contained in this toolkit can be creatively adapted and applied based on the priorities, resources, and relationships that may already exist.


Analyze

Navigating College and Career Readiness Data

This section includes important state and national data currently available to help analyze the level of college and career readiness in your community. Data were gathered from available sources that provide information on high school performance in college preparatory courses, high school completion, postsecondary participation, and career projections. The purpose is to highlight issues, use data to prioritize next steps for taking action, and measure progress toward meeting your community's goals.

Cluster	Indicator
High School Performance Indicators	
State Tests	End-of-Course Examination Program
Graduation	Graduation Rates
Advanced Coursework	Dual/Concurrent Enrollment Advanced Placement (AP) International Baccalaureate (IB) Diploma Programme
College Entrance Exams	SAT ACT
Course-Taking Patterns	South Carolina High School Courses and Requirements College Preparatory High School Course Prerequisites Career Pathway Program of Study
College Performance Indicators	
Developmental Education	Developmental Education Rates
Enrollment and Completion	Enrollment, Retention, and Completion Rates Degrees Awarded
Career Performance Indicators	
Career Preparedness	ACT WorkKeys
Career Opportunities	Employment by Education Level Median Income by Education Level South Carolina Jobs Requiring Higher Education Projected Education–Workforce Mismatch and Shortages

Important Considerations for Analyzing College and Career Readiness Data

Note that data currently available, particularly at the high school level, do not provide a comprehensive picture of college and career readiness. High school indicators included in this toolkit, such as the data on end-of-course and college entrance exams, primarily measure only the second key of the Four Keys to College and Career Readiness: Key Content Knowledge. The indicators included in this toolkit only serve as proxy measures for the other three dimensions of the Four Keys.

As you conduct your action planning, it is important to think about how to more accurately assess students and schools in terms of the other three keys: Key Cognitive Strategies, Key Learning Skills and Techniques, and Key Transition Knowledge and Skills. Although there is no one instrument that deeply measures all aspects of a Key, an approach that incorporates multiple types of assessments will provide the richest picture of where a community stands. For examples of how to measure these other three keys, please see the tools below.

- **CampusReady:** A web-based self-diagnostic tool that generates a school profile that analyzes college and career readiness across the Four Keys. Teachers, students, administrators, and counselors take the online diagnostic, which results in detailed schoolwide reports and recommended resources that allow middle and high schools to take immediate action to improve student performance. Students who complete the survey immediately receive an individualized report showing their readiness across the Four Keys. The Center of Excellence is currently supporting the use of CampusReady in several local South Carolina high schools. For more information about CampusReady, please visit http://www.epiconline.org/projects/campusready/

- **Mission Skills Assessment (MSA)**: The MSA is a web-based assessment that targets six skills: teamwork, creativity, ethics, resilience, curiosity, and time management. School-level reports are based on data from student surveys, teacher observations, and a suite of different multiple-choice question formats. Developed by the Educational Testing Service (ETS) in collaboration with the Independent School Data Exchange, the MSA is currently used in over 17,000 middle schools, including two in South Carolina. For more information about the Mission Skills Assessment, please visit http://indexgroups.org/msa/

- **Mindset Works**: Four web-based surveys allow educators to assess their current mindset, students' motivation, and the mindset within a classroom or school. Results of each survey describe the mindset or motivation level and identify areas for growth. In addition to these surveys, Mindset Works' Brainology curriculum includes a mindset assessment profile for middle and high school students. These and other resources help educators and students learn about growth mindset and how the brain functions to oversee learning. To access the surveys and more information about Mindset Works and the Brainology curriculum, please visit http://www.mindsetworks.com/assess

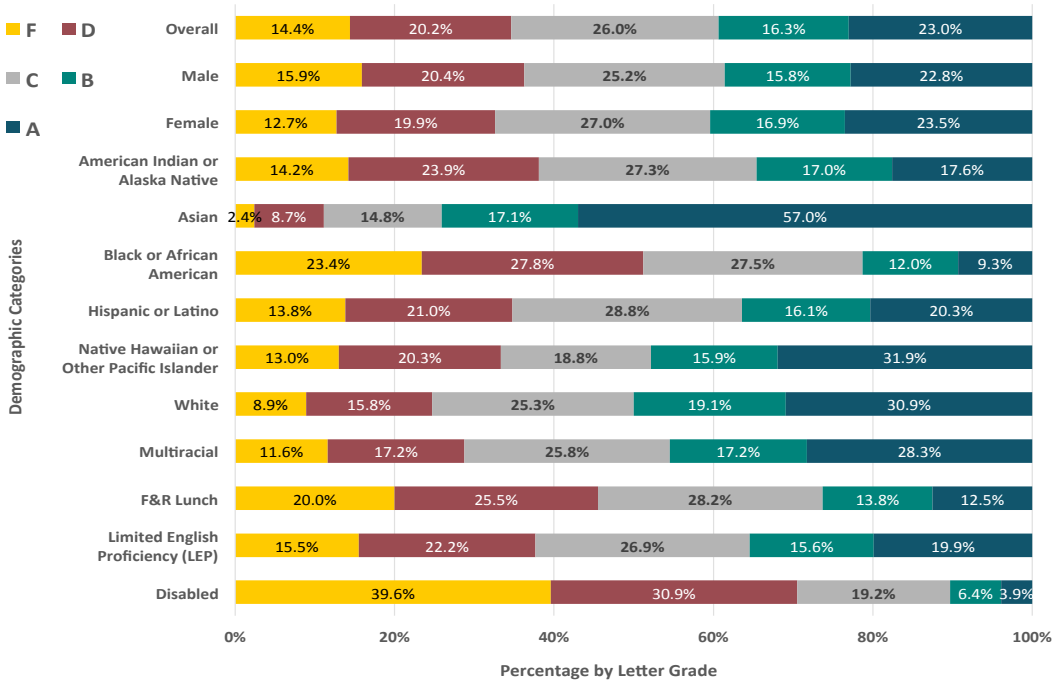
End-of-Course Examination Program (EOCEP)

The Educational Accountability Act of 1998 required the development of end-of-course examinations in gateway or benchmark courses in South Carolina. The End-of-Course Examination Program (EOCEP)[12, 13] provides tests in high school core academic courses and in middle school courses taken for high school credit. Tests are currently administered in four gateway or benchmark courses: English 1, Biology 1/Applied Biology 2, Algebra 1/Mathematics for the Technologies 2, and U.S. History and the Constitution. Students receive letter grades of *A*, *B*, *C*, *D*, or *F* on the exams. A score of *F* is considered *not passing*.

A (blue) = Percentage of students scoring 93–100%
B (green) = Percentage of students scoring 85–92%
C (gray) = Percentage of students scoring 77–84%
D (red) = Percentage of students scoring 70–76%
F (yellow) = Percentage of students scoring 0–69%

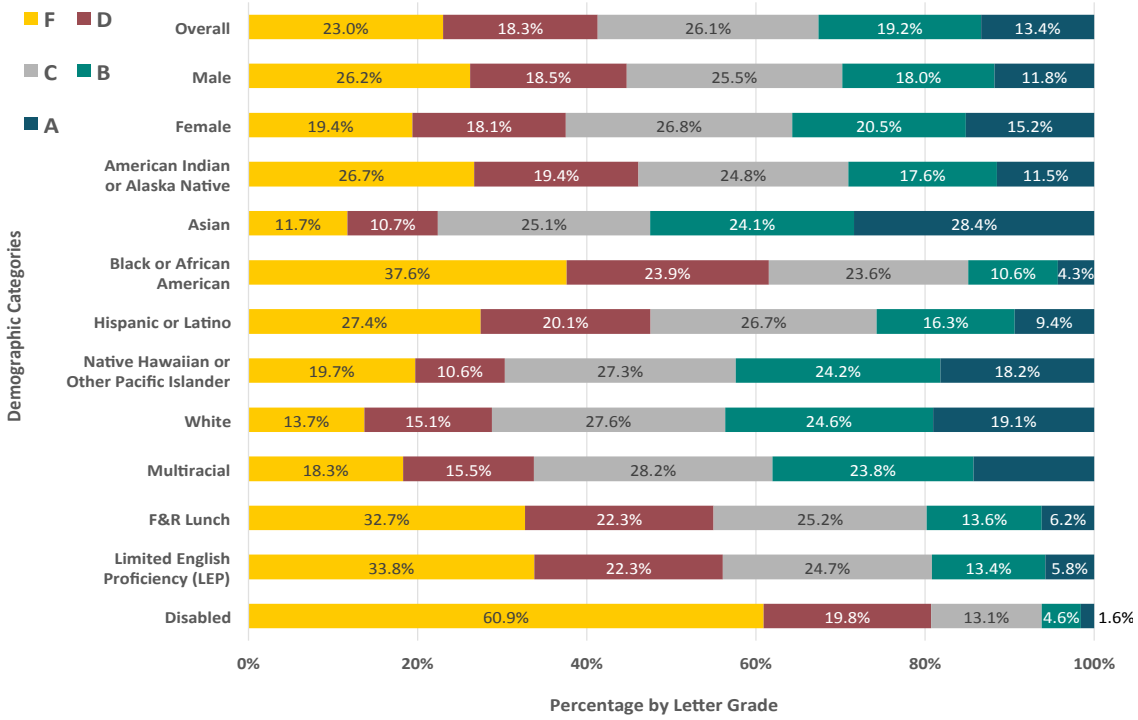
The EOCEP test accounts for 20 percent of each student's final grade in the related course and all students must pass a high school credit course in science for which there is a state end-of-course assessment during their high school career. EOCEP results are used in calculating middle and high school Absolute Ratings and Growth Ratings.

2014 State Results: Algebra 1/Mathematics for the Technologies 2

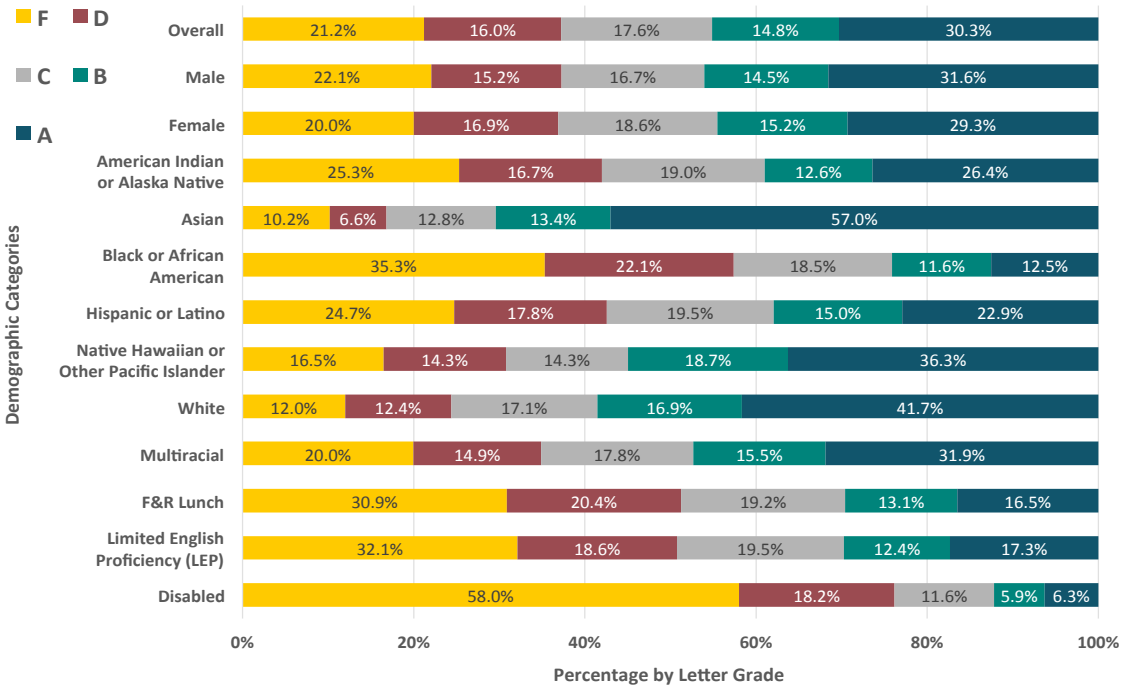


12 South Carolina Department of Education. (2014). 2014 End of course examination. Retrieved from http://ed.sc.gov/data/eocep/eocep.cfm?year=2014
13 South Carolina Department of Education. (2014). End-of-course examination program (EOCEP). Retrieved from https://ed.sc.gov/agency/programs-services/41/

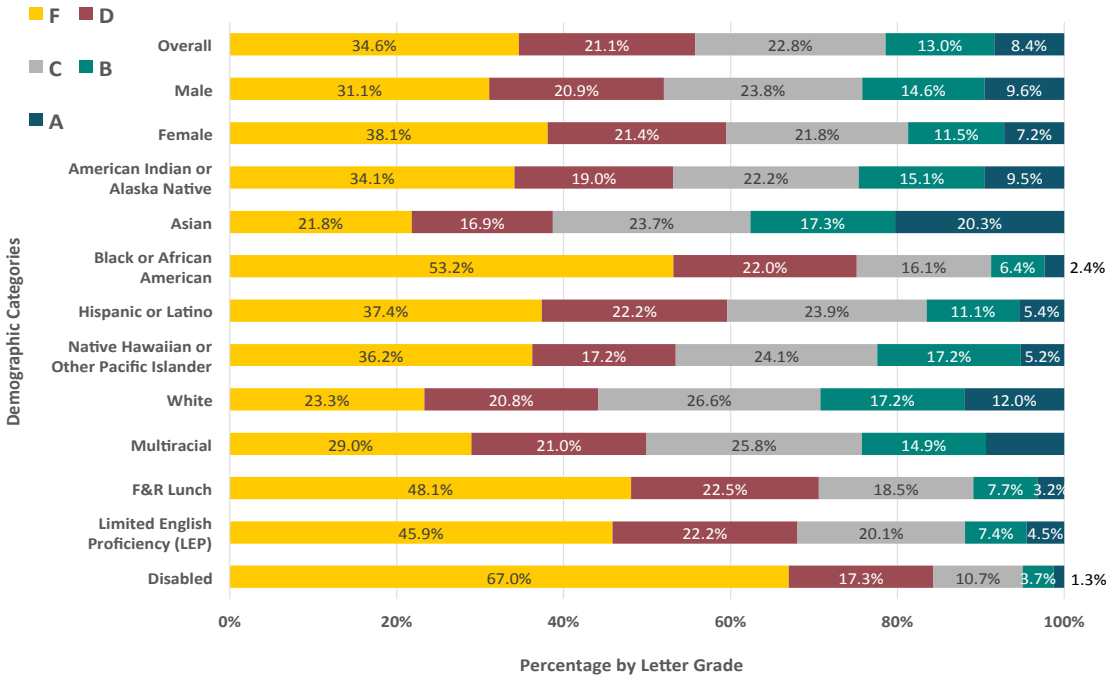
2014 State Results: English 1



2014 State Results: Biology 1/Applied Biology 2



2014 State Results: U.S. History and the Constitution



Conversation Points

- The data show us patterns in student performance on the EOCEP exams. Using the graphs above, identify the highest-performing student groups and the lowest-performing student groups on each exam. What patterns exist in the data?
- Look at data from local school districts around the state (available at http://ed.sc.gov/data/eocep/). How do different districts perform on the EOCEP exams compared to the statewide data above? Be sure to look at subject areas and various student groups for patterns and comparisons between local and state data.

Graduation Rates

In general, students without a high school diploma or equivalent (or higher) will not have access to college or jobs requiring middle- and high-level skills, and will thus earn less income. Although graduation rates in South Carolina are below the national average, rates have increased steadily from 2012 to 2014.

Student Demographic	Graduation Rates			
	National (2012)[14]	South Carolina (2012)[15]	South Carolina (2013)[16]	South Carolina (2014)[17]
Male	78.0%	67.0%	73.2%	75.7%
Female	85.0%	78.0%	82.0%	84.5%
White	85.0%	76.0%	79.8%	82.8%
Black or African American	68.0%	64.0%	74.5%	76.0%
Asian or Pacific Islander	93.0%	83.0%	87.3%	88.0%
Hispanic or Latino	76.0 %	72.0%	73.2%	76.9%
American Indian or Alaska Native	68.0%	53.0%	–	74.3%
Disabled	–	–	–	43.2%
Limited English Proficiency (LEP)	–	–	–	73.4%
Free or Reduced Lunch	–	–	–	72.5%
Total	**81.0 %**	**72.0%**	**77.5%**	**80.0%**

Note. Graduation rates reported for 2012 are the averaged freshman graduation rate (AFGR) data by state or jurisdiction and a national estimated AFGR reported by the National Center for Education Statistics. The AFGR provides an estimate of the percentage of high school students who graduate within 4 years of first starting ninth grade. These calculations may differ from those reported by the South Carolina Department of Education.

Conversation Points

- How does your local graduation rate data compare to state and national statistics?
- Do the data suggest an achievement gap between groups of students?
- What are some obstacles to increasing graduation rates in your community?

14 U.S. Department of Education, National Center for Education Statistics. (2014). *Public high school four-year on-time graduation rates and event dropout rates: School years 2010-2011 and 2011-2012*. Retrieved from https://nces.ed.gov/ccd/pub_dropouts.asp

15 *Ibid.*

16 South Carolina Department of Education. (2013). High school four-year cohort graduation rate, 2012-2013 school year. Retrieved from http://ed.sc.gov/agency/slice/documents/STUDENTPERFORMANCE-GraduationRate.pdf

17 South Carolina Department of Education. (2014). *South Carolina federal report card*. Retrieved from https://ed.sc.gov/data/report-cards/2014/documents/2014StateAnnualReportCard.pdf

Advanced Coursework: Dual/Concurrent Enrollment

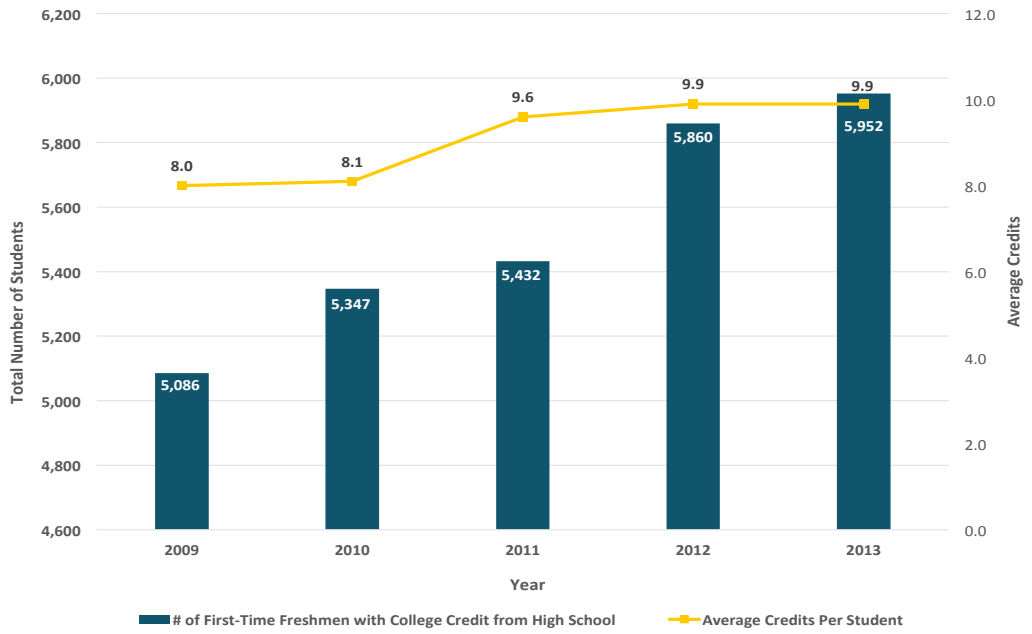
Some students get a head start in college by taking college-level courses in high school. Students in South Carolina are able to obtain college credit from either dual or concurrent enrollment programs. Dual enrollment is available to eligible juniors or seniors who obtain both parent and school written permission. (Exceptional freshmen and sophomores may also be recommended by the high school principal.) Students also must be accepted by their local college.[18]

1. Dual Enrollment: a high school student enrolls in college courses and requests both high school credit and college credit.
2. Concurrent Enrollment: a high school student takes college courses and requests college credit only.

High school students who graduate with some college credit have a higher probability of pursuing and obtaining postsecondary degrees or certificates and earn higher grade point averages than their peers. Participation in dual and/or concurrent enrollment can help students succeed in higher education by giving them a realistic idea of what college requires and a head start on college-level work. Dual enrollment can also reduce the cost of attending college by providing no-cost college credit and shortening time to reach a degree.[19]

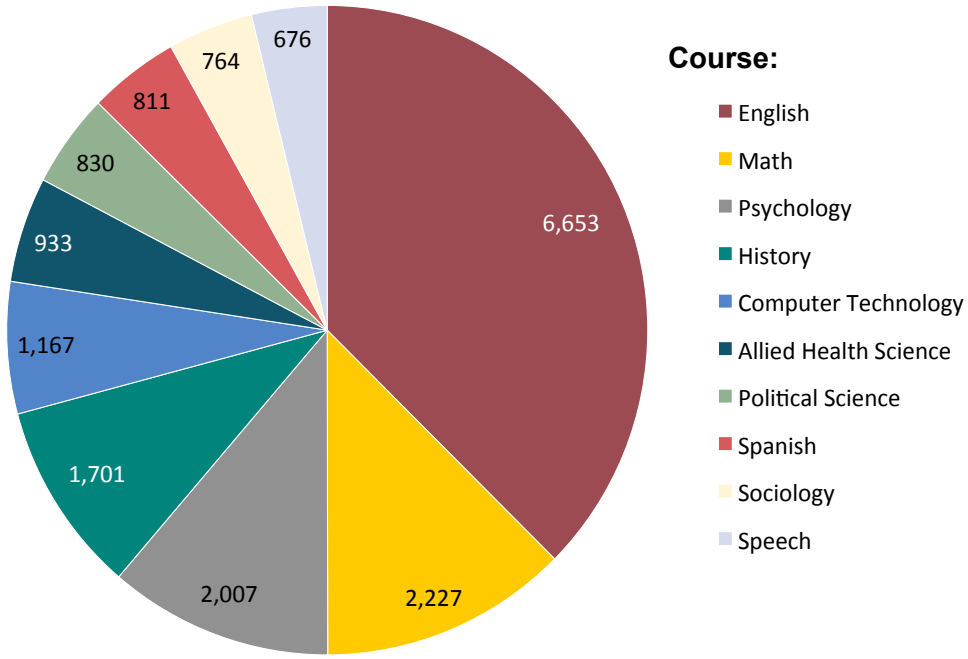
In South Carolina, from 2009–2013, dual enrollment and concurrent enrollment participation steadily increased and the average number of credits per student also increased.

Dual/Concurrent Enrollment Participation in South Carolina: First-Time Freshmen With College Credit From High School[20]



Notes. These numbers include only students who were residents of South Carolina at the time of first admission to the institution. First-Time Freshman or First-Time Undergraduate is defined as an entering freshman who has never attended any college. Includes students enrolled in the fall term who attended college for the first time in the prior summer term. Also includes students who entered with advanced standing (college credits earned before graduation from high school) OR admitted under an alternative admission program (provisional).

Top Ten Dual Enrollment Course Prefixes Offered by the Technical Colleges for the 2013–14 Academic Year[21]



Notes. Enrollment is duplicated, indicating that some students may take multiple dual enrollment courses. These data include all course sections offered in the system that include high school students taking college courses. A separate report captures data for course sections that consist of 100% high school/dual enrollment.

Conversation Points

- What opportunities do students in my school or community have to earn college credit in high school?
- What partnership opportunities exist to expand these offerings?
- Are dual or concurrent enrollment opportunities only available to certain groups of students?
- How do high school students in my community perform in courses that provide college credit and what does their performance tell me about how well the school is preparing them?

18 South Carolina Technical College System. (2015). Dual enrollment overview. Retrieved from https://www.sctechsystem.com/students/dual-enrollment.html
19 Community College Research Center. (2012). *What we know about dual enrollment*. Retrieved from http://ccrc.tc.columbia.edu/publications/what-we-know-about-dual-enrollment.html
20 South Carolina Commission on Higher Education Information Management System. (2014). High school students taking college classes. [Data file].
21 *Ibid.*

Advanced Coursework: Advanced Placement

The Advanced Placement (AP) program offers advanced courses in a variety of subject areas to students in South Carolina and across the nation. At the culmination of the course, students have the option to take a standardized exam to measure how well they have mastered the content and skills of the course. Most four-year postsecondary institutions nationwide award college credit for a score of 3 or higher on the exam.

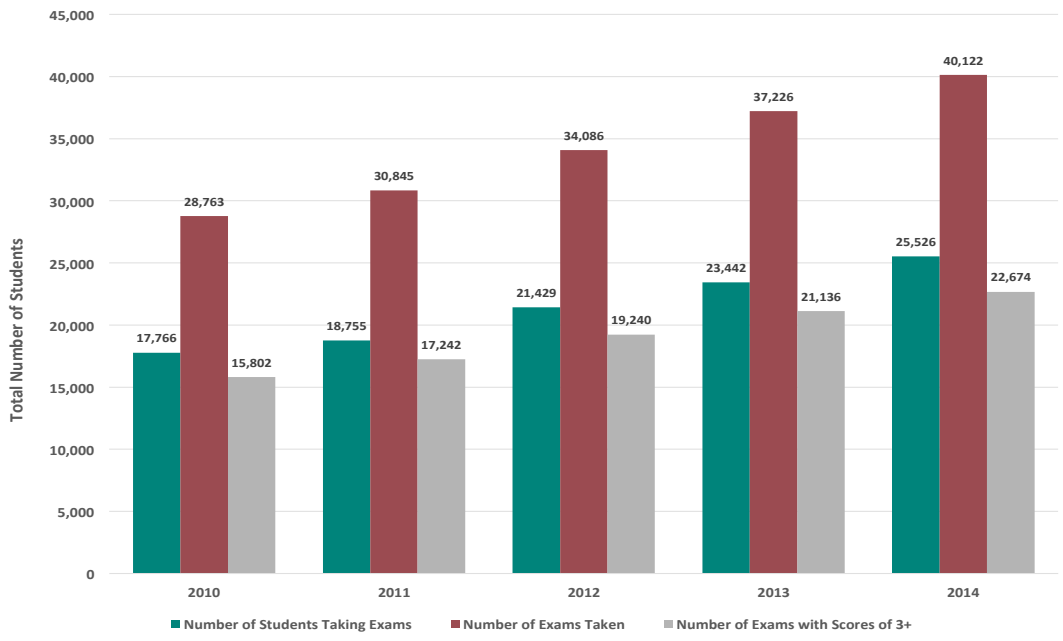
The percentage of students who took AP exams over the last decade, both statewide and nationally, is on the rise. Likewise, the percentage of students who succeeded on the AP exams (i.e., those who received a score of 3, 4, or 5) is also on the rise. See the table below for participation and passing rates from 2003 to 2013. The six AP exams taken most often were, in order: English Language and Composition, United States History, English Literature and Composition, Human Geography, Calculus AB, and Psychology. In 2014, 25,526 South Carolina public school students took 40,122 exams in 31 AP exam areas (students could take more than one test).

Out of the 40,122 AP exams taken by South Carolina students in 2014, 57% of the exams received a score of 3 or higher. When compared to their matched peers, research consistently shows that students who score a 3 or higher on an AP exam typically earn higher GPAs in college, have higher graduation rates, and are more likely to graduate from college within five years.[23]

Advanced Placement (AP) Participation and Passing Rates[22]

		2003	2008	2012	2013
Seniors who took an AP exam in high school	United States	18.9%	25.2%	31.2%	33.2%
	South Carolina	21.2%	23.2%	26.7%	29.3%
Seniors who scored 3+ on an AP exam	United States	12.2%	15.4%	18.8%	20.1%
	South Carolina	12.7%	13.8%	15.8%	17.7%

Advanced Placement (AP) Participation in South Carolina



22 The College Board. (2014). *The 10th annual AP report to the nation*. Retrieved from http://media.collegeboard.com/digitalServices/pdf/ap/rtn/10th-annual/10th-annual-ap-report-to-the-nation-single-page.pdf

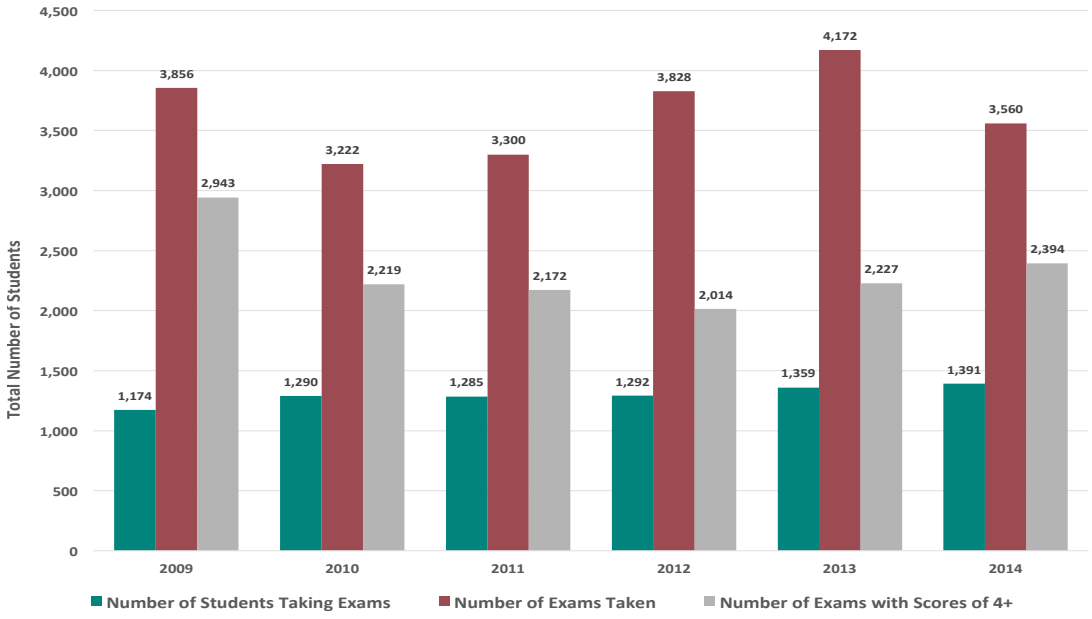
23 South Carolina Department of Education. (2014). 2014 results of the Advanced Placement (AP) examinations. Retrieved from http://ed.sc.gov/data/national-assessments/documents/AP2014_final.pdf

Advanced Coursework: International Baccalaureate

The International Baccalaureate (IB) Diploma Programme is another advanced course-taking opportunity offered in select South Carolina high schools. The Diploma Programme is an academically challenging program with final course exams. The programme is designed to address the intellectual, social, emotional, and physical well-being of students to help prepare them for success in postsecondary opportunities and life beyond. Research suggests that students who completed the IB Diploma Programme are better prepared for university demands and significantly more likely to persist in four-year colleges than students who took other forms of rigorous coursework in high school.[24, 25]

The IB Diploma Programme course exams are taken at the end of a course and the exam procedures measure the extent to which students have mastered content and key concepts as well as advanced skills such as analyzing and presenting information, evaluating and constructing arguments, and solving problems creatively. IB exams are scored on a scale of 1–7, with 4 or higher considered "passing" and accepted by most four-year postsecondary institutions for college credit. In 2014, 67% of the IB exams completed in South Carolina were rated at a passing score of 4 or higher.[26]

International Baccalaureate (IB) Participation in South Carolina[27]



Conversation Point: Although not the only way to offer rigorous coursework, AP and IB courses prepare students for college-level work. Which students in South Carolina have access to AP or IB courses? Is the access equitable across schools with differing student demographics?

24 Coca, V., Johnson, D., Kelley-Kemple, T., Roderick, M., Moeller, E., Williams, N., & Moragne, K. (2012). *Working to my potential: The postsecondary experiences of CPS students in the International Baccalaureate Diploma Programme*. Chicago, IL: The University of Chicago Consortium on Chicago Schools Research.

25 Conley, D., McGaughy, C., Davis-Molin, W., Farkas, R., & Fukuda, E. (2014). *International Baccalaureate Diploma Programme: Examining college readiness*. Bethesda, MD: International Baccalaureate Organization.

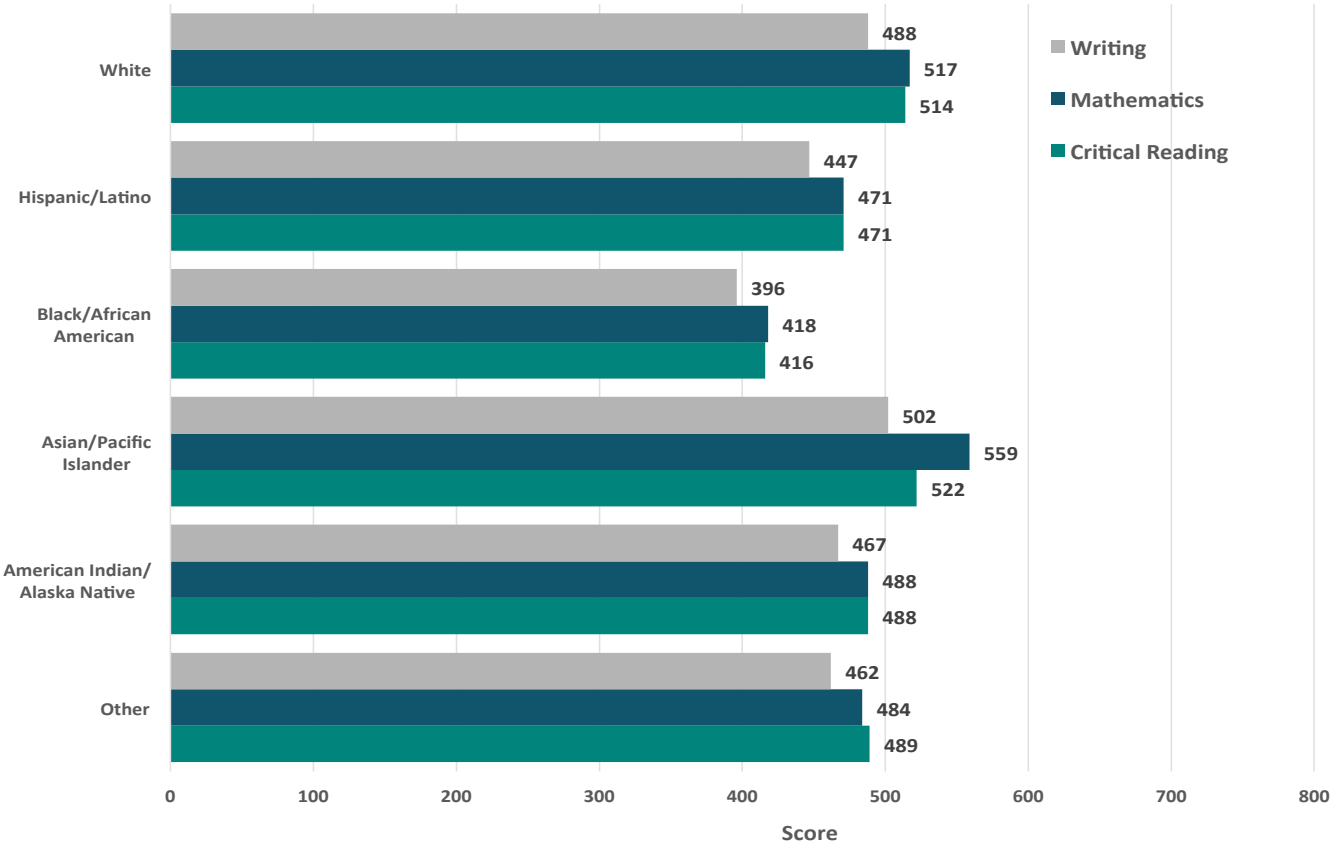
26 International Baccalaureate. (2015). Assessment and exams. Retrieved from http://www.ibo.org/en/programmes/diploma-programme/assessment-and-exams/

27 South Carolina Department of Education. (2014). 2014 The International Baccalaureate (IB) examinations. Retrieved from http://ed.sc.gov/data/national-assessments/documents/IB2014_final.pdf

SAT and ACT Scores

The Scholastic Aptitude Test (SAT) and the American College Test (ACT) are intended to assess a student's readiness for college. Colleges and universities use SAT and ACT scores for admission and scholarship purposes. The following graphs depict the participation rates and scores for graduating seniors in South Carolina. Some students choose to take one exam over the other, while other students take both exams and choose their better score. For the 2014 graduating class in South Carolina, 57% of students opted to take the ACT exam and 50% of students took the SAT exam.[28]

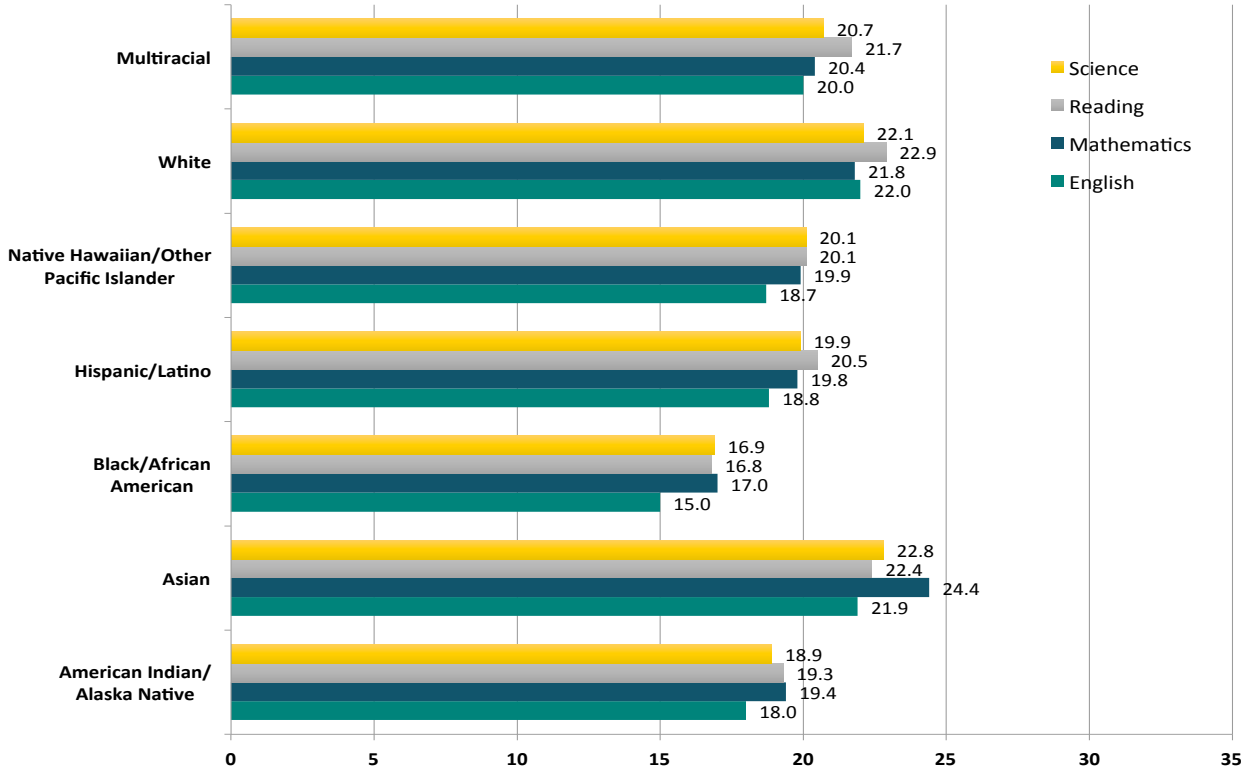
South Carolina Average SAT Scores for the 2013–2014 School Year[29]



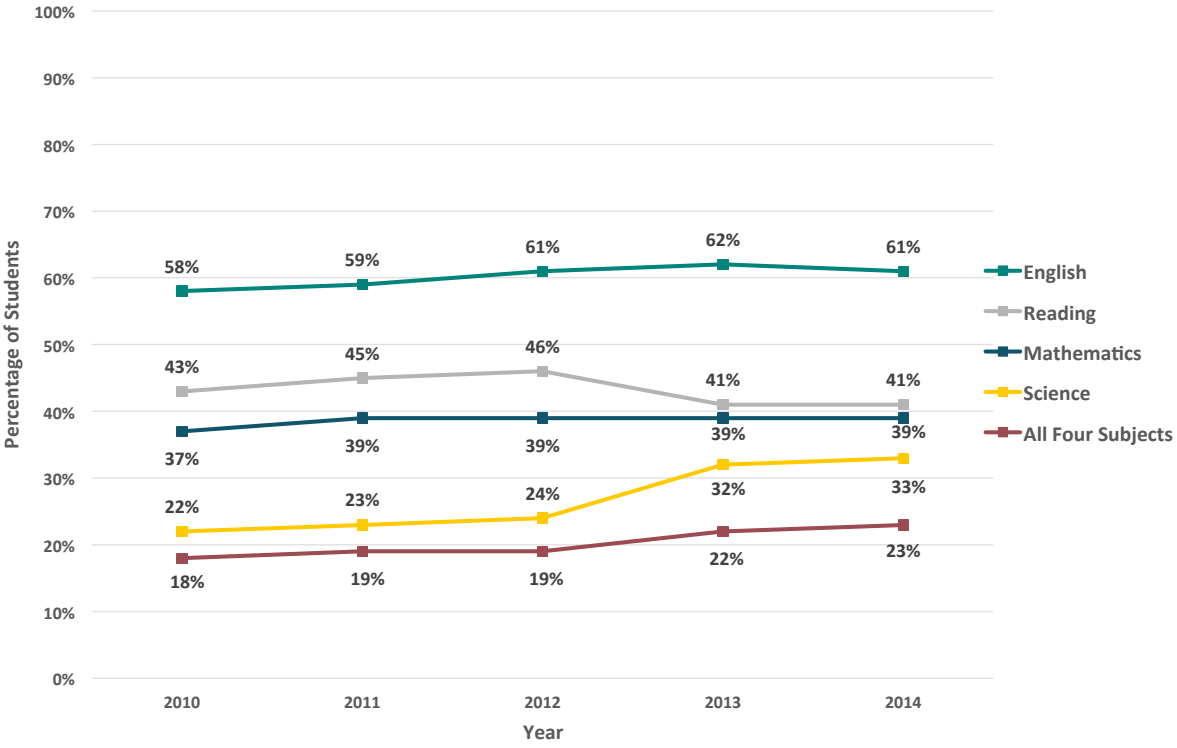
28 South Carolina Department of Education. (2014). South Carolina public school district distribution: 2014 mean SAT scores for graduating seniors with score comparisons to 2013 results. Retrieved from http://ed.sc.gov/data/national-assessments/index.cfm

29 *Ibid.*

South Carolina Average ACT Scores for the 2013–2014 School Year[30]



2014 South Carolina Students Meeting ACT College Readiness Benchmarks by Subject Area[31]



30 ACT. (2014). *ACT profile report: South Carolina*. Retrieved from http://www.act.org/newsroom/data/2014/pdf/profile/SouthCarolina.pdf

31 *Ibid.*

Course-Taking Patterns

A rigorous course load, including during the senior year, helps prepare students for the demands of college and careers. Additionally, most colleges have curricular requirements for admission, which may differ from a high school's graduation requirements. The table below compares South Carolina's current high school graduation requirements to the recommended college preparatory prerequisites.

Comparison Chart of High School Graduation Requirements to College Preparatory High School Prerequisites

South Carolina High School Graduation Requirements		South Carolina College Preparatory High School Prerequisites (Entering College Freshmen 2019)	
Courses	**Units Required**	**Courses**	**Units Required**
English/Language Arts – (English 1,2,3,4)	4.0	English – All four units must have strong reading (including works of fiction and non-fiction), writing, communicating, and researching components. *Recommended courses include English 1, 2, 3, 4, and IB/AP English courses. It is strongly recommended that students take two units based on American, British, or World Literature.*	4.0
Math – (Algebra 1; Mathematics for the Technologies 1,2,3,4; Algebra 2; Geometry; Pre-calculus, Calculus, Discrete Math; Probability and Statistics)	4.0	Math – Units must include Algebra I, Algebra II, and Geometry. A fourth higher-level mathematics unit should be taken before or during senior year. *Recommended courses include Algebra I, Geometry, Algebra II, Algebra III, Precalculus, Calculus, Probability and Statistics, Discrete Math, Computer Science, IB /AP Math courses, and AP Computer Science.*	4.0
Science – (Physical Science; Earth Science; Biology 1,2; Applied Biology 1,2; Chemistry 1,2; Chemistry for the Technologies; Physics; Physics for the Technologies 1,2)	3.0	Laboratory Science – Two units must be taken in two different fields of the physical, earth, or life sciences and selected from among biology, chemistry, physics, or earth science. The third unit may be from the same field as one of the first two units or from any laboratory science for which biology, chemistry, physics and/or earth science is a prerequisite. Courses in general science or introductory science for which one of these four units is not a prerequisite will not meet this requirement. *Recommended courses include Biology, Chemistry, Physics, Earth Science, and IB/AP Science courses. It is strongly commended that students desiring to pursue a career in STEM areas take one course in all four fields.*	3.0
Social Studies – U.S. History and Constitution = 1 unit; Economics = 1/2 unit; U.S. Government = 1/2 unit; Other Social Studies (World History, World Geography) = 1 unit	3.0	Social Studies – One unit of U.S. History, a half unit of Economics, and a half unit of Government are required. World History or Geography is strongly recommended. *Recommended courses include U.S. Government, Economics, U.S. History and Constitution, World Geography, Western Civilization, Psychology, Sociology, IB/AP Social Science courses.*	3.0
Foreign Language or Career and Technology Education	1.0	World Language – Two units of the same world language with a heavy emphasis on language acquisition. *Recommended courses include Spanish, French, German, Chinese, Japanese, Russian, American Sign Language (ASL), and the Classics (Latin, Green, Hebrew).*	2.0
Technology – Computer Science or Keyboarding	1.0	Fine Arts – One unit in appreciation of, history of, or performance in one of the fine arts. This unit should be selected from among media/digital arts, dance, music, theater, or visual and spatial arts. *Recommended courses include Art (Media, Visual, Digital), Chorus, Instrumental Music, Dance, Music, Theater, AP/IB Fine Arts courses, and Art/Music Appreciation.*	1.0
Physical Education or Junior ROTC	1.0	Physical/Heath Education or ROTC – One unit of physical education to include one semester of personal fitness and another semester in lifetime fitness. Exemption applies to students enrolled in Junior ROTC and for students exempted because of physical disability or for religious reasons. *Recommended courses include Physical Education, Health Education, and ROTC.*	1.0
Open Electives	7.0	Electives – Two units must be taken as electives. A college preparatory course in Computer Science is strongly recommended for this elective. Other acceptable electives include college preparatory courses in English; fine arts; foreign languages; social science; humanities; mathematics; physical education; and laboratory science (courses for which biology, chemistry, physics, or earth science is a prerequisite). *Recommended courses: A preparatory course in Computer Science, English, fine arts, foreign languages; social sciences; humanities; math; physical education; and laboratory science.*	2.0
Total	**24.0**		**20.0**

Notes. Each institution may make exceptions in admitting students who do not meet all of the prerequisites, limited to those individual cases in which the failure to meet one or more prerequisites is due to circumstances beyond the reasonable control of the student. Foundations and Structure in Algebra and Intermediate Algebra: Functions and Modeling may count together as a substitute for Algebra I if a student successfully completes Algebra II. Computer Science should involve significant programming content, not simply be keyboarding or using applications.

Course-Taking Patterns: Career and Technology Education (CATE)

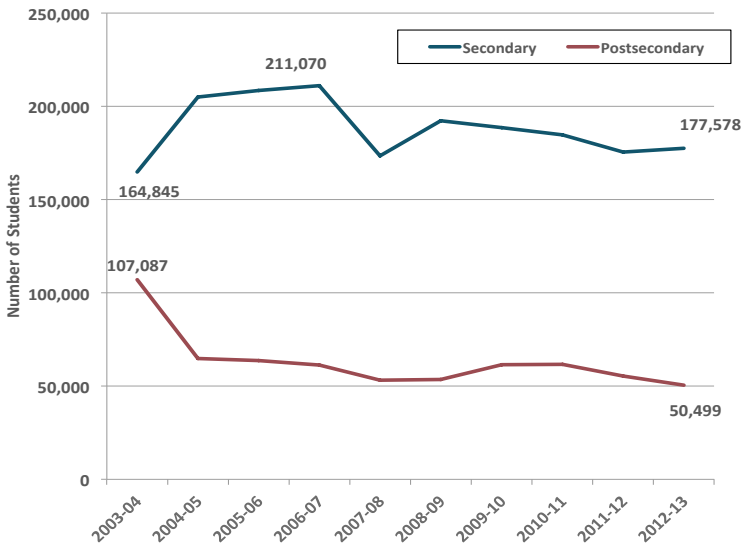
In years past, vocational education courses in agriculture, wood shop, or automotive repair have not held the same stature as academic classes. However, in the 21st century, high school students need to be able to pursue a wide range of interests in order to determine where their career interests lie. Now known as Career and Technology Education (CATE) in South Carolina, these elective programs attract students because of their engaging and authentic curricula. Increasingly, careers in the CATE fields require postsecondary education that includes certificates and degrees.

For this reason, federal legislation that governs these programs (Perkins IV) mandates that states receiving federal funding for CATE programs offer career pathways that help students make the transition from secondary to postsecondary education while pursuing an industry-recognized credential, certificate, or degree. The most recent data (2012–13) for enrollment in CATE courses in South Carolina show more than 177,000 high school students and 50,000 postsecondary students (nonduplicated).

Students across South Carolina take advantage of CATE courses in sixteen different career clusters, recognized by the National Association of State Directors of Career Technical Education Consortium:

- Agriculture, Food, and Natural Resources
- Architecture and Construction
- Arts, Audio-Video Technology, and Communications
- Business, Management, and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Science
- Hospitality and Tourism
- Human Services/Family and Consumer Sciences
- Information Technology
- Law, Public Safety, and Security
- Manufacturing
- Marketing, Sales, and Service
- Science, Technology, Engineering, and Mathematics
- Transportation, Distribution, and Logistics

Perkins IV Basic Grant Enrollment in South Carolina, 2003–2013[32]



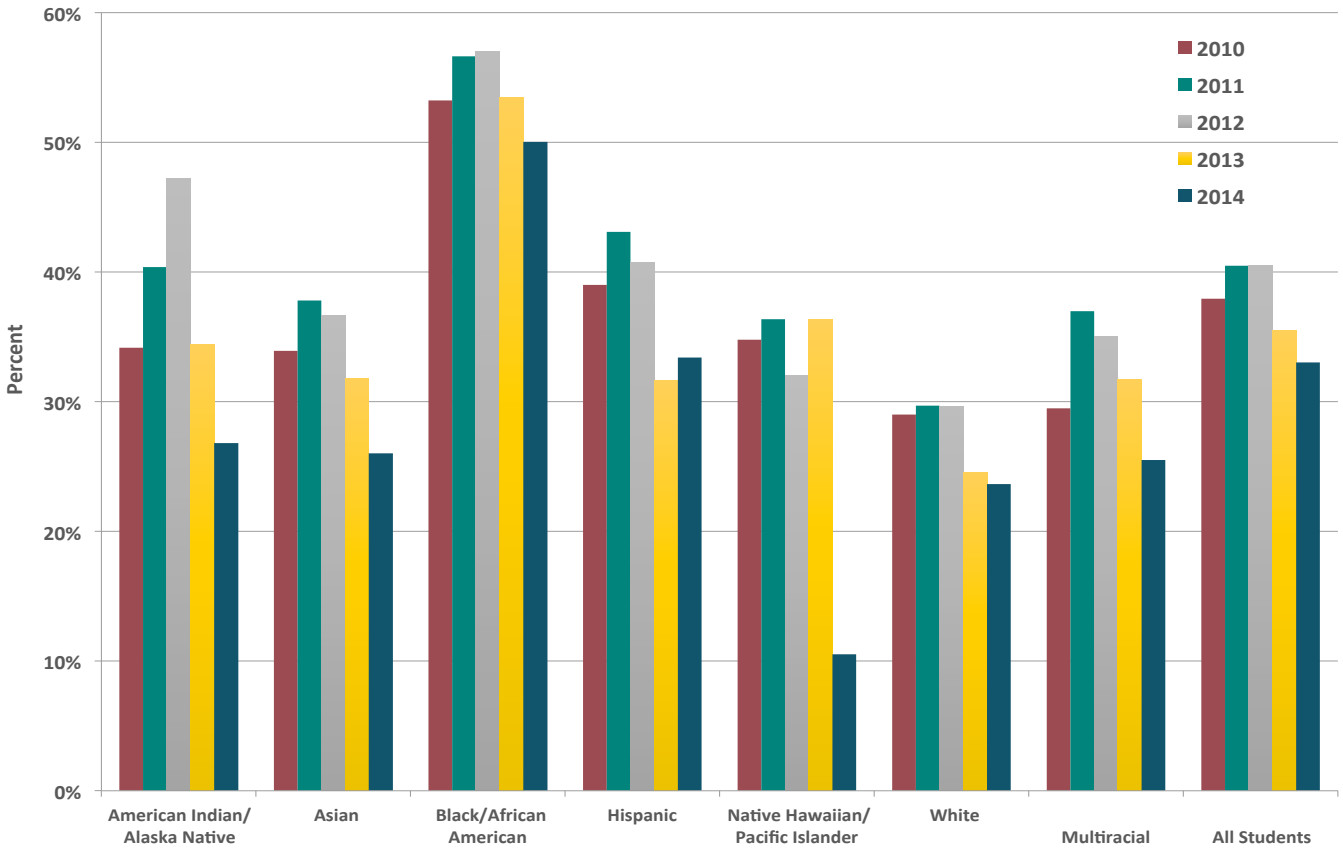
School districts must use the sixteen career clusters for reporting purposes but may modify the clusters. Students must declare an area of academic focus, also known as a career major, within a cluster of study before the end of the second semester of their 10th-grade year.

32 U.S. Department of Education, Office of Career, Technical, and Adult Education. (2015). Basic grant enrollment reports 2003-2013 [Data file]. Retrieved from http://cte.ed.gov/profiles/south-carolina

Developmental Education

What is holding students back upon entry into the postsecondary system? Depending on how students score on college placement exams, developmental courses (sometimes called remedial coursework in other states) may be required before students can take courses that earn credit and count toward graduation. Lack of academic preparedness for college is a stark reality nationwide. About 60% of students entering two-year colleges are placed into developmental education courses.[33] Although South Carolina appears to fare slightly better than other states regarding remediation rates, in 2014 one in three South Carolina students still enrolled in at least one developmental education course.[34]

Developmental Education Enrollment by Race/Ethnicity, 2010–2014[35]



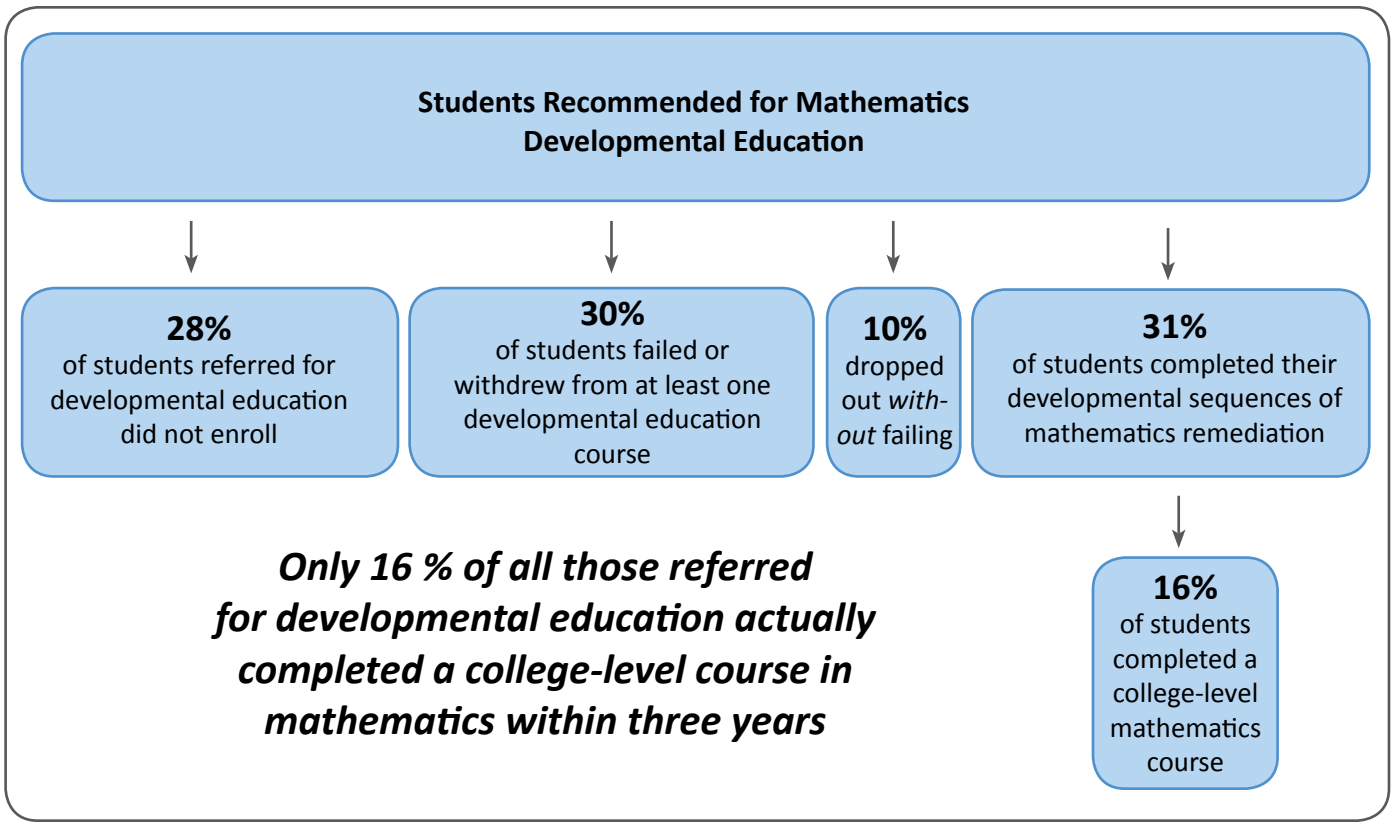
Conversation Points

- What percentage of students place into developmental courses or show indicators of not being ready for college?
- Is the rate of placement into developmental courses different across subgroups of students?
- What is your institution, or other institutions in your area, doing to lower the percentage of students who enroll in developmental courses?

33 Bailey, T., & Cho, S-W. (2010). *Developmental education in community colleges.* House Summit on Community Colleges. New York, NY: Columbia University Teachers College.
34 South Carolina Commission on Higher Education. (2015). Developmental Education Enrollment by Race/Ethnicity [Data file].
35 *Ibid.*

Placing into developmental education courses represents a significant barrier for fulfilling college and career aspirations. Students who are required to take developmental education courses are less likely to graduate than those who place high enough to start their college careers in credit-bearing courses.[36] This is especially true for students required to take more than one developmental education course. See the remediation "pipeline" example below.

The Remediation Pipeline[37]



Summary of Enrollment in Developmental Education Classes for Fall 2014[38]

CIP Code	CIP Description	Enrollment	Percent
320104	Developmental/Remedial Mathematics	10,048	58.5
320108	Developmental/Remedial English	6,998	40.7
320109	Second Language Learning	104	0.6
320199	Basic Skills and Developmental/Remedial Education, Other	32	0.2
Total		17,182	

Note. Enrollment is duplicated, indicating that some students may take multiple developmental education courses.

36 Institute of Education Sciences. (2015). *What predicts participation in developmental education among recent high school graduates at community college? Lessons from Oregon*. Retrieved from http://ies.ed.gov/ncee/edlabs/regions/northwest/pdf/REL_2015081.pdf

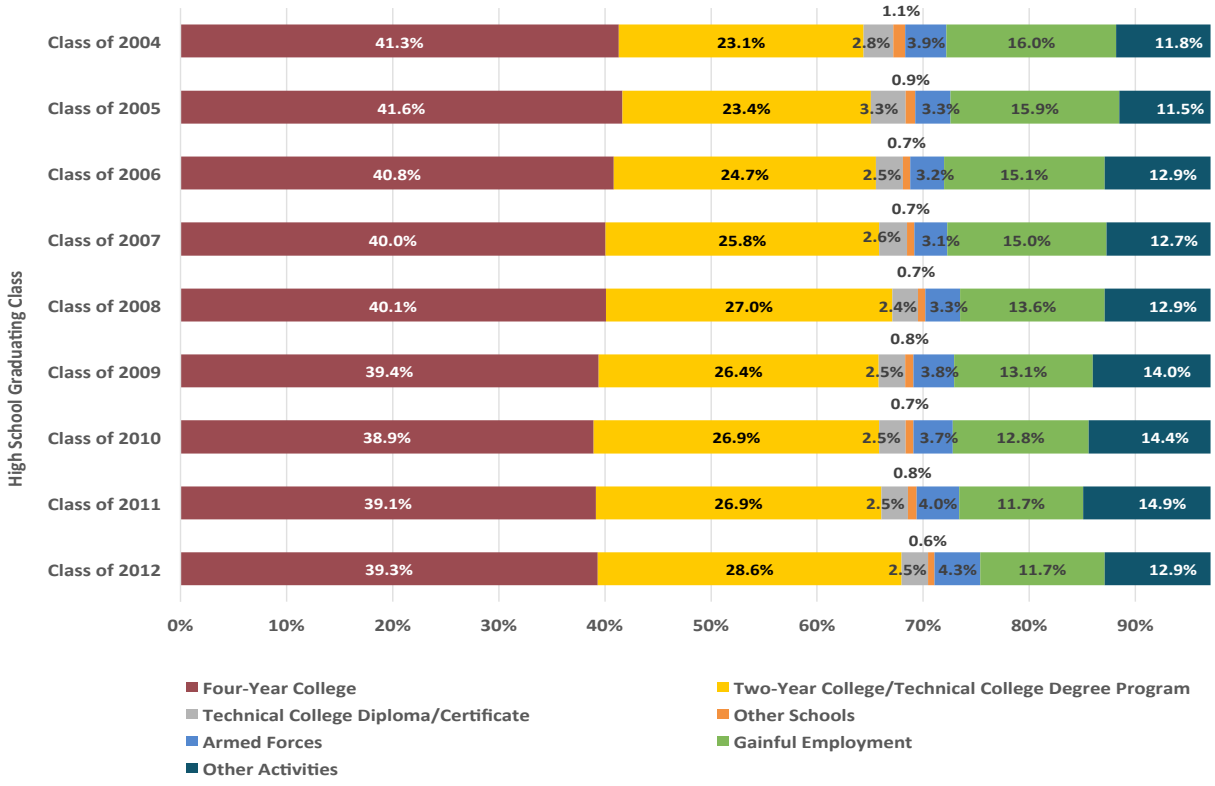
37 Bailey, T., & Cho, S-W. (2010). *Developmental education in community colleges.* House Summit on Community Colleges. New York, NY: Columbia University Teachers College.

38 South Carolina Commission on Higher Education. (2015). Headcount of developmental students enrolled in one or more developmental classes [Data file].

College Enrollment, Retention, and Completion

Where do students go after they graduate from high school? The figure below displays different routes taken by South Carolina high school students from the class of 2004 to the class of 2012. The percentage of students enrolling in four-year universities and the percentage going straight to the workplace is decreasing, while the percentage of students enrolling in two-year colleges and technical college degree programs has increased in recent years. College retention rates in South Carolina have maintained near 66% over the past several years, below the national average of 77%. Students are more likely to drop out of postsecondary education during the first year than any other time, so first-year retention rates are a key indicator to address.[39]

South Carolina High School Post-Graduation Routes[40]



Summary of College Retention Rates[41]

Type of Institution	2008–2009	2009–2010	2010–2011	2011–2012	2012–2013
Four-Year Institutions	78.5%	77.9%	78.1%	77.4%	78.6%
Two-Year Institutions	53.7%	53.5%	53.0%	49.6%	50.6%
Technical Colleges	55.0%	52.9%	52.8%	50.8%	50.4%
Overall	**67.9%**	**65.9%**	**66.5%**	**65.2%**	**66.1%**

39 National Center for Education Statistics. (2010). Retention rates: First-time college freshman returning their second year. Retrieved from http://www.higheredinfo.org/

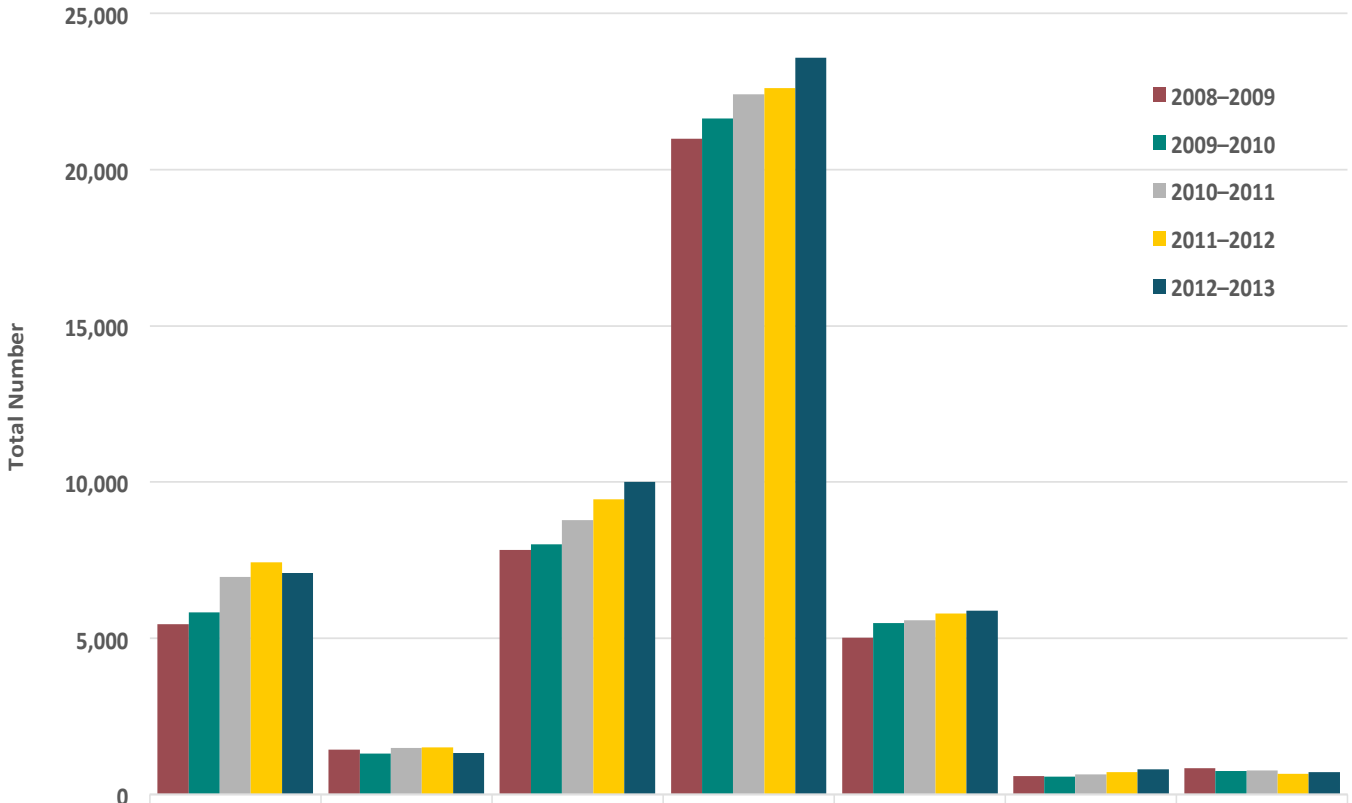
40 South Carolina Department of Education. (2014). Summary of all 2011-2012 S.C. high school completers enrolled in 2012–2013 college freshman classes in South Carolina and other states. Retrieved from http://ed.sc.gov/agency/ie/rda/documents/2011-12CollegeFreshmanReport.pdf

41 South Carolina Commission on Higher Education. (2014). *South Carolina higher education statistical abstract 2014*. Retrieved from http://www.che.sc.gov/CHE_Docs/finance/abstract/Abstract-2014-web.pdf

Degrees Awarded

The number of associate and bachelor's degrees awarded in South Carolina has been increasing over the past several years. In addition, from 2012 to 2013, the number of certificates and diplomas awarded dropped slightly. This trend may indicate that students are becoming more likely to pursue two- and four-year degrees rather than certificates.

Number of Degrees Awarded by South Carolina Public and Independent Institutions[42]



	Certificate	Diploma	Associate	Bachelor's	Master's	Doctor's (Research/ Scholarship)	Doctor's (Professional Practice)
2008–2009	5,446	1,432	7,826	20,993	5,009	593	832
2009–2010	5,824	1,313	8,001	21,636	5,481	578	745
2010–2011	6,966	1,482	8,781	22,414	5,584	640	770
2011–2012	7,427	1,511	9,443	22,603	5,784	711	665
2012–2013	7,081	1,323	10,000	23,584	5,889	801	716

Degree

42 South Carolina Commission on Higher Education. (2014). *South Carolina higher education statistical abstract 2014*. Retrieved from http://www.che.sc.gov/CHE_Docs/finance/abstract/Abstract-2014-web.pdf

ACT WorkKeys

Beginning in 2015, ACT WorkKeys, an assessment that measures essential workforce skills, was administered to all 11th-grade students in South Carolina. The multiple-choice test items are based on real-world work situations in three areas: Applied Mathematics, Reading for Information, and Locating Information.[43] In each of the three areas, students receive a Level Score, ranging from 3 to 7, indicating overall performance on the test. Students may earn one of four National Career Readiness Certificates (Bronze, Silver, Gold, or Platinum) depending on their scores across all three assessments.

ACT WorkKeys Scores[44]

Certificate Level	Level Score Requirements	Percentage of Qualified Jobs in WorkKeys Database
Platinum	Minimum score of 6 on each of the three core areas	Examinee has necessary foundational skills for 95% of the jobs in the WorkKeys database
Gold	Minimum score of 5 on each of the three core areas	Examinee has necessary foundational skills for 90% of the jobs in the WorkKeys database
Silver	Minimum score of 4 on each of the three core areas	Examinee has necessary foundational skills for 65% of the jobs in the WorkKeys database
Bronze	Minimum score of 3 on each of the three core areas	Examinee has necessary foundational skills for 35% of the jobs in the WorkKeys database

Notes. Platinum jobs require high levels of education, training, and experience. The Certificate is only one of the many selection criteria employers use when hiring and promoting. Earning the National Career Readiness Certification does not quality a person for all job requirements.

More than 1,400 employers in South Carolina recognize the WorkKeys certificate. Doing well on the test may help high school students find summer and part-time jobs and internships. Many companies use the WorkKeys certificate for hiring purposes, because it helps students stand out from applicants who do not have credentials,[45] and some companies are willing to offer higher salaries based on higher scores. Students can use the ACT database to compare their Level Scores to scores typical for jobs that align with their interests.

Example Jobs Based on WorkKeys Scores[46]

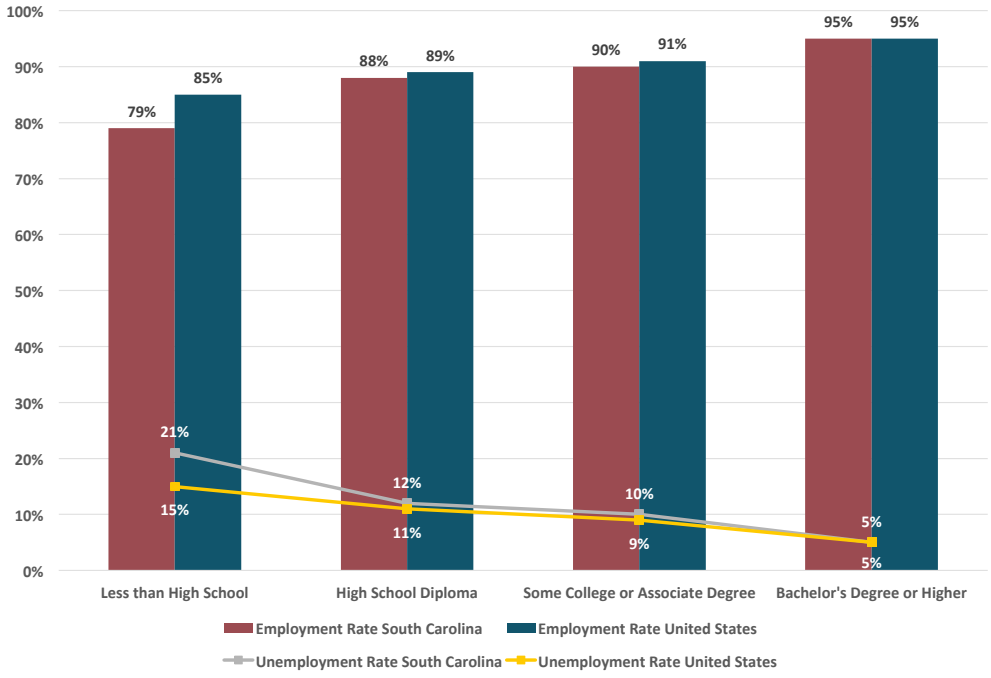
Job Title	Applied Mathematics Score	Reading for Information Score	Locating Information Scores
Graphic Designer	5	5	4
Flight Attendant	3	4	4
Public Safety, Corrections, and Security	3	3	3
Financial Manager	6	6	5

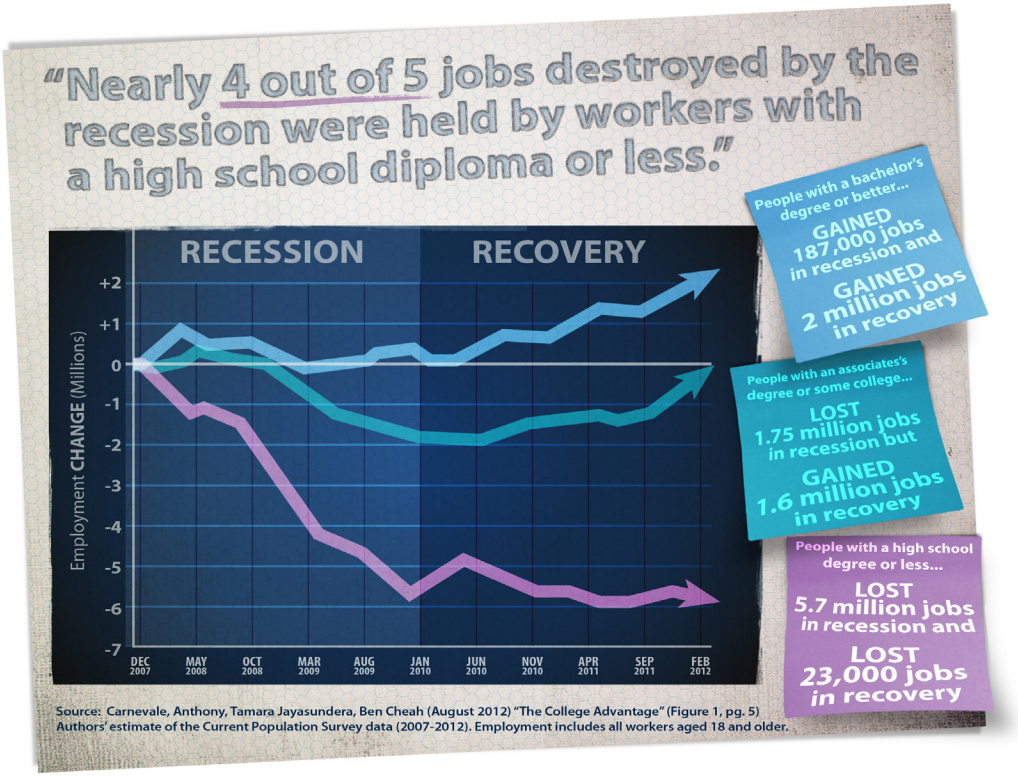
43 South Carolina Department of Education. (2015). New test changes coming to South Carolina. Retrieved from https://ed.sc.gov/agency/pi/act/
44 ACT. (2015). *New measures for student success in South Carolina.* Retrieved from http://www.greenville.k12.sc.us/Parents/docs/1503NewMeasures.pdf
45 ACT. (2010). *Using your WorkKeys scores*. Retrieved from http://www.act.org/workkeys/careerseekers/pdf/UsingWorkKeysScores.pdf
46 *Ibid.*

Employment by Education Level

The graph below depicts employment by educational level and includes unemployment trend lines. On average, people with college degrees are employed at higher rates than those without. During the recent recession, the majority of jobs lost were held by workers without a college degree.

Employment by Education Level[47]



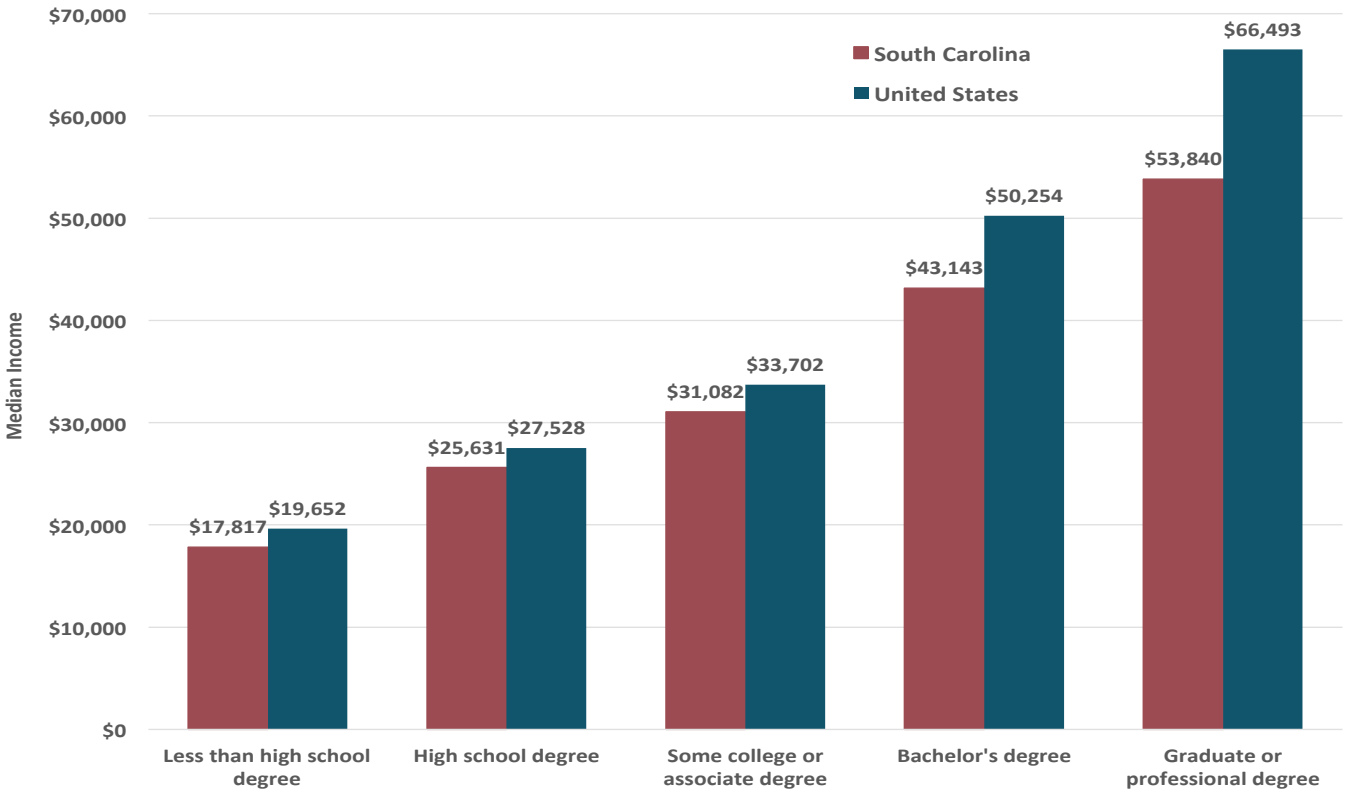


47 U.S. Census Bureau. (n.d.). 2009-2013 5-year American community survey. Retrieved from http://census.gov/programs-surveys/acs.html

Income by Education Level

The graph below shows the median income by education attainment for South Carolina and the United States. In general, people with college degrees earn higher wages than those without, as depicted below. The median lifetime earnings of a person with a bachelor's degree is nearly twice the lifetime earnings of an individual with a high school diploma.

Median Yearly Income by Education Level[48, 49]



Median Lifetime Earnings by Educational Attainment, 2009 Dollars[50]

Degree	Median Lifetime Earnings
Less than High School	$973,000
High School Diploma	$1,304,000
Some College/No Degree	$1,547,000
Associate Degree	$1,727,000
Bachelor's Degree	$2,268,000
Master's Degree	$2,671,000
Doctoral Degree	$3,252,000
Professional Degree	$3,648,000

48 U.S. Census Bureau. (n.d.). *2009-2013 5-year American community survey*. Retrieved from http://census.gov/programs-surveys/acs.html

49 Carnevale, A. P., Jayasundera, T., & Cheah, B. (2012). *The college advantage: Weathering the economic storm*. Washington, DC: Georgetown Public Policy Institute, Center on Education and the Workforce.

50 Carnevale, A. P., Rose, S. J., & Cheah, B. (2011). *The college payoff: Education, occupations, lifetime earnings.* Washington, DC: Georgetown Public Policy Institute, Center on Education and the Workforce.

South Carolina Job Projections

"One of the essential drivers for success in today's economy is higher education. The economic benefits of higher education are well established, ranging from individual benefits such as increased personal income levels and greater lifetime job opportunities to social benefits such as lower levels of crime and higher voter participation rates. In fact, the percentage of the population with a college degree is the single best predictor of a state's national ranking in personal per capita income levels." [51]

Like the rest of the nation, South Carolina has worked to recover from the recession of 2008, which was the worst economic decline in the United States in almost eighty years. However, the new jobs being created in post-recession South Carolina are not the same jobs that were lost during the recession. The industries primarily responsible for job growth have changed, as have job qualifications for many positions. One of the primary sectors in which this change can be observed is manufacturing. Workers who were laid off during the recession are now being retrained in order to obtain manufacturing positions that use more advanced technology that was not as prevalent among pre-recession manufacturing jobs. For South Carolina workers to be successful in the 21st-century job market, they will need to possess the skill sets required by 21st-century jobs. In a fast-paced knowledge economy, acquiring these skills increasingly requires higher education.

There will be approximately 553,884 new jobs created in South Carolina directly from economic growth and expansion between 2013 and 2030, 52% of which will require higher education. These new jobs will outpace the projected increase in the size of the labor force and thus create a workforce shortage.

Projected South Carolina Education Workforce Mismatch in 2030[52]

Degree Type	Increase in Population Through 2030 (Supply)	Increase in Employment Through 2030 (Demand)	Difference
High School Diploma or Lower	154,498	288,860	134,466
Some College	67,014	56,624	-10,390
Associate Degree	28,250	66,844	38,594
Bachelor's Degree or Higher	78,840	141,556	62,716

51 Darla Moore School of Business, University of South Carolina. (2013). South Carolina's education-workforce matchup (2013-2030): Identifying the higher education needs of the 21st century. Retrieved from http://competingthroughknowledge.org/assets/uploads/references/Higher_Education_Report.pdf

52 *Ibid.*

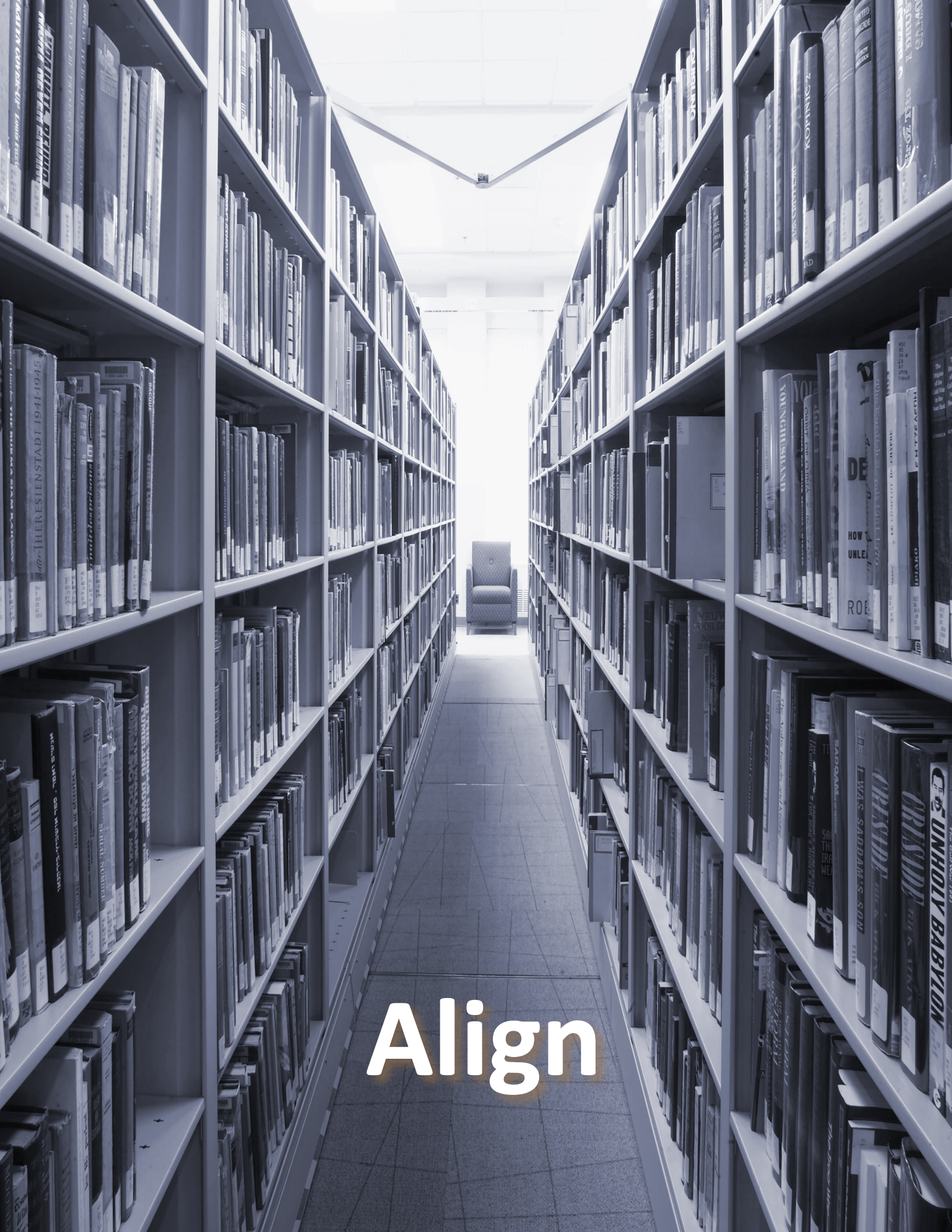
Highest Projected 2030 Shortages for South Carolina Occupations Requiring Higher Education[53]

Occupation	Projected Shortage (# of jobs)
Associate Degree	
Registered Nurses	17,438
General and Operations Managers	9,134
Construction Managers	3,322
Preschool Teachers (except Special Education)	2,491
Paralegals and Legal Assistants	1,661
Dental Hygienists	1,661
Radiologic Technologists and Technicians	1,661
Architectural and Civil Drafters	830
Civil Engineering Technicians	830
Bachelors's Degree	
Elementary School Teachers (except Special Education)	5,279
Accountants and Auditors	4,319
Secondary School Teachers (except Special and Career/Technical Education)	3,359
Teachers and Instructors, All Other	2,879
Management Analysts	2,399
Software Developers, Applications	1,919
Financial Managers	1,919
Computer Systems Analysts	1,919
Software Developers, System Software	1,440

Conversation Points

- Which sectors of the South Carolina economy are growing in your community?
- Are students at your institution aware of workforce opportunities or career pathways that are consistent with their skills and interests?
- Does your institution collaborate with public and private sector employers to increase student awareness of career pathways and opportunities?

53 Darla Moore School of Business, University of South Carolina. (2013). South Carolina's education-workforce matchup (2013-2030): Identifying the higher education needs of the 21st century. Retrieved from http://competingthroughknowledge.org/assets/uploads/references/Higher_Education_Report.pdf


Align

Alignment Overview

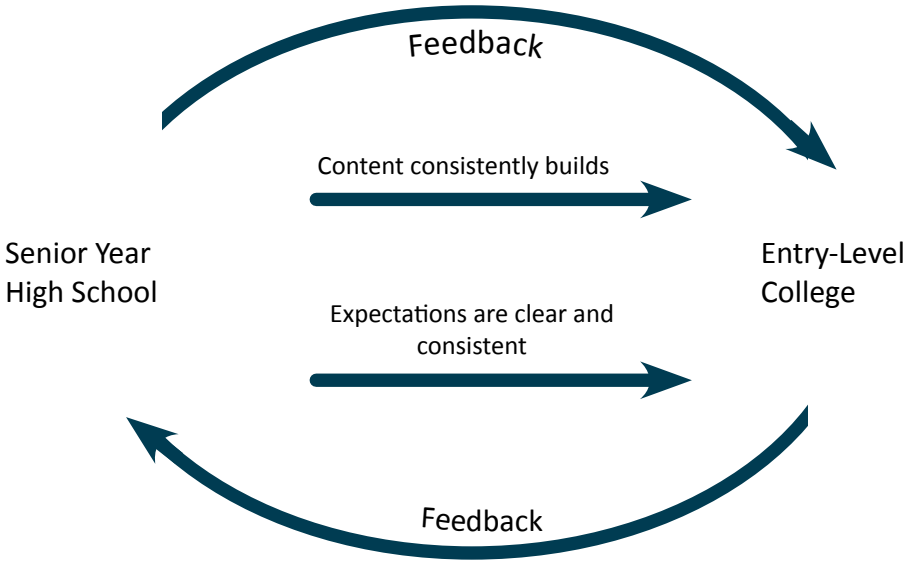
One of the most challenging yet powerful steps to begin to improve the connections between high school and college is to align course content and student performance expectations. Tackling the fundamental disconnect between secondary and postsecondary systems requires rethinking relationships and assumptions about the content of courses and how the senior year of high school is connected to entry-level college courses.

Vertical alignment

Vertical alignment refers to curriculum design that builds logically on the performance expectations and content covered in each course and moves students along a college and career readiness trajectory. For example, high school teachers and college instructors meet in content teams to discuss and align content and expectations that steadily increases as the grade levels progress.

Horizontal alignment

Horizontal alignment refers to curriculum design efforts to bring consistency to the performance expectations and content covered across similar course titles. For example, all ninth grade English teachers within a school or district meet to discuss their courses and ensure consistency across classrooms.



"Rarely, if ever, do college instructional faculty and program designers sit down with or include their secondary peers in any consideration of the content and structure of entry-level college courses. College instructors rely largely on their own experiences with freshmen as the reference point for the expectations that accompany their entry-level courses. None of this is communicated to high school educators in any systematic fashion."

– Dr. David T. Conley
Author of *College and Career Ready*

Tools and Strategies for Increasing Alignment

Alignment Strategy #1: Develop and maintain a detailed course syllabus

One of the most useful tools available to schools addressing alignment issues is a course syllabus. When properly developed and updated, a syllabus communicates to students, families, administrators, and other teachers the course information that can be used to improve both horizontal and vertical alignment of content knowledge and student expectations.

All syllabi in a school should use a common format, which makes the process of comparing syllabi and mapping course content to college and career readiness standards significantly easier. A common format could include the following features:

- Course objectives
- Prerequisite knowledge and skills necessary for success
- Required texts
- Unit descriptions broken down by topic
- Teaching methods employed
- Standards or learning objectives covered in each unit
- Homework and assignments and their weight relative to course grade
- Assessments planned and their weight relative to course grade
- Grading policies
- Classroom policies

For many high schools, a feasible place to begin is to ask teachers to work independently to develop more robust and detailed syllabi using a common format, and then use these syllabi to calibrate expectations within the school and, eventually, with postsecondary institutions.

To align courses to college and career readiness, course developers must work in relation to a common set of standards and expectations. The adoption of South Carolina's new mathematics and English/Language Arts standards provides an excellent opportunity for schools in South Carolina to begin using syllabi to document which standards are addressed within a course and to detail how and at what level they are being taught.

Syllabi for existing courses can be read by faculty to develop a common framework that is explicitly aligned to a college- and career-ready trajectory. Faculty can then identify classroom assignments and activities and examples of student work that illustrate what the Four Keys to College and Career Readiness look like in practice. Once this process is complete, teachers and instructors can adapt the framework, maintaining individual preferences. The result is more transparent course development and an established system that allows for ongoing review and improvement.

Another way to use syllabi is for secondary school faculty and entry-level college faculty to work together in their development. This collaboration allows for greater insight by high school faculty into the content, pacing, rigor, and expectations of higher education faculty. Likewise, higher education faculty gain insight into the realities and challenges at the secondary level. If available, accompanying documents such as student work samples and grading rubrics help illustrate the contents of postsecondary syllabi.

Example Syllabus for Entry-Level College Course at Francis Marion University

English 112: Composition II Syllabus

Office Hours: Monday 1:00-3:00, Tuesday 1:00-3:00, Wednesday 10:00-11:00, and by appointment
Email: teacher@fmarion.edu

Course Introduction and Success Strategies

This course is a study of composition, critical thinking, and critical reading. A composition course is intended to help you improve the skills of proofreading, revising, and editing multiple drafts. To ensure you have ample opportunity to do so with each essay, it is important to build sufficient time into your writing schedule. Plan to read the final draft before you consider it complete and ready for submission. Setting aside time for the final proofreading is advisable for your in-class writing as well, particularly at both midterm and final exams. Successfully managing writing time improves a writer's ability to meet required deadlines.

As with any skill, the more you write, the more proficient you become. Regular communication with me throughout the course is important to ensuring your success in the course. This may include discussion about deadline changes, or requesting time to convene an individual conference to discuss specific writing concerns. You are encouraged to seek assistance, and I also encourage you to use the FMU Writing Center.

Course Objectives

Intellectual Openness

- Students will develop a greater openness and willingness to explore issues and ideas that are new and/or different from their own established ideas and opinions.
- Students will develop a greater ability to evaluate, synthesize, and communicate the issues, themes, and conflicts presented in various readings, writings, and visual experiences.

Academic Knowledge and Skills

- Students will be able to analyze issues of audience, purpose, and rhetorical mode.
- Students will construct focused, coherent, and fully supported arguments for an academic audience using standard English conventions of grammar and style.
- Students will understand the importance of consistently accurate and precise language, grammar, and mechanics in their writing.
- Students will be able to locate, assess, and critically read sources found online and in library databases.

Academic Behavior

- Students will adhere to assignment deadlines and independently organize their workloads in ways that allow them to complete all of their academic work.
- Students will be able to work effectively both independently and collaboratively.
- Students will act honestly and ethically in their academic work.

Contextual Skills and Awareness

- Students are expected to be invested in their coursework and overall college education, and because of this, they are expected to actively participate in their courses.
- Students are expected to respect the opinions of those whose opinions differ from their own and to understand that people can maintain civility even when holding opposite opinions and beliefs.
- Students are expected to seek out extra help, from their professors and from support services, if they need it.

Required Texts

- Alfano, Christine L., and Alyssa J. O'Brien, *Envision in Depth: Reading, Writing, and Researching Arguments,* 2nd ed.
- Harris, Muriel, and Jennifer L. Kunka, *Prentice Hall Reference Guide*, 7th ed.

Assignments

All assigned work will be due on the day listed on the syllabus. I will do my best to read your papers in a timely manner and make comments to help you in your revision of these papers. You can expect the following types of assignments:

- Class Participation: This is not a lecture class but one that depends on your active, lively, committed participation. This means that our class will go smoothly and be a positive learning environment only if you come to class prepared (having done the reading and writing), ready to engage in a discussion of your ideas, and willing to listen genuinely to the ideas of your peers. I expect that we will disagree with one another at times, but it is important that disagreement does not turn into thoughtless disparagement or dismissal of others. This portion of your grade will be based on your attendance, participation in discussions and in-class writing, and constructive response to the writing of your peers.
- Short Writing Assignments: These are shorter writing assignments (1–3 pages) that may serve as starting points for longer assignments or help you to perfect a strategy or skill that we have been working on or discussing.
- Homework: These short assignments may be handwritten and may include exercises, reflections, or explanations.
- Major Papers (3): These are papers between 3 and 5 pages in length. I will provide you with a detailed assignment sheet for each of these major assignments.
- Paper Workshops: One time this semester, you will turn in a paper early and share it with the class. On workshop days, every member of the class will come to class having read your paper, and in class we will look together at your work, discussing the strengths of the writing and giving helpful suggestions for revision. For each workshop, each member of the class (except for those who turned in their papers early) will write a paragraph addressed to the writer. We will discuss this in further detail.
- Final Exam: The final exam will require you to apply concepts from the course.

Paper #1	15%	Revision Assignment	15%
Paper #2	15%	Homework/Quizzes/Class Participation	10%
Paper #3	15%	Workshop Participation	5%
Short Assignments	15%	Final Exam	10%

Attendance: In order to learn through writing and discussion we all need to be here; therefore, regular attendance is very important to your success in this course. Your final grade will be lowered one letter grade if you miss five classes. Your final grade will be lowered two letter grades if you miss six classes. If you miss seven classes, I will drop you from the course. **You will only earn credit for short writing assignments, homework, and quizzes if you are in class—you will receive a zero for any missed short writing assignments, homework assignments, or quizzes. Any in-class work that we do cannot be made up. If you know ahead of time that you will not be in class, come see me beforehand.**

Grading Policies: I expect your work to be on time. I will not accept papers that are more than 24 hours late and I will not accept emailed papers (unless you and I have discussed this).

Classroom Policies

- Plagiarism: Plagiarism is the use of someone else's words and/or ideas without adequately crediting that person as a source. All sources you consult must be recognized in a bibliography or footnote. Plagiarism is a serious violation of university rules and may result in a failing paper or suspension from the university. Using a paper from another class is also plagiarism. See pages 378–398 of the *Prentice Hall Reference Guide* for some instruction on how to avoid plagiarism.
- Paper Format: Short writing assignments and major papers must be typed (10 to 12-point font), double-spaced with one-inch margins, and stapled. If you do not have a computer there are several labs on campus that you may use. Some assignments such as freewrites, invention exercises, and in-class work may be handwritten. Spellcheck your writing; then, read it again—the spellcheck will not catch all mistakes!
- If you have or believe you have a disability, you may wish to self-identify. You can do so by providing documentation to the FMU Counseling and Testing Center. Appropriate accommodations may then be provided for you.

Alignment Strategy #2: Use college and career readiness assignments in your classroom

College and career readiness assignments represent an exit-level alignment strategy, and one similar to a type of assignment many schools already require such as an assignment at the end of a unit or even a capstone project. These types of rich, performance-based tasks require students to demonstrate independence, organization, and persistence as well as engage content knowledge at a more sophisticated level than typical homework assignments. When aligned to college and career readiness standards and expectations, these assignments can both assess and reinforce the knowledge and skills necessary to succeed in college and careers.

The more college and career readiness assignments students have the opportunity to complete during their secondary careers, the more opportunities they have to practice skills they will need to succeed in college and careers. These assignments can be codeveloped by secondary and postsecondary faculty to ensure they meet a college- and career-ready level. Below are some important features of college and career readiness assignments.

Work products reflect the type of work students would be expected to complete in college and careers.
Students should be expected to engage Key Cognitive Strategies, work independently, gather and synthesize information, and communicate ideas effectively.

Assignments are explicitly mapped to college and career readiness standards.

By linking student performance to an agreed-upon set of criteria, college readiness assignments help to support alignment efforts, inform student self-assessment, and build a culture of college-going and postsecondary success.

Assignments allow for a variety of responses or solution pathways.

Tasks should have more than one solution or solution pathway. For example, in math or science, a task may have only one correct solution, but have different ways to arrive at that solution. The assignments should not be overly prescriptive in guiding students to the solution or response.

Assignments should offer opportunities for student ownership and student choice.

Tasks should allow students to shape the direction of their own learning through topic selection, method of inquiry, solutions or solution pathways, sources to consider, and/or ways to represent their learning in a final product.

Work products are scored according to grading criteria aligned to the criteria the student will face in college and careers.

The work must be original, complete, organized, well documented, sufficiently challenging, relatively free of errors, and appropriate to the discipline and career area. Students not performing at the college- and career-ready level should have an opportunity to receive this feedback in a scaffolded environment while they still have time to address and practice necessary skills.

Example Assignment Used in a 12th-Grade South Carolina English Classroom

Monsters Research Paper

English IV

Monsters have been a staple in literature since its beginnings. Why do you think monsters exist? Can you give examples of monsters from your childhood? Can you give examples of monsters in our society? What societal need(s) did monsters fill in the past and what need(s) might they fill now? Are monsters born or are they created by societal factors?

Asks questions, inviting students to think through the problem and develop their own responses. *(ACT, Ownership of Learning)*

In *Beowulf,* the hero had to battle Grendel, a clearly defined and recognizable monster. However, the reverse perspective was depicted in *Grendel*, when Grendel is presented as the victim and King Hrothgar as the monster. In our current novel, was Frankenstein's creation the monster, or was it the scientist himself?

Considering the prompt and questions above, your task is to write a 800–1000 word paper that:

- Demonstrates an understanding of the concept of a monster by defining what a monster is. What makes a monster a monster? Are there certain characteristics all monsters share?
- Examines the role monsters play and/or have played in society and literature (may include film). Consider areas of science and history as you begin to decide upon and narrow your topic.
- Follows a logical path, keeping in mind it must represent a position you can successfully support. Remember to provide specific, textual evidence to support your position.
- Uses at least three sources. Be careful with your choices of sources; they must be reputable and respected sources. If you are unsure about a source, feel free to check with me about it *prior* to using it.
- Keeps your audience and his/her/their knowledge base in mind.
- Uses correct MLA citations.

Encourages students to make interdisciplinary connections. *(KNOW, Structure of Knowledge)*

Rather than giving students a list of "acceptable" sources, students are asked to find their own reliable sources and seek help, if needed. *(THINK, Research) (ACT, Ownership of Learning)*

Invites students to write for outside audiences instead of writing for the teacher. *(KNOW, Structure of Knowledge)*

Details:

- You will have two days in the library to conduct research.
- Your final topic/thesis should be approved by March 13.
- You will conduct peer edits in class on March 21.
- Your final copy is due any time prior to the late bell on March 31st. Late papers will receive a penalty – (no excuses).

Requires only a final draft to be submitted to the teacher, giving students an opportunity to develop time management skills and revision skills that are essential to the writing process. *(ACT, Ownership of Learning)*

Alignment Strategy #3: Senior seminars

The development of senior or "college ready" seminars is a curriculum-based strategy that schools can use to better align their exit year to college and career readiness. These seminars are specially designed courses that seek to challenge students in ways that approximate what they will soon face in college. Seminars emphasize deeper understanding of previously taught content knowledge and an emerging awareness of the structure of knowledge in core academic subject areas. By engaging Key Cognitive Strategies, students learn to think about central questions of the disciplines, to consider emerging explanations and theories, and to develop an awareness of how experts in a discipline think about knowledge and understanding.

Ideally, seminars are integrative in nature, helping students make connections among things they have learned and develop insight into why these things are important to know and understand. In the process, they become better at formulating and solving problems; considering multiple, competing, and conflicting explanations of the same phenomenon; and accepting that not everything they have been taught to date will be forever and always true. This type of intellectual maturity helps students prepare for college learning environments. The following are a set of suggested features that distinguish senior seminars from regular high school classes.

- **Faster pacing**: While students may be accustomed to reading two or three pieces of literature in an English course, a senior seminar may expect them to read eight to ten novels. This expectation requires students to develop their self-management skills, including tracking and managing due dates to ensure all work is completed.
- **Fewer, more substantial assignments**: Senior seminars should rely less on daily homework assignments collected and graded by teachers. Students are expected to complete homework because the homework relates to the larger assignments, but homework is not checked. The effect of not doing the homework is clear when the larger assignments are turned in.
- **Required editing and redrafting**: Students may be expected to complete essays at three-week intervals. Producing quality products on such a regular timeline requires almost continuous drafting and editing of written work.
- **Independent research requirement**: Seminars should require students to conduct independent research papers that approximate the types of assignments given in entry-level college classes. Success requires well-developed research and analysis skills, including the ability to locate a range of relevant sources, to make determinations about the credibility and relevance of sources, to know how and when to cite, to paraphrase, and to quote.
- **Grading criteria tied to college readiness skills**: Mirroring college expectations, students should not have the option to complete extra credit, should have few if any allowances for late work, and should face strict penalties for plagiarism of any type.
- **Third-party discussion of student work**: Bringing a critical perspective from outside the school provides a scale against which student work can be evaluated in ways that match more closely how their work will be evaluated in college. Ideally, the person providing the feedback is a college-level instructor or someone with previous experience teaching entry-level college courses. However, other subject matter experts from the community can also serve in this role.

Conversation Points

For secondary:

- Does your school have processes in place to ensure that students taking similarly titled courses have the opportunity to learn equivalent content and skills?
- Does your school have processes in place to ensure that students are faced with content standards that increase in cognitive challenge year after year?
- Does your school have processes in place to ensure that the content students learn culminates at the college- and career-ready level?
- Do teachers at your school share or compare classroom policies and grading expectations with each other?

For postsecondary:

- Does your institution share information with high schools in your area regarding the content and challenge level of entry-level courses?
- Does your institution share information with high schools in your area regarding classroom policies and grading expectations in entry-level courses?

For both:

- What points of contact already exist between your institutions and others (secondary and postsecondary) in your area?
- What could you and your colleagues do to engage people at other institutions in your area about issues related to college and career readiness?


Partner

Partnership Planning Resources

center of EXCELLENCE
College and Career Readiness at Francis Marion University

The Center of Excellence can provide school districts, programs, and individual instructors with resources and additional advice for developing partnerships. Here are some ways that you can work with the Center to improve college and career readiness in your area:

Classroom Visits

The Center staff can facilitate classroom visits by connecting you with secondary or postsecondary classroom instructors in your area.

Professional Development Workshops

Interested schools can contact the Center to schedule professional development sessions on a variety of issues related to college and career readiness including soft skills, mindset, incorporating the Four Keys into the classroom, and other topics.

Readiness Leadership Workshops

In two day-long workshops, secondary and postsecondary teachers will learn how to deliver quality, interactive professional development sessions for South Carolina schools.

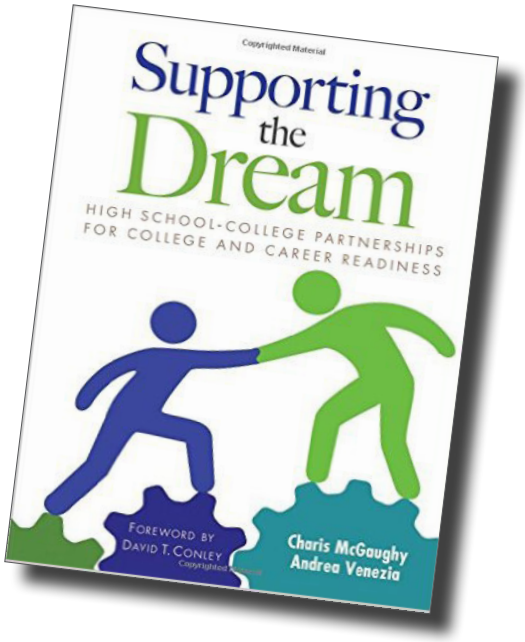
Advanced Readiness Institutes

Each year, the Center will prepare a program focused on an innovative teaching practice. For the 2015–2016 school year, the institute will focus on Project-Based and Problem-Based Learning.

Like us on Facebook

For more information, please "like" our Facebook page (Center of Excellence for College and Career Readiness) and consult our web page at www.screadiness.org to learn more about how the Center can help.

Partnership Planning Overview



Throughout the previous sections, you have seen examples of diagnostic and alignment strategies that can be used to help build secondary-postsecondary partnerships. These partnerships benefit instructors at both levels and, most importantly, they benefit students by creating a deeper understanding of what each institution expects and how each is gauging academic performance. As expectations between the two levels become more closely aligned, students who graduate from high school and pursue advanced training, certificates, and degrees will be better prepared for success.

The key question facing educators who want to partner is, "Where do we start?"

There is no one-size-fits-all approach to building successful partnerships, and a starting point may depend on factors such as the status of preexisting relationships, leadership, resources, and needs of different student groups in the community. In their book *Supporting the Dream*, authors Charis McGaughy and Andrea Venezia point out that there is no one correct way to foster a partnership between districts and postsecondary institutions.[54] Each community must build partnerships based on its own context. However, they describe multiple steps that can be used to facilitate the process.

Area 1: Establish Leadership and a Working Group

For a partnership to succeed, it must have the leadership and organizational capacity to engage and guide members toward a desired outcome. There are two levels of leadership that need to be established at the launch of a partnership: 1) high-level leadership that has decision-making and resource allocation authority to prioritize the work, and 2) facilitation leadership that includes the leaders responsible for implementing the work (often assistant superintendents/department chairs at the secondary level, deans at the postsecondary level, and program directors at community organizations).

Practically, the first step is to appoint a person who is passionate about your efforts to be a "convener" or the main point of contact. This person will be responsible for bringing all the major players together to begin the conversations around your partnership and for organizing ongoing meetings for the group. It is important for this facilitator to be well respected by all parties involved in the partnership.

Successful partnerships and connections must lead to more substantive and deeper relationships. These relationships can be difficult to establish and, due to the historical separation between secondary and postsecondary institutions, there can be a tendency for participants to blame others for a lack of student readiness. A skilled college and career readiness partnership leader (or leadership team) can help navigate these conversations and move beyond them to focus productively on the priorities and experiences educators have in common.

54 McGaughy, C., & Venezia, A. (2015). *Supporting the dream: High school-college partnerships for college and career readiness.* Thousand Oaks, CA: Corwin.

Area 2: Develop a Vision

Creating a shared vision is essential for buy-in, support, and coordination of efforts. The leadership team must agree on a vision statement with concise goals to bring into focus the activities you wish to implement. Creating the vision statement and establishing actionable goals should be a primary objective of the first partnership meeting.

In order to help a group define goals and determine a partnership activity, consider using the Planning Steps Guide provided on pages 59–60 of this toolkit. The guide helps educators use data to prioritize goals, map current efforts to the Four Keys to College and Career Readiness, and think through the planning items needed to develop a successful partnership.

Remember, initial partnership activities might start with small events that are relatively easy to organize such as classroom visits, assignment sharing, joint student work scoring sessions, or quarterly meetings with secondary and postsecondary representatives. While these do not take the place of comprehensive action planning, they can provide a forum for partners to establish relationships and begin to assess priorities, before moving on to loftier goals.

Area 3: Selecting an Organizing Structure or Model

The next step is to determine an organizing structure for operating the partnership. Partnership work does not need to start from scratch. There is a good chance the type of initiatives you are considering have already been implemented in another school, district, or state. If you are able to use existing models, such as the Early High School structure, the International Baccalaureate program, a positive behavior incentive program, or a Cornell notes curriculum, there are existing materials and resources available online.

Area 4: Creating a College and Career Readiness Culture

Now, we return full circle to the Seven Principles of College and Career Readiness (see page 16). Building a culture of college and career readiness includes making success after high school an explicit community-wide goal. With the leadership of a dedicated team and the commitment of teachers each day, efforts should clearly focus on making sure each student can be successful after high school. Creating a college and career readiness culture should entail working with students to set individual goals and providing students with opportunities to explore their interests. College and career readiness does not mean setting the bar for all students to go to a four-year college or university, but rather providing programs and opportunities tailored to students' interests and postsecondary goals.

Planning Steps

Maximizing Partnerships for the Future

1. **Prioritize.**
   As a group, review data included in this toolkit or from other sources to determine areas in need of improvement and to establish a baseline to measure improvement. Prioritize the college and career readiness goals that are most pressing in your institution or region.

2. **Map.**
   Using the Mapping Activity Sheet on page 14, map current college and career readiness practices, initiatives, and efforts in your local educational setting to the Four Keys categories: THINK, KNOW, ACT, and GO. Then, discuss the initiatives already in place that may address your goals. Choose a partnership activity on which to focus that addresses your college and career readiness goals.

3. **Plan.**
   Use the Plan worksheet to consider goals, resources, barriers, timeline, etc., for your partnership activity (or activities). Be sure to collect the contact information for each team member.

Prioritize

Prioritize the college and career readiness goals that are most pressing in your region.
Example: Increase the number of students placing into credit-bearing general education courses.

Plan

Comprehensive Partnership Plan

Partnership Activity	Goals and Evidence of Success
Available Resources	Barriers and/or Resources Needed
Next Steps/Who's Responsible	Timeline

Partnerships in Action: Horry County and Coastal Carolina University

For more than ten years, the Scholars Academy has served Horry County Schools' gifted learners in Grades 9–12 through a partnership with Coastal Carolina University (CCU). The Scholars Academy strives to educate students at the "rate and with the level of academic rigor commensurate with their ability so they can graduate as confident, responsible, lifelong learners who are prepared to succeed in higher education and in the world beyond."[55]

Students apply for admission during their eighth-grade year, and those who are admitted benefit from the collaborative efforts between the district and Coastal Carolina University. One physical marker of the strength of this partnership is the Scholars Academy building, which is dedicated exclusively to the program. Constructed by Horry County Schools in 2013 on land leased from CCU, the building combines 21st-century learning design with high school functionality including controlled access and a student drop-off site.

The shared sense of ownership over students' success is also evident in the learning opportunities available to students. Students in Grades 9 and 10 focus on meeting high school graduation requirements through advanced courses primarily taught by Horry County Schools teachers, with some opportunities for college-level coursework. In Grades 11 and 12, students engage in both Advanced Placement and college courses, under the instruction of secondary teachers and CCU professors. Increased enrollment since 2003 and the success of Scholars Academy students reflect what is possible through committed secondary and postsecondary partnerships.[56]

HCS
Horry County Schools

55 Horry County Schools. (n.d.). Scholars Academy. Retrieved from http://scholars.horrycountyschools.net/pages/Scholar_s_Academy/

56 Grooms, V. (2013). New building to give Horry County Schools' Scholars Academy its own home on CCU campus. Retrieved from http://www.myrtlebeachonline.com/news/local/education/article16657508.html

Partnerships in Action: Career Pathways

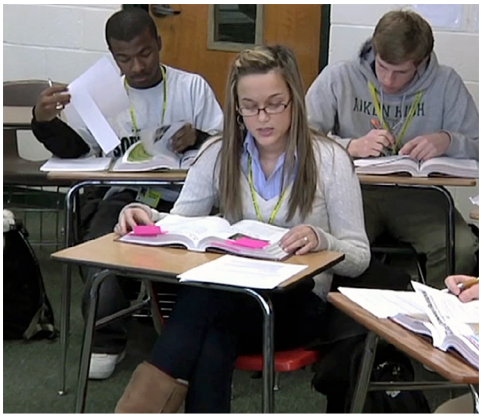
Tri-County Technical College hosts a program called Career Pathways for High School Students that provides high school students early access to technical college and promotes pathways for careers in ten different clusters from Agriculture to Health Science to STEM.[57] The program provides college courses for free for students interested in pursuing professions identified by the state as "critical needs" areas. The program has been a resounding success, with 51 students participating in the 2014–2015 school year and 188 new students enrolled in 2015–2016.

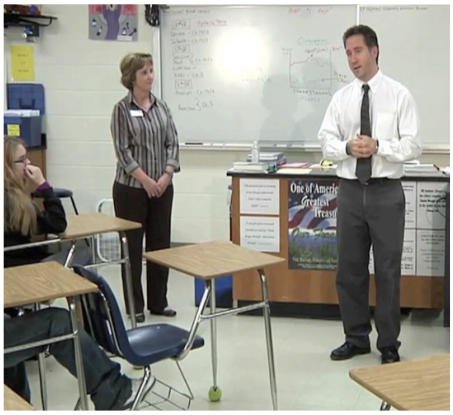
Current industry needs in Anderson, Oconee, and Pickens counties include heating, ventilation and air conditioning; welding; automotive technology; and mechatronics (a combination of mechanical engineering, electrical engineering, telecommunications engineering, control engineering, and computer engineering). With state funding, some high school students are eligible to receive help with tuition, books, and even transportation as they complete courses toward a two-year degree.

Companies such as Michelin, the automotive tire company, have also formed partnerships with Tri-County Technical College to identify industry needs and then offer jobs with competitive salaries to students who complete their two-year degrees.

The advantage of completing a degree in two years, entering the work force early, and earning a very competitive salary is appealing to students and parents. Some of the companies will even pay their employees to continue their education and pursue advanced degrees while working. Spokespersons for the program are working to provide early guidance to eighth-grade students and families about the professional opportunities related to STEM and the manufacturing industry, so that students can consider manufacturing as a career pathway for their future.

57 Poovey, B. (2015, June 29). Career pathways puts high schoolers on job fast track. *Charleston Regional Business Journal*. Retrieved from http://www.charlestonbusiness.com/news/54925-career-pathways-puts-high-schoolers-on-job-fast-track?rss=0





Working Together for a Better South Carolina

This toolkit has been developed in a time of significant change relative to education in the state of South Carolina. While those changes bring uncertainty, they also provide a new set of possibilities—to converse, collaborate, and create new realities for our state's students. We hope this toolkit will help facilitate conversations and collaborations among the many education stakeholders in our state and that those conversations result in new possibilities for the coming generations of South Carolina graduates.

We at the Center of Excellence for College and Career Readiness are excited to be a part of the future of education in our state. For more information, visit www.screadiness.org or email readiness@fmarion.edu.

Appendix A: Resources

The following pages provide an extensive list of targeted resources for educators. The resources are organized into categories for easy navigation.

Adolescent Literacy

AdLit.org. Retrieved from http://www.adlit.org

AdLit is a national multimedia project that offers a wide breadth of resources for parents and educators of struggling readers in Grades 4–12. The site includes teaching strategies, graphic organizers, suggested reading lists, and research articles about a variety of topics related to adolescent literacy.

Graham, S., & Hebert, M. (2010). *Writing to read: Evidence for how writing can improve reading* (Carnegie Corporation Time to Act Report). Washington, DC: Alliance for Excellent Education. Retrieved from https://www.carnegie.org/media/filer_public/9d/e2/9de20604-a055-42da-bc00-77da949b29d7/ccny_report_2010_writing.pdf

Graham, S., & Perin, D. (2006). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools*. Washington, DC: Alliance for Excellent Education. Retrieved from http://all4ed.org/articles/writing-next-new-alliance-report-trumpets-writing-as-an-important-component-to-literacy-instruction-and-as-a-predictor-of-academic-success/

Assessment

Association for Supervision and Curriculum Development (ASCD). (2010). Giving students meaningful work. *Educational Leadership, 68*(1). Retrieved from http://www.ascd.org/publications/educational-leadership/sept10/vol68/num01/toc.aspx

Blythe, T., Allen, D., & Powell, B. S. (1999). *Looking together at student work*. New York: NY Teachers College Press.

Heritage, M. (2007). Formative assessment: What do teachers need to know and do? *Phi Delta Kappa, 89*(2), 140–145.

Popham, W. J. (2009). Assessing student affect. *Educational Leadership, 66*(8), 85–86. Retrieved from http://www.ascd.org/publications/educational-leadership/may09/vol66/num08/Assessing-Student-Affect.aspx

Career Readiness and Planning

ACT. (2009). The path to career success: High school achievement, certainty of career choice, and college readiness make a difference. Retrieved from https://www.act.org/research/policymakers/pdf/PathCareerSuccess.pdf

Connecticut Department of Labor. (2014). Today's youth – tomorrow's workforce. Retrieved from https://www.ctdol.state.ct.us/youth/main.htm

The Project Management Office of the Connecticut Department of Labor provides career self-assessment tools for students' skills, values, and interests. The website Includes information for career exploration, job training beyond high school, and tips for creating resumes, cover letters, job applications, and networking.

DeWitt, S. (2012). Career readiness: Has its time finally come? *Techniques: Connecting Education & Careers 87*(3), 17–19.

Gebhard, N., McAllister, B., & Marriner, M. (2015). *Roadmap: The get-it-together guide for figuring out what to do with your life*. San Francisco, CA: Chronicle Books.

Pawlewski, Sarah. (2015). *Careers: The graphic guide to finding the perfect job for you.* New York, NY: DK Publishing.

United States Bureau of Labor Statistics. Occupational outlook handbook. (2015). Retrieved from http://www.bls.gov/ooh

The Bureau of Labor Statistics website provides information on career industries including training requirements, earnings, job forecasts, and working conditions.

University of Delaware Career Services Center. (2012). Major resource kits. Retrieved from http://www.udel.edu/CSC/students/major_resource_kits.html

Major Resource Kits link academic majors to career alternatives by providing information on career paths, sample job titles, and a short bibliography of Career Resource Center materials available to students in a particular major.

College Readiness and Planning

ACT. (2015). Why go to college? Retrieved from http://www.actstudent.org/college/

ACT provides information and guidance on academic preparation, applying to college, choosing a college, and a year-by-year college planning checklist for high school students.

College Board. Retrieved from http://www.collegeboard.org

The College Board website provides links to information on the SAT test, Advanced Placement tests, a college search engine, and college-planning information for students and their families.

The Common Application. Retrieved from http://www.commonapp.org

The Common Application provides a common, standardized college application form for more than 400 higher education institutions across the U.S. including public and private, large and small, highly selective and modestly selective colleges.

Conley, D. (2008). Rethinking college readiness. *New Directions for Higher Education, 144*, 3–13.

Mapping Your Future. Retrieved from http://mappingyourfuture.org

This website outlines steps that students need to take in each grade for future success. Students can explore careers, prepare for college, get help with selecting a school and applying for admission, learn how to pay for college (financial aid), and understand money management strategies.

NUMBER2.com. Retrieved from http://www.number2.com

This website provides online test preparation courses for the SAT and ACT tests that include user-friendly tutorials, vocabulary building, and practice sessions adapted to each student's ability level.

Peterson's. Retrieved from http://www.petersons.com

Peterson's is a comprehensive guide to college information including a searchable database of colleges, tips for applying to colleges and preparing for entrance examinations, and scholarship information.

English Language Learners

Manyak, P. C., & Bauer, E. B. (2009). English learners: English vocabulary instruction for English learners. *The Reading Teacher, 63*(2), 174.

WordSift. Retrieved from http://wordsift.com

A resource particularly useful for English language learners (ELLs), WordSift helps students engage with vocabulary and academic language through interactive word maps. The maps show the relation of words to one another, allowing students to visualize and explore language more deeply. WordSift also offers an audio feature so students can hear the way the words sound in speech.

Financial Aid

FAFSA4caster. Retrieved from https://fafsa.ed.gov/

FAFSA4caster is the U.S. Department of Education's tool for students and parents to estimate a student's eligibility for federal financial aid.

FastWeb. Retrieved from http://www.fastweb.com

FastWeb is a searchable scholarship database with tips for applying to college and financial management tools.

Office of Federal Student Aid. Retrieved from https://studentaid.ed.gov/sa

This website is a source for free information, guidance, and tools for federal student assistance for higher education. This is also the home of the Free Application for Federal Student Aid (FAFSA), which is the basis for consideration for student financial aid.

United States Department of Education. (2014). *Be a responsible borrower: Plan ahead and graduate with less debt.*

This document from the Office of Federal Student Aid outlines the decisions that students and families need to make when they plan to borrow money to pay for an education. It covers what types of federal student loans are available, how much to borrow, the difference between private and federal student loans, and other helpful hints on how to manage debt.

College and Career Readiness: State Programs and Reports

ACT. (2014). The condition of college and career readiness 2014: National. Retrieved from http://www.act.org/research/policymakers/cccr14/pdf/CCCR14-NationalReadinessRpt.pdf

American Institutes for Research. (2013). How career and technical education can help students be college and career ready: A primer. Retrieved from http://www.aypf.org/wp-content/uploads/2013/04/CCRS-CTE-Primer-2013.pdf

Advancement Via Individual Determination (AVID). (2014). AVID Center–Rice University College Readiness Initiative takes a multifaceted approach to improve student success. *Access, 20*, 1–12. Retrieved from http://collegeready.rice.edu/sites/default/files/ACCESS_Fall_2014.pdf

Duffy, H., & Darwin, M. (2013). The district roles in supporting college and career readiness for students: Prospective from Long Beach, Albuquerque, and Philadelphia. Retrieved from http://www.ccrscenter.org/

Educational Policy Improvement Center. (2009). *Creating college readiness: Profiles of 38 schools that know how*. Retrieved from http://www.epiconline.org/creating-college-readiness/

Educational Policy Improvement Center. (2009). *Massachusetts regional alignments workshops: Final report.* Retrieved from http://files.eric.ed.gov/fulltext/ED537871.pdf

Educational Policy Improvement Center. (2011). *Connecticut college and career readiness toolkit.* Retrieved from http://www.ct.edu/files/pdfs/p20/p20-CT-Toolkit.pdf

Lockard, C. B., & Wolf, M. (2012). Employment outlook: 2010–2020. Occupational employment projections to 2020. Retrieved from http://www.bls.gov/

McGaughy, C., Bryck, R., & Gonzáles, A. (2012). *California diploma project technical report III: Validity study.* Retrieved from http://www.epiconline.org/cdp-technical-report3-validity/

McGaughy, C., & Gonzáles, A. (2012). C*alifornia diploma project technical report I: Crosswalk study.* Retrieved from http://www.epiconline.org/cdp-technical-report1-crosswalk/

McGaughy, C., & Gonzáles, A. (2012). *California diploma project technical report II: Alignment study.* Retrieved from http://www.epiconline.org/cdp-technical-report2-alignment/

Key Cognitive Strategies (THINK)

Adams, M. (2013). *Teaching that changes lives: 12 mindset tools for igniting the love of learning*. San Francisco, CA: Berrett-Koehler.

Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How learning works: Seven research-based principles for smart teaching*. San Francisco: Jossey-Bass.

Association for Supervision and Curriculum Development (ASCD). (2008). Teaching students to think. *Educational Leadership, 65*(5).

Cabrera, D., & Colosi, L. (2009). *Thinking at every desk: How four simple thinking skills will transform your teaching, classroom, school, and district*. Ithaca, NY: Research Institute for Thinking in Education.

Dweck, C. (2006). *Mindset: The new psychology of success*. New York, NY: Ballantine.

Hoerr, T. (2013). *Fostering grit: How do I prepare my students for the real world?* Alexandria, VA: ASCD Arias.

Jensen, E., & Snider, C. (2013). *Turnaround tools for the teenage brain: Helping underperforming students become lifelong learners.* San Francisco, CA: Jossey-Bass.

Klaus, P. (2007). *The hard truth about soft skills: Workplace lessons smart people wish they'd learned sooner.* New York, NY: HarperCollins.

Nilson, L. (2013). *Creating self-regulated learners: Strategies to strengthen students' self-awareness and learning skills*. Sterling, VA: Stylus.

Perkins-Gough, D. (2013). The significance of grit: A conversation with Angela Lee Duckworth. *Educational Leadership, 71*(1), 14–20.

Ricci, M. C. (2013). *Mindsets in the classroom: Building a culture of success and student achievement in schools*. Waco, TX: Prufrock Press.

Ritchhart, R. (2002). *Intellectual character: What it is, why it matters, and how to get it*. San Francisco: CA: Jossey-Bass.

Rose, M. (2005). *The mind at work: Valuing the intelligence of the American worker.* New York, NY: Penguin.

Rothstein, D., & Santana, L. (2011). *Make just one change: Teach students to ask their own questions.* Cambridge, MA: Harvard Education Press.

SpringBoard. Retrieved from http://professionals.collegeboard.com/k-12/prepare/springboard

SpringBoard provides instructional resources for ELA and mathematics, encouraging students to take control of their own learning.

Key Content Knowledge (KNOW)

Key Content Knowledge: English/Language Arts

Acker, S., & Halasek, K. (2008). Preparing high school students for college-level writing: Using ePortfolio to support a successful transition. *The Journal of General Education, 57*(1), 1–14.

Council of Writing Program Administrators. (2011). Framework for success in postsecondary writing. Retrieved from http://wpacouncil.org/framework

The Literacy Web. Retrieved from http://www.literacy.uconn.edu

Designed by the University of Connecticut, The Literacy Web is an online tool to assist teachers in literacy instruction. It links teachers to resources that support best practices and ideas for integrating literacy strategies in the classroom. The website also provides links to current literacy research and professional development resources.

Oczkus, L. D. (2010). *Reciprocal teaching at work: Powerful strategies and lessons for improving reading comprehension* (2nd ed.). Newark, DE: International Reading Association.

Purdue Online Writing Lab (OWL). Retrieved from http://owl.english.purdue.edu/owl

The Online Writing Lab (OWL) at Purdue University offers a range of writing and instructional material at no cost. This site provides general writing resources for the writing process, academic writing, mechanics, grammar, punctuation, and rhetorical devices as well as resources for subject-specific writing. Additionally, teachers and tutors can find guides for developing writing curriculum.

TeacherVision. Retrieved from http://www.teachervision.fen.com

TeacherVision is a collection of more than 20,000 resources for teachers, including lesson plans, quizzes, graphic organizers, games, and other printable materials. Users can search for resources by grade level, subject, or theme. TeacherVision is a subscription-based site but offers a free trial.

Thinkmap Visual Thesaurus. Retrieved from http://www.visualthesaurus.com

This interactive online tool allows students to input a word and the Visual Thesaurus will create a visual word map. The tool aids understanding and encourages students to view and explore vocabulary in unique and novel ways.

Key Content Knowledge: Mathematics

Brutlag, D. (2009). *Active algebra: Strategies and lessons for successfully teaching linear relationship, grades 7–10*. Sausalito, CA: Math Solutions.

Burger, E. B., & Starbird, M. (2010). *The heart of mathematics: An invitation to effective thinking*. (3rd ed.). New York: NY: Wiley.

Carpenter, T. P., & Romberg, T. A. (2004). *Powerful practices in mathematics and science*. Naperville, IL: Learning Point.

Core-Plus Mathematics Project. Retrieved from http://www.wmich.edu/cpmp

Core-Plus Mathematics is a four-year math curriculum from the National Science Foundation that features interwoven strands of math subjects and focuses on habits of mind and connections between subjects.

Drexel School of Education, Drexel University. (2006). Scaffolding for the math writing (and talking) process. Retrieved from http://mathforum.org/pow/teacher/writingdev.pdf

This short handout provides teacher questions to facilitate student work on rich tasks. Facets of problem solving addressed include figuring out a solution path, explaining a solution, asking questions when stuck, and reflecting to improve and extend solutions. Also briefly described are typical learning and writing stages and tips for responding to students' reluctance to write out solutions.

Education Development Center. (2003). Making mathematics: Teacher handbook. Retrieved from http://www2.edc.org/makingmath/mathproj.asp

Part of the website for Making Mathematics, a 10-year research project, the Teacher Handbook is a valuable resource for teachers using open-ended research projects with students. The website provides information on helping students during research and about what a research sequence

might look like. Also provided are introductory explorations that highlight the stages of performing research and help students gradually build up their persistence.

National Council for Teachers of Mathematics. (2015). Principles and standards for school mathematics. Retrieved from http://www.nctm.org/standards

The Principles and Standards were designed by a commission appointed by the National Council for Teachers of Mathematics to provide guidance for educational decision makers. They describe the mathematical understanding, knowledge, and skills that students should acquire from prekindergarten through the twelfth grade.

Key Content Knowledge (Science)

Carpenter, T. P., & Romberg, T. A. (2004). *Powerful practices in mathematics and science*. Naperville, IL: Learning Point.

Hoffer, W. W. (2009). *Science as thinking: The constants and variables of inquiry teaching, grades 5–10*. Portsmouth, NH: Heinemann.

National Research Council. (2005). *How students learn: Science in the classroom*. Washington, DC: National Academies of Science.

Next Generation Science Standards. Retrieved from http://www.nextgenscience.org

These standards are designed to provide all students an internationally benchmarked science education.

Rutherford, F. J., & Ahlgren, A. (1990). *Science for all Americans*. New York: NY: Oxford University Press.

Key Content Knowledge (Social Studies)

ProCon.org. Retrieved from http://www.procon.org

ProCon.org is a 501(c)(3) nonprofit public charity that exists to provide resources for critical thinking and to educate without bias. Considered a resource that provides quality, sourced information, ProCon.org might be a reference tool for educators and students engaged in breaking down controversial issues.

Key Learning Skills and Techniques (ACT)

Cornell Learning Strategies Center. Retrieved from http://lsc.cornell.edu

The Center has several study skills resources available for download, including a template and directions for using the Cornell note-taking system. Also included are resources related to time management, reading and learning from lecture, studying for and taking exams, and stress management.

Learning and Study Strategy Inventory (LASSI). Retrieved from http://www.hhpublishing.com/_assessments/LASSI/

The LASSI is an assessment that measures students' awareness regarding the use of learning and study strategies related to skills, will, and self-regulation components of strategic learning.

Key Transition Knowledge and Skills (GO)

American School Counselor Association. (2015). Standards for school counseling programs. Retrieved from http://www.schoolcounselor.org

These standards for school counseling programs encompass academic, career, and social goals for students.

Knight, M. G., & Marciano, J. E. (2013). *College ready: Preparing black and Latina/o youth for higher education—A culturally relevant approach*. New York, NY: Teachers College Press.

KnowHow2Go. Retrieved from http://www.knowhow2goct.org

This college-planning website, provided by the American Council on Education and the Lumina Foundation for Education, gives information for middle and high school students and mentors in Connecticut.

Office of Federal Student Aid. Retrieved from https://studentaid.ed.gov/sa/prepare-for-college

The Preparing for College section of the Federal Student Aid website walks students through various steps in getting ready for college: from exploring career options, to choosing and applying to schools, to taking required tests, and to getting financial aid.

Middle School to High School Transition

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Project-Based and Problem-Based Learning

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Bender, W. N. (2012). *Project-based learning: Differentiating instruction for the 21st Century*. Thousand Oaks, CA: Corwin.

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Technology

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Microsoft. (2015). Guides by impairment. Retrieved from http://www.microsoft.com/enable/guides/

On this website, guides for specific types of difficulties and impairments describe assistive technology products and links to tutorials for accessibility features. An additional guide, specifically for educators, focuses on understanding how accessibility affects the classroom and how to choose technology solutions.

Whitaker, T., Zoul, J., & Casas, J. (2015). *What connected educators do differently*. New York, NY: Routledge.

Other Resources

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AVID is a college readiness program currently offered in more than 1,500 middle and high schools. Research indicates that it can raise student achievement by creating a culture of high expectations and support for students to meet those expectations.

MyRoad. Retrieved from https://myroad.collegeboard.com/myroad/navigator.jsp

A college and career planning resource from the College Board offering validated personality assessments and suggested careers and majors, tips for postsecondary success, and other resources for college and career planning.

Naviance. Retrieved from http://www.naviance.com

Naviance specializes in K–12 educational resource products designed to support students in planning and preparing for graduation, college, and careers. The Naviance suite includes test preparation, learning inventories, community surveys, and data management tools, among other applications.

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