



Work Readiness

Agenda

Introduction

Roll Call

Approval of Minutes

Presentation: Dale Winkler, Ed.D. – Southern Regional Education Board

Discussion: Work Plan

Public Comment

Next steps



FLORIDA TALENT DEVELOPMENT COUNCIL

Workgroup Meeting Minutes

Group 2: Workforce Readiness

Tuesday, October 22, 2019

1:30 pm – 3:00 pm

Roll Call

Members Present:

Representative Rene Plasencia, Workgroup Chair

Bob Ward

Art Hoelke

Warren Davis

Keantha Moore

Tiffany Barfield

Ted Norman

Others Present:

- Joel Schleicher, Council Chair

Department of Economic Opportunity Support Staff Present:

- Katie Crofoot Liebert
- Nicole Duque
- Katherine Morrison
- Emilie Oglesby
- Monica Rutkowski
- Lorena Clark

Introduction: Welcome, Roll Call and Approval of Minutes

- Representative Rene Plasencia welcomed members and Katie Crofoot Liebert called roll.
- Workgroup members approved the October 18, 2019 meeting minutes as presented.

Presentations

Ted Norman presented on apprenticeships.

Discussion

- Representative Plasencia opened for discussion to the group. Discussion topics among workgroup members included:
 - Difference between internship and apprenticeship
 - Preapprenticeships
 - Financial availability
 - Awareness of apprenticeships
 - Perception/misconceptions of apprenticeships
 - European apprentice model
 - Criteria and constraints within federal system
- Goals and strategies discussed:

The logo features a cluster of 3D cubes in blue, red, yellow, and white, arranged in a geometric pattern.

FLORIDA TALENT DEVELOPMENT COUNCIL

- Survey on apprenticeships
- Identification of barriers
- Education and awareness
- Expanding apprenticeships
- Identifying needs
- Next steps:
 - Suggestion to have subject matter expert for the Florida Education and Training Placement Information Program (FETPIP) on the next call.

Public Comment

Katie Crofoot Liebert opened for public comment. No members of the public commented on the call.

Closing

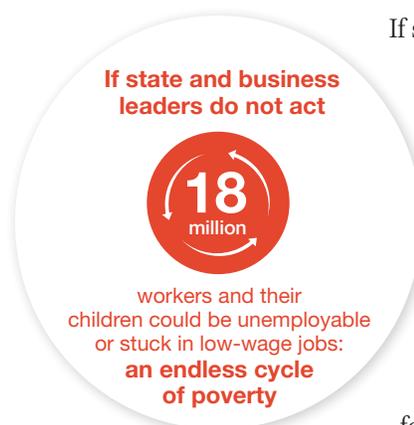
Representative Plasencia and Katie Crofoot Liebert gave closing remarks. Meeting was adjourned.

The SREB Region's Economic Outlook

The Potential Impact of Automation and AI

Many American workers find themselves in a continuous struggle to keep up with advances in automation and artificial intelligence that could potentially displace them from a growing list of occupations. Nearly every day articles and online videos highlight new technologies. We learn about machines being tested to deliver packages to homes autonomously. A robotic interviewer in Sweden now questions job applicants in an attempt to eliminate human bias from the hiring process. And researchers are working on an ocular implant for humans to record everything their eyes see during the day.

As companies continue to incorporate new technologies, making machine learning and robotics common in almost all workplaces, more and more working adults need to adapt to computerized work activities. Many need to move into new jobs raising their skill levels, or they will be out of a job altogether. According to SREB's *Unprepared and Unaware: Upskilling the Workforce for a Decade of Uncertainty*, adults with the lowest levels of skills — typically those with a high school credential or less — are most vulnerable to these changes.



If states and industry leaders do not act quickly to prepare employees for these workplace transformations, 18 million or more adults will find themselves in low-paying positions or out of a job and increasingly reliant on public services. Businesses will struggle to fill middle- and high-skilled positions. Children — future workers — will face similar struggles and likely be unprepared for future positions, worsening these problems for states and businesses.

Low-skill positions in the workforce, especially those requiring repetitive manual labor, are being eliminated by automation. But many are also being transformed to middle-skill positions — those available to adults with more than a high school diploma but less than a 4-year degree. As these jobs change, the employees holding them will need to change, too, either by increasing their skill level or by moving to a new job altogether. This leaves many in education and industry asking not “Will there be enough jobs?” but “Will there be enough skilled workers to fill the jobs that are available?” And without significant investment from states and businesses, there will be even fewer skilled workers in the future.

Low-skilled workers are costly for states and businesses. They earn less and thus pay less in taxes. They are more likely to live in poverty and to depend on costly social welfare programs. Businesses have trouble filling important jobs and experience decreased productivity while they invest more to train employees.

States will need to help low-skilled adults earn diplomas and postsecondary degrees and certificates if they hope to supply the expanding middle-skill job market. And states will need to do so at a rate that keeps up with technological advancements.

The SREB region is additionally challenged to catch up with other states in the nation — states that already have more workers with higher skills and more businesses that rely on those skills to flourish. The region is already behind. States will need to make a large and concerted effort if they are to prepare the workforce for the uncertain future that technology is already delivering. SREB states’ efforts will need to be greater than the rest of the country if they hope to become competitive. And those efforts need to begin now. What could the future hold if they do not step up to these challenges? Let’s take a look.

Many in education and industry are asking not “Will there be enough jobs?” but “Will there be enough skilled workers to fill the jobs that are available?”

Automation Potential

In 2017, researchers at the McKinsey Global Institute analyzed more than 2,000 work activities across 800 occupations to determine what portion could be automated using currently demonstrated technologies. This *technical automation potential* will manifest differently across occupations and geographic areas over time, depending on five key factors: technical feasibility, the cost of automating, labor market dynamics, economic benefits, and regulatory and social acceptance. McKinsey researchers found that **at least 30 percent of work activities in about 60 percent of occupations have the potential to be automated**. Five percent of occupations were *completely* automatable.

Just 5%
of jobs are completely
automatable, but
44%
of all work activities
have automation
potential

Jobs are much more likely to change than be eliminated. Each occupation consists of various work activities — some that can be automated with currently demonstrated technologies, and some that cannot. So, potential automation is reported as percentages of work activity, not numbers of jobs. Almost all employees will be increasingly likely to work alongside machines or to see their daily tasks change in some capacity as technology infiltrates the work place. Most workers — at all skill levels — will be affected by these technological changes, but those with the lowest skill levels are more likely to be negatively affected. McKinsey estimates that across the United States, total automation potential of all work activities is 46 percent. In the SREB region, 44 percent of all work activities are potentially automatable.

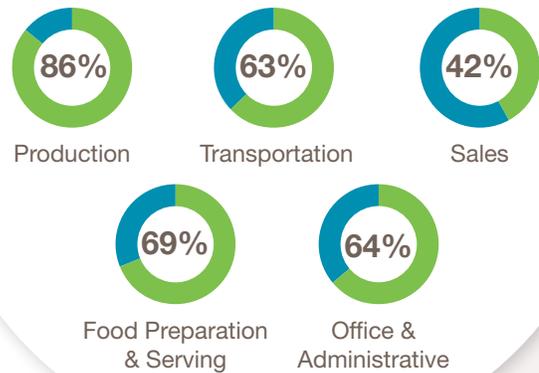
The Bureau of Labor Statistics sorts more than 800 occupations into 22 industry categories, each of which McKinsey assigns a different automation potential. Nationwide, automation potential of work activities varies across these categories from just 15.7 percent for business and financial operations to 86.3 percent for production occupations.

SREB analyzed the automation potential in the *top 5 industry categories*, defined as those industries that employ the most people in each state. Across the region, among the 22 categories identified by BLS, just eight account for the top 5 in every state. These eight are listed as top industry categories in the table below. It is notable that McKinsey found that **four of the top five in the SREB region also rank highest for potential for automation**, with more than 62 percent of work activities in each category potentially automatable.

Across the SREB region, 52 percent of all workers — nearly 26 million people — are in a top 5 industry category, ranging from under 47 to over 54 percent across states.

Most of the 50 million workers in the region will be affected by automation in the coming decades

Automation potential in the top 5 industry categories in the SREB region



Top Industry Categories by Number of Employees in Each SREB State

Industry Category	Number of SREB states having this category as one of the top 5	Number of SREB workers in a state's top 5 category
Food Preparation and Serving Related Occupations	16	4,873,020
Sales and Related Occupations	16	5,527,360
Office and Administrative Support Occupations	16	7,878,070
Transportation and Material Moving	14	3,359,020
Production Occupations	11	2,062,390
Healthcare Practitioners and Technical Occupations	4	679,570
Education, Training and Library Occupations	2	979,220
Business and Financial Operations	1	261,530

Source: U.S. Bureau of Labor Statistics, 2018

Examples of jobs in each of these industry categories:

1. Food Preparation and Serving Related Occupations
Chefs, first-line supervisors, line cooks, bartenders, waiters and waitresses, dishwashers, and hosts and hostesses
2. Sales and Related Occupations
Retail salespersons, advertising sales agents, insurance sales agents, travel agents, and telemarketers
3. Office and Administrative Support Occupations
Bill and account collectors, payroll and timekeeping clerks, court clerks, financial clerks, and hotel desk clerks
4. Transportation and Material Moving
Taxi drivers, ambulance drivers, ship engineers, parking lot attendants, industrial truck and tractor operators, and refuse and recyclable material collectors
5. Production Occupations
Engine and machine assemblers, food and tobacco batch makers, welders, dry-cleaning workers, and water treatment plant and system operators
6. Healthcare Practitioners and Technical Occupations
Pharmacy technicians, physician assistants, veterinarians, registered nurses, dental hygienists, and surgical technologists
7. Education, Training and Library Occupations
Postsecondary teachers, special education teachers, adult basic and secondary education and literacy teachers and instructors, and librarians
8. Business and Financial Operations
Insurance appraisers, fundraisers, training and development specialists, budget analysts, credit counselors, tax preparers, and meeting, convention, and event planners

As *Unprepared and Unaware* points out, the workers most vulnerable to technological advancements are those who have a high school credential or less. As businesses automate various activities, fewer low-skilled workers will be necessary in the workplace. But industries that require more high-skilled workers already struggle to fill positions, and this trend is likely to increase over time.

Using national educational attainment averages and state occupational data from the Bureau of Labor Statistics, SREB estimated the number of workers with high school credentials or less in 2016 in each occupational category in each state. Of the 50.4 million people employed in the SREB region, 18.4 million — 37 percent — had a high school credential or less. These adults are the region's *vulnerable workers* — those most likely to struggle to keep up with changes in the workforce and to need more education in the years ahead. And of all the vulnerable workers in the region, 59 percent were employed in a top 5 industry category.



Student Readiness

The National Assessment of Education Progress and other similar assessment measures have shown that children’s educational attainment is correlated with that of their parents. NAEP asks students in the eighth and twelfth grades to report their parents’ educational attainment as they take the assessments; their results are reported by the percentage of students who score at each proficiency level and by parental education levels: “did not finish high school,” “graduated high school,” “some education after high school,” “graduated college” and “unknown.”

Throughout the SREB region in both reading and math, a smaller percentage of students who reported lower levels of parent educational attainment performed at the Basic and Proficient levels than did students who reported higher levels of parent educational attainment.

8th Grade NAEP Performance in the SREB Region, 2017

Percentage of students by parental education level

Parental education level	Reading		Math	
	below Basic	at or above Proficient	below Basic	at or above Proficient
Did not finish high school	39	19	49	13
Graduated high school	36	21	48	15
Some education after high school	22	33	32	26
Graduated college	20	41	26	39
All students	27	31	34	29

Source: National Center for Education Statistics, 2017

The disappointing news is that from 2013 to 2017 the percentage of eighth grade students in the SREB region scoring at or above the Basic level in reading and math fell by 3 and 5 percentage points respectively. The percentage of students performing at or above the Proficient level on NAEP in reading and math fell as well — by 1 and 2 percentage points. Just 31 percent of eighth grade students scored at or above the Proficient level in reading in the SREB median state in 2017, while fewer — 28 percent — scored at this level in math that same year. These results indicate that too few SREB states have sufficiently raised reading and math achievement for most middle graders to ensure that overall they are ready for the rigors of high school.

SREB studied National Center for Education Statistics enrollment data to analyze student advancement trends — based on the percentage of students who move from middle school into high school through graduation and on to college completion. This student progression has remained relatively consistent in recent years. Applying these trends, approximately one in three eighth graders enrolled in 2017 will complete college within six years of their class’s high school graduation date. The high school graduates are more likely to be those who scored at or above the Proficient level on NAEP. One in four will likely not complete any education beyond high school.

Educational Attainment

Across the SREB region, 41 percent of adults ages 18 to 64 had no education beyond high school in 2017. If student achievement trends continue, no more than one in four currently enrolled students will be educated beyond high school, and their children will likely face the same grim scenario as their parents — especially as automation continues to force low-skilled workers out of jobs. Many, like their parents and grandparents before them, will earn incomes below the poverty line and be reliant on state-funded social services.

If state policymakers and business leaders don't act quickly to raise the educational attainment levels of both parents and students in the region, the region is going to fall further behind the rest of the nation. Currently, low unemployment rates mean states have a smaller pool from which to hire workers, which masks — particularly in the South — the low-skill level of many workers and the need to retrain and educate them now. Many areas in the SREB region are still able to employ low-skilled workers, but in the future many of the jobs available to adults with lower educational attainment will go away. Today's low-skilled employees will need additional training and education to keep up with future workforce changes. *Unprepared and Unaware* identifies these low-skilled adults as those most vulnerable in a recession or during automation-fueled workplace transitions. So, while many Southern workers may be employable now, they may not be so lucky in the future.

Considering the higher percentage of low-skilled workers in the South compared with elsewhere in the nation, SREB states already are less attractive than other states to employers looking to open businesses that traditionally require workers with higher levels of education. The SREB region is now more likely to attract businesses that do not need high-skilled workers. As these businesses automate work activities, they may lay off employees and increase the skill demands for new, higher-paying positions. They will likely look elsewhere for higher-skilled labor if it is not available.

To remain competitive with other states across the region and to ensure the livelihood of future generations, SREB states need to make a greater effort to increase the educational attainment of all residents and to attract businesses that demand higher skill levels. Not doing so will mean a further depressed economy — and worse prospects for all who live here.

This multigenerational cycle, combined with rising workforce skill demands, means more workers of all educational attainment levels will be:



unemployed or underemployed



earning incomes below the poverty level



reliant on state services

Are students prepared?

Parents today: 25 to 44 year-olds

37% had a high school credential or less in 2017

Of 8th graders whose parents had no education after high school



36% were **below Basic** on NAEP **reading** and



48% were **below Basic** on NAEP **math**

These percentages were just

22% 

32% 

for students whose parents had some education beyond high school

SREB states need to make a greater effort to increase the educational attainment of all residents and to attract businesses that demand higher skill levels.

References

- Andreason, S., Bozarth, A., De Renzis, B., Johnson, M., Hirsch, R., & Pack, A. (2018). *Building a Skilled Workforce for a Stronger Southern Economy*. Federal Reserve Bank. Retrieved from <https://www.frbatlanta.org/-/media/documents/community-development/publications/special/180612-building-a-skilled-workforce-for-a-stronger-southern-economy/report.pdf>.
- Crowe, M. (February 2019). *Unprepared and Unaware: Upskilling the Workforce for a Decade of Uncertainty*. Southern Regional Education Board. Retrieved from <https://www.sreb.org/publication/unprepared-and-unaware>.
- Crowe, M., Durrance, S., Gagne, J., & Lord, J. (June 2018). *Looking Closer*. Southern Regional Education Board. Retrieved from <https://www.sreb.org/StateProgress>.
- Manyika, J., Chui, M., Miremadi, M., Bughin, J., George, K., Willmott, P. & Dewhurst, M. (January 2017). *A Future that Works: Automation, Employment and Productivity*. McKinsey Global Institute. Retrieved from <https://www.mckinsey.com/featured-insights/digital-disruption/harnessing-automation-for-a-future-that-works>.
- Manyika, J., Lund, S., Chui, M., Bughin, J., Woetzel, J., Batra, P., ...Sanghvi, S. (December 2017). *Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation*. McKinsey Global Institute. Retrieved from www.mckinsey.com/mgi.
- McKinsey Global Institute. (October 1, 2018). *Automation and US Jobs*. Retrieved from <https://public.tableau.com/profile/mckinsey.analytics#!/vizhome/AutomationandUSJobs/USAutomationlandscape>.
- U.S. Bureau of Labor Statistics. (May 2018). *State Occupational Profiles, May 2017 data*. Occupational Employment Statistics. Retrieved from <https://www.bls.gov/oes/#data>.
- U.S. Bureau of Labor Statistics. (October 30, 2018). *Table 5.3 Educational Attainment for Workers 25 Years and Older by Detailed Occupation, 2016-17*. Retrieved from <https://www.bls.gov/emp/tables/educational-attainment.htm>.
- U.S. Census Bureau. (2017). *Sex by Age and Educational Attainment for the Population 18 Years and Over*. Retrieved from <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>.
- U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP). (2017) *Math Assessment*. Retrieved from <https://www.nationsreportcard.gov/ndecore/xplore/NDE>.
- U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP). (2017) *Reading Assessment*. Retrieved from <https://www.nationsreportcard.gov/ndecore/xplore/NDE>.

SREB

Southern Regional Education Board
592 10th St., N.W.
Atlanta, GA 30318-5776
(404) 875-9211

SREB.org

June 2019 (19E05)

Florida's Economic Outlook

Most of the **8.2 million workers** in the state will be **affected by automation** in the coming decades

If state and business leaders do not act



workers and their children could be unemployable or stuck in low-wage jobs: **an endless cycle of poverty**

This multigenerational cycle, combined with rising workforce skill demands, means more workers of all educational attainment levels will be:



unemployed or underemployed



earning incomes below the poverty level



reliant on state services

Just 5% of jobs are completely automatable, but **44%** of all work activities have automation potential.

In the **top 5 industries** the potential is often greater:



Food Preparation & Serving



Sales



Office & Administrative



Healthcare Practitioners



Transportation

Note: The top five industries employ the most people.

36%

workers highly vulnerable to rising workforce skill demands

58%

vulnerable workers employed in the top 5 industries in 2016

Business & industry will need increasing numbers of workers with middle & high skills

Are students prepared?

Parents today: **25 to 44 year-olds**

37% had a high school credential or less in 2017

Of 8th graders whose parents had no education after high school



30% were **below Basic** on NAEP reading and



44% were **below Basic** on NAEP math

These percentages were just

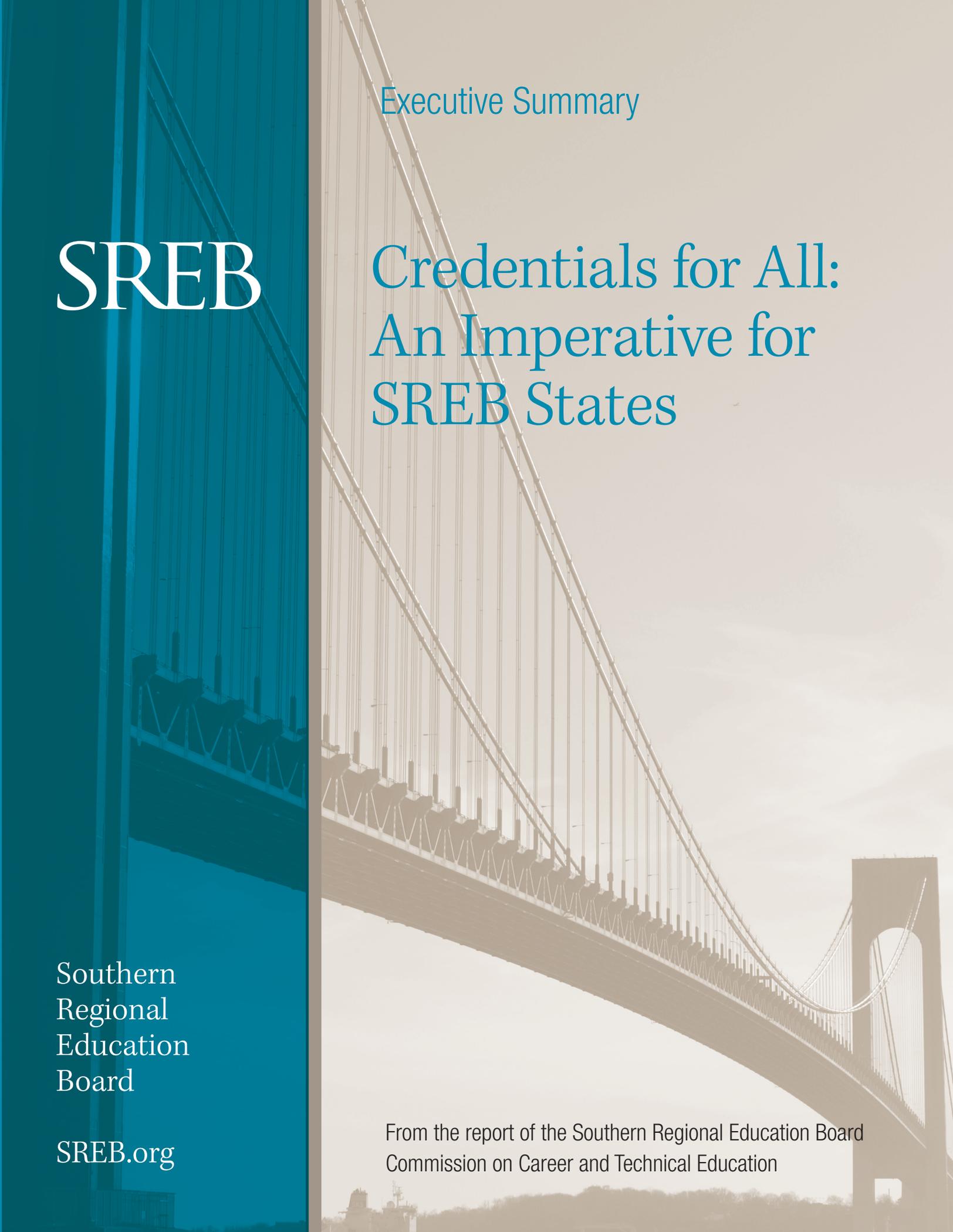
20%



32%



for students whose parents had some education beyond high school

The background of the cover is a photograph of a suspension bridge, likely the New River Gorge Bridge, with its steel cables and towers visible against a light sky. The left side of the image is partially obscured by a vertical teal-colored bar.

Executive Summary

SREB

Credentials for All: An Imperative for SREB States

Southern
Regional
Education
Board

SREB.org

From the report of the Southern Regional Education Board
Commission on Career and Technical Education

Credentials for All: An Imperative for SREB States

The challenge: How do we help more young people earn the postsecondary credentials and degrees that matter in today's economy?

SREB states and the nation are gaining ground on high school graduation rates. Eighty percent of American students now graduate on time from high school — continuing a decade of steady progress.¹

However, the future looks bleak for young people with a high school diploma or less and no postsecondary credential of value in the workplace. The number of jobs available to those with a high school diploma or less has steadily declined for decades, and the Great Recession hit these individuals hard,⁴ particularly in SREB states.⁵ Workers with a high school diploma or less continue to lose jobs despite the economic recovery.⁶

For young people born into poverty, educational attainment may offer the only means of moving up the economic ladder. Research shows that 42 percent of young people born to families in the lowest fifth of income distribution will remain there⁷ — a considerably higher percentage than countries like Great Britain (about 30 percent) or northern European countries like Denmark, Finland and Sweden (about 15 percent).⁸ Even youth born to middle-income families are as likely to move down the economic ladder as they are to move up.⁹

The future looks brighter for young people with the right postsecondary credentials. Higher education attainment of any kind benefits individuals in the labor market. Post-recession, jobs for those with bachelor's degrees have increased, and jobs for workers with some college or a postsecondary credential have mostly recovered.¹⁰

But not enough students are earning postsecondary credentials and degrees.

As Table 1 shows, between 55 percent and 73 percent of adults aged 25 to 64 in SREB states had less than a postsecondary credential in 2012. And although about two-thirds of high school graduates immediately enroll in some form of postsecondary education, too few complete a useful credential.¹¹ As of 2012, the three-year graduation rate for first-time, full-time certificate or associate degree-seeking students fell shy of 20 percent; the six-year graduation rate for first-time, full-time bachelor's-seeking students was about 57 percent.¹² SREB's analyses of educational attainment data suggest that at least half of all students entering ninth grade will fail to earn a credible industry or postsecondary credential or degree by age 25.

Employment in the New Economy

In the 21st-century U.S. economy, nearly two-thirds of all jobs require education and training beyond high school. One growing sector is jobs that pay between \$35,000 and \$75,000 a year² in fields such as advanced manufacturing, energy, health care, information technology, and science, technology, engineering and mathematics (STEM).³ To secure these jobs, individuals need to know how to analyze data, apply math, use technology, think critically and solve problems — skills students can develop in high schools, work-based training programs, community and technical colleges, and universities.

TABLE 1:
Percentage of Adults Aged 25-64 by Educational Attainment, SREB States — 2012

State	No high school credential	High school but no postsec. credential	Some postsec. but no credential	Total: Less than a postsec. credential	Postsec. credential
Alabama	15	30	23	68	32
Arkansas	14	34	23	71	29
Delaware	10	31	21	62	38
Florida	12	29	22	63	37
Georgia	13	28	22	63	37
Kentucky	13	34	22	69	31
Louisiana	15	34	22	71	29
Maryland	9	25	21	55	45
Mississippi	16	30	24	70	30
North Carolina	13	26	23	62	38
Oklahoma	12	31	24	67	33
South Carolina	13	30	22	65	35
Tennessee	13	33	22	68	32
Texas	18	25	23	66	34
Virginia	10	24	21	55	45
West Virginia	13	40	20	73	27

Source: U.S. Census Bureau.

Executive Summary

Low educational attainment harms individuals and the economy.

At current rates of attainment, by 2020 the United States will fall 5 million workers short of industry demand for employees with some postsecondary education.¹³ Despite this substantial workforce gap, joblessness is persistently high, especially for minorities. According to U.S. Department of Labor data for adults aged 20 to 24 who were looking for work in 2013, unemployment was more than 11 percent for white young adults, almost 13 percent for Hispanic young adults and nearly 23 percent for black young adults.¹⁴ The economic outlook for young men is also poor. The age at which young men can expect to reach the median wage has shifted dramatically. In 1980, it was age 26; in 2010, it was age 30.¹⁵

“The new forgotten half [are] those youth who do not complete college and find themselves shut out of good jobs in the era of college for all... Many youth who took society’s advice to attend college, sacrificing time and often incurring debts, have nothing to show for their efforts in terms of credentials, employment, or earnings.”

— William T. Grant Foundation¹⁶

Not enough students are earning credentials and degrees in the right fields for today’s economy. Many believe that a bachelor’s degree, regardless of major, is the best guarantee of a well-paying job. Yet after taking on debt, some recent college graduates find themselves with no work. As of 2012, the average unemployment rate for recent college graduates ages 22 to 26 with a bachelor’s degree was 7.5 percent.¹⁷ And according to one estimate, as many as 23 percent of recent college graduates may be underemployed, working in a job that requires less than a college degree.¹⁸

Overall, SREB’s analyses of educational and labor market data suggest that for many young adults, the 20s are a lost decade. After years of underemployment or unemployment, many return to school when they are nearly 30.¹⁹

Simply put, the bridge from high school to postsecondary attainment and career opportunities is broken. To solve this problem, more high school students must get into community and technical colleges — and on pathways to postsecondary attainment and career advancement — much sooner.

***The challenge:** How do we provide more young people with an education that connects the classroom with the workplace and prepares them to succeed in postsecondary education and 21st-century careers?*

The solution:

- **Transform education with rigorous, relevant career pathways that align secondary, postsecondary and workplace learning and lead to postsecondary credentials that help individuals secure good jobs.**
- **Double the percentage of young adults who earn postsecondary credentials by age 25 over the next decade.** These credentials include advanced industry credentials and postsecondary certificates and degrees at the associate degree level or higher.

Members of SREB’s Commission on Career and Technical Education offer eight actions states can take to build rigorous, relevant career pathways.

These eight actions — supported by a set of policies and practices summarized below and described at length in the full report — can help states double the percentage of young adults earning valuable industry and postsecondary credentials.



Steve Beshear, Governor,
Commonwealth of Kentucky
Chair, Southern Regional
Education Board
Chair, SREB Commission on
Career and Technical Education

A Message from Governor Beshear

In the SREB region, each of our states has its own character, our economies as different as our landscapes and our dialects. But we share a common problem: Too few students graduate from high school with the academic, technical and workplace knowledge and skills they need to find employment in the key industries that are critical to our states' economies. One of my goals as chair of SREB and its Commission on Career and Technical Education is to promote policies and practices to support strong career pathways that help more students earn industry and postsecondary credentials and obtain good jobs.

This report makes it clear that preparing for today's workplace requires a transformation of our educational system. Over the next decade, we must double the number of young adults who earn credible advanced credentials or degrees by age 25.

By creating high-quality career pathways in our states, we can ensure that our region's young adults are fully prepared for today's knowledge-based economy.

ACTION 1 — Build bridges from high school to postsecondary education and the workplace by creating rigorous, relevant career pathways driven by labor market demand. Such pathways:

A. Combine a college-ready academic core with challenging technical studies and require students to complete real-world assignments.

Require all students to complete a college-ready academic core and a concentration — for example, a four-course career pathway or a set of Advanced Placement or International Baccalaureate courses — that provide the foundational learning skills they need to earn credentials and secure good jobs.

B. Align three stages of learning — secondary, postsecondary and the workplace — through strategies like dual enrollment and work-based learning.

Leverage state and federal funds to incentivize school districts, community and technical colleges, and employers to develop career pathways that align with identified workforce needs in key state and regional industry sectors.

Promote structured dual enrollment programs for career pathways and establish uniform statewide policies so students can earn credits toward high school graduation that are automatically added to students' transcripts at community and technical colleges.

Incentivize industry partners to expand ongoing, structured, progressively intensive work-based learning that engages students in authentic applications of academic, technical and workplace skills.

Develop policies with insurers, workforce commissions and other agencies to protect students and their employers in work-based learning experiences.



Royce West, Texas State Senator

C. Create guidance systems that include career information, exploration and advisement and engage students in ongoing career and college counseling beginning in the middle grades.

Mandate career exploration courses and activities in the middle grades and high school and adopt distributed, curriculum-based career guidance systems that make career and college counseling the shared responsibility of every adult in the school.

D. Allow students to choose accelerated learning options in settings that provide the extended time needed to earn advanced industry credentials.

Encourage school districts to offer career pathways in diverse settings — comprehensive high schools, shared-time technology centers, full-time technical high schools, early college high schools, career academies, and community and technical colleges — that allow students to earn advanced credentials and college credits while still participating in activities at their home high schools.

Incentivize districts, technology centers, and community and technical colleges to partner to create early advanced credential programs modeled after early college high schools. Early advanced credential programs allow students to graduate with a diploma plus an advanced industry certification, postsecondary credential or significant credits toward an associate degree.

E. Lead to further education and training and high-skill, high-wage jobs in high-demand industries.

Prioritize the investment of state and federal funds to develop rigorous, relevant career pathways that lead to employment in state and regional industry sectors with a shortage of skilled workers.

ACTION 2 — Expect all students to graduate academically ready for both college and careers.

Establish literacy- and math-readiness standards for non-STEM college majors and set benchmark cut scores on the assessments chosen to measure college readiness.

Collaborate with secondary, postsecondary and industry partners to establish foundational literacy and math readiness standards needed for advanced education and training, non-degree programs and the workplace. Establish cut scores for academic career readiness on multiple validated assessments (such as nationally normed assessments) that predict success in advanced training programs.

Use state-approved junior-year academic readiness assessments as a measure of students' academic preparedness for college and advanced training programs. Work with community and technical colleges to adopt or develop senior-year transitional readiness courses in literacy and math that count as fourth English or math credits.

ACTION 3 — Select assessments of technical and workplace readiness standards that offer long-term value to individual students, employers and the economy; carry college credits; and are directly linked to more advanced certifications and further study.

Define technical career readiness in state policy, capturing the knowledge and skills students must master to enter postsecondary education and training programs and secure high-skill, high-wage jobs in high-demand fields.

Designate a state agency to work with secondary and postsecondary education agencies and employers to identify, evaluate and approve industry certification examinations, technical skills assessments, dual credit courses and end-of-course assessments that are part of a system of stackable credentials.

ACTION 4 — Provide all high school career pathway teachers, especially new teachers from industry, with the professional development and fast-track induction programs they need to meet high academic, technical and pedagogical standards and enhance students' academic and technical readiness for college and careers.

Allocate funds for new teachers from industry to participate in fast-track induction programs that span the first 15 months of teaching and include two weeks to one month of paid employment in the summer before they enter the classroom.

Work with postsecondary and industry partners and external providers to deliver research-based professional development that teaches academic and CTE teachers how to design real-world, project-based instruction, assignments and assessments that integrate literacy, math and science with technical content.

ACTION 5 — Adopt a framework of strategies to restructure low-performing high schools around rigorous, relevant career pathways that accelerate learning and prepare students for postsecondary credentials and degrees.

Use federal, state and local funds to help low-performing high schools reorganize around theme-based career academies that feature rigorous, relevant career pathways.

ACTION 6 — Offer early advanced credential programs in shared-time technology centers, aligning their curricula, instruction and technology with home high schools and community and technical colleges.

Create the time needed for technology center students to earn advanced industry credentials by offering full-time study during students' junior and senior years; extending the school year or the school day; creating 13th-year early advanced credential programs; converting some centers into full-time technical high schools or full-time regional magnets; or partnering with community and technical colleges to offer junior- and senior-year career pathway instruction.

ACTION 7 — Incentivize community and technical colleges and school districts to double the percentage of students who earn certificates, credentials and degrees by setting statewide readiness standards and aligning assessment and placement measures with those standards. Other strategies: Use the senior year of high school to reduce the number of students who need remediation, retool developmental education, adopt individualized support strategies for struggling students and improve affordability.

Use a combination of incentives and performance-based funding models to encourage community and technical colleges to work with school districts to increase the percentage of students who complete their programs and earn industry credentials and postsecondary certificates and degrees.

Increase the number of ways students can qualify for credit-bearing course work and developmental education. Establish multiple measures of postsecondary readiness, such as the grade point average (GPA), benchmark scores on nationally normed assessments and college placement exams.

ACTION 8 — Design accountability systems that recognize and reward districts, high schools, technology centers, and community and technical colleges that double the number of young adults who acquire postsecondary credentials and secure high-skill, high-wage jobs by age 25.

Allocate extra weight in state accountability systems for each high school student who meets both academic college-readiness standards and technical career-readiness standards. Ensure that the state accountability system values academic college readiness and academic and technical career readiness equally.

Allocate extra weight in state accountability systems for each high school student who completes an advanced industry credential in a critical industry sector.

Increase each year the percentage of high school students who demonstrate academic, technical and workplace readiness by:

- a. completing capstone courses, senior portfolios, career and technical student organization competitions, or work-based learning experiences;
- b. attaining advanced industry credentials;
- c. earning dual credits for career pathway courses; and
- d. passing end-of-course assessments for career pathway courses that generate extra weight toward the GPA or carry college credit.



Derrick Graham, State Representative, Kentucky

Establish a multi-measure, college- and career-ready performance index to assess, track and report progress made by school districts, high schools, community and technical colleges, and employers delivering career pathways. Expect secondary and postsecondary partners to:

- Raise high school graduation rates to 90 percent or higher in all high schools within a decade or less and help schools with graduation rates of 70 percent or less raise their graduation rates to 80 percent or higher within five years.
- Increase the percentage of students who leave high school academically prepared for college and careers to 80 percent or higher.
- Increase each year the percentage of students who meet academic career-readiness benchmarks for the foundational literacy and math skills appropriate to their career pathways.
- Increase each year the percentage of high school students who complete a career pathway consisting of a college-ready academic core and at least four sequential CTE courses leading to further education and training and workforce opportunities.
- Increase each year the percentage of high school graduates who immediately enter some form of postsecondary education, including employer-sponsored work-based training programs.
- Double over the next decade the percentage of young people who complete advanced industry credentials, postsecondary certificates and degrees by age 25.
- Expand each year the number of secondary and postsecondary students who participate in employer-sponsored work-based experiences and learn-and-earn programs.

¹ "Table 2: Public high school 4-year adjusted cohort graduation rate (ACGR), by race/ethnicity and selected demographics for the United States, the 50 states, the District of Columbia, and other jurisdictions: School year 2011–12." U.S. Department of Education, National Center for Education Statistics (NCES), 2014. http://nces.ed.gov/pubs2014/2014391/tables/table_02.asp.

² Anthony P. Carnevale, Tamara Jayasundera and Andrew R. Hanson. *Career and Technical Education: Five Ways that Pay along the Way to the B.A.* Georgetown University Center on Education and the Workforce, 2012. See also Anthony P. Carnevale and Nicole Smith. *A Decade Behind: Breaking Out of the Low-Skill Trap in the Southern Economy.* Georgetown University Center on Education and the Workforce, 2012.

³ Carnevale and Smith, 2012. See also Rachael Unruh. *Driving Innovation from the Middle: Middle-Skill Jobs in the American South's Economy.* National Skills Coalition, 2011.

⁴ Carnevale, Jayasundera and Hanson, 2012.

⁵ Carnevale and Smith, 2012.

⁶ Jeff Gagne, Joan Lord and Michaela Corrente. *Workforce Development in SREB States: The Role of Two-Year Colleges in Preparing Students for Middle-Skill Jobs.* SREB, 2014.

⁷ Julia B. Isaacs. *Economic Mobility of Families Across Generations.* Brookings Institution, 2007.

⁸ Markus Jäntti Bernt Bratsberg, Knut Røed Oddbjørn Raaum, Robin Naylor Eva Österbacka and Anders Björklund Tor Eriksson. *American Exceptionalism in a New Light: A Comparison of Intergenerational Earnings Mobility in the Nordic Countries, the United Kingdom and the United States.* Institute for the Study of Labor, 2006.

⁹ Isaacs, 2007.

¹⁰ Gagne, Lord and Corrente, 2014.

¹¹ "Indicator 30: Immediate Transition to College. Figure 1: Percentage of high school completers who were enrolled in 2- or 4-year colleges by the October immediately following high school completion, by level of institution: 1990-2012." *The Condition of Education 2014.* NCES, 2014.

¹² "Table 46: 150 Percent of Normal Time Graduation Rates in Public Universities and Colleges by Racial/Ethnic Groups." *SREB Fact Book on Education.* SREB, 2014. Figures reported are for the same cohort — Fall 2009 students at public two-year colleges and Fall 2006 students at public four-year colleges and universities. See http://info.sreb.org/DataLibrary/factbook/collegecompletion/FB14_45_46_47.xlsx.

¹³ Anthony P. Carnevale, Nicole Smith and Jeff Strohl. *Recovery: Job Growth And Education Requirements Through 2020.* Georgetown University Center on Education and the Workforce, 2013.

¹⁴ U.S. Department of Labor, Bureau of Labor Statistics.

¹⁵ Anthony P. Carnevale, Andrew R. Hanson and Artem Gulish. *Failure to Launch: Structural Shift and the New Lost Generation.* Georgetown University Center on Education and the Workforce, 2013.

¹⁶ James Rosenbaum, Caitlin Ahearn, Kelly Becker and Janet Rosenbaum. *The New Forgotten Half and Research Directions to Support Them.* William T. Grant Foundation, 2015.

¹⁷ Anthony P. Carnevale and Ban Cheah. *From Hard Times to Better Times: College Majors, Unemployment, and Earnings.* Georgetown University Center on Education and the Workforce, 2015.

¹⁸ Personal communication, Anthony P. Carnevale, Director, Georgetown University Center on Education and the Workforce, February 18, 2015.

¹⁹ "Students at Community Colleges." American Association of Community Colleges, 2014. See <http://www.aacc.nche.edu/AboutCC/Trends/Pages/studentsatcommunitycolleges.aspx>.

SREB Commission on Career and Technical Education

*Commission Members**

Governor Steve Beshear, Commonwealth of Kentucky, Chair, Southern Regional Education Board, Chair, Commission on Career and Technical Education

June Atkinson, State Superintendent, Public Schools of North Carolina

Alan Baker, State Representative, Alabama

Tommy Bice, State Superintendent of Education, Alabama State Department of Education

Hugh Blackwell, State Representative, North Carolina

Jay Box, Chancellor, Kentucky Community & Technical College System

Harry Ray Brooks, State Representative, Tennessee

Terry Burton, State Senator, Mississippi

Aneesh Chopra, Senior Advisor, The Advisory Board, Washington, D.C.

Norman Conway, State Delegate, Maryland

Elizabeth Creamer, Assistant Vice Chancellor, Career Pathways and Workforce Programs, Virginia Community College System

Rod Duckworth, Chancellor, Division of Career and Adult Education, Florida Department of Education

Gayle Flowers, Director, Career, Adult & Alternative Education, Caddo Parish Public Schools, Louisiana

John Ford, State Senator, Oklahoma

Derrick Graham, State Representative, Kentucky

Steve Gratz, Director, Office of Career-Technical Education, Ohio Department of Education

Teri Quinn Gray, President, Delaware State Board of Education

Donald Griffith, Director, Teacher Training Program, University of South Carolina, School of Engineering and Computer Science

Robert Gunter, Deputy Director, Division of Career and Technical Education, Arkansas Department of Career Technical Education

Barbara Hampton, Chair, Georgia State Board of Education

Greg Higdon, President & CEO, Kentucky Association of Manufacturers

Terry Holliday, Commissioner of Education, Kentucky Department of Education

Lloyd Jackson, State Board Member, West Virginia Board of Education

Ronald Jackson, Commissioner, Technical College System of Georgia

Johnny Key, State Senator, Arkansas

John Legg, State Senator, Florida

Jean Massey, Associate State Superintendent, Mississippi Department of Education

Joe May, Chancellor, Dallas County Community College District, Texas

Joseph U. Meyer, Former Secretary of Education and Workforce Development, Kentucky

Danielle Mezera, Assistant Commissioner, Career and Technical Education, Tennessee Department of Education

Sharon Morrissey, Vice Chancellor for Academic Services & Research, Virginia Community College System

Katharine Oliver, Assistant State Superintendent, Maryland State Department of Education

Phil Owens, State Representative, South Carolina

Dennis Parker, Assistant Manager, Toyota Motor Engineering & Manufacturing, North America Production Support Center, Kentucky

Robert Plymale, State Senator, West Virginia

Tim Shaughnessy, Associate Provost for Academic Affairs, Gateway Community & Technical College, Kentucky

David Sokola, State Senator, Delaware

Robert Sommers, Secretary of Education and Workforce Development, State Director of Career and Technology Education, Oklahoma

Royce West, State Senator, Texas

J. Alvin Wilbanks, CEO and Superintendent, Gwinnett County Schools, Georgia

Michael Williams, Commissioner of Education, Texas Education Agency

Mike Wilson, State Senator, Kentucky

Consultants to the Commission

Anthony Carnevale, Research Professor and Director, Georgetown University Center on Education and the Workforce, Washington, D.C.

Stephen Hamilton, Professor of Human Development, Director, Cornell Youth and Work Program, Cornell University, Ithaca, New York

Gary Hoachlander, President, ConnectEd: The California Center for College and Career, Berkeley, California

David Stern, Professor Emeritus, University of California, Berkeley, Berkeley, California

James R. Stone III, Director, National Research Center for Career and Technical Education, Louisville, Kentucky

Marc Tucker, President and CEO, National Center on Education and the Economy, Washington, D.C.

Guests of the Commission

Wesley Beddard, Associate Vice President for Student Learning and Success, North Carolina Community College System

Michael Berry, Deputy Commissioner for Policy & Programs, Texas Education Agency

Dale Winkler, Associate Commissioner, Office of Career and Technical Education, Kentucky Department of Education

Tom Zawacki, Secretary, Education and Workforce Development Cabinet, Kentucky

SREB

Southern Regional Education Board
592 10th St., N.W.
Atlanta, GA 30318-5776
(404) 875-9211

SREB.org

April 2015 (15V09)

* Titles as of the May 2014 meeting of the Commission.

Strategic Priority 2: Workforce Readiness

Statutory Requirements:

- (d) Establish targeted strategies to increase certifications and degrees for all populations with attention to closing equity gaps for underserved populations and incumbent workers requiring an upgrade of skills.
- (e) Assess the role of apprenticeship programs in meeting targeted workforce needs and identify any barriers to program expansion.

Goals	Strategies
WR 1. Expand Apprenticeships in Florida	WR 1.1. Survey private partners to develop and inventory of offered and/or available apprenticeships.
	WR 1.2. Survey (might be an update of a survey previously administered) of businesses to assess their workforce needs related to work-based learning and apprenticeships.
	WR. 1.3. Determine integration of existing apprenticeships' related technical instruction in paid and nonpaid credit instruction.
WF 2. Identify Current Barriers to Participation	WR 2.1. Identify needs and challenges of populations targeted to be served through apprenticeships.
	WR 2.2. Increase enrollment and reduce barriers to participation.
	WR 2.3. Formalize efforts to gather employers input on current and future workforce (training) needs.
WR 3. Increase Education and Awareness	WR 3.1. Build and promote awareness of apprenticeships as a critical workforce strategy.
	WR 3.2. Select and implement policies and programs that increase participation and access to apprenticeships.
	WR 3.3. Develop statewide educational campaign to increase visibility and understanding of benefits of apprenticeships.
WR 4.	