## SREB

# The Skills Employers Demand

An Analysis of the Research



November 2023

Southern Regional Education Board

SREB.org

#### **Table of Contents**

Success Skills Overview	2
What Success Skills Are in Demand?	4
Success Skill Demand in SREB States	6
Developing Skills in SREB States	<u> </u>
Credentialling	1C
Key Takeaways	11
References	12
Appendix A: Summary of Research in Employer Demand of Success Skills	14
Appendix B: Demand for Success Skills. Full-Time and Part-Time Positions in SREB State	16

 $<sup>{\</sup>it This report was written by Courtney Leidner, research analyst at the Southern Regional Education Board.}$ 

### The Skills Employers Demand

#### An Analysis of the Research

#### Introduction

To meet the demands of jobs, now and in the future, jobseekers should possess a variety of skills frequently requested by employers. Skills can be both academic and technical in nature but also include personal qualities and advanced cognitive skills, such as decision-making and interpersonal skills.

This report provides an overview of the non-technical skills most frequently requested by employers. We refer to them here as success skills. They are also commonly referred to as soft skills, employability skills or durable skills. Though these names are different, they encompass a set of interpersonal and cognitive skills that advance workers in their careers and increase productivity in the workplace.

In this report we refer to them as success skills because of their critical role in the success of both employers and employees in an ever-changing, dynamic workforce. The demand for these skills has increased rapidly and is further accelerated by the technological advancements of automation and artificial intelligence.

SREB conducted a review of relevant research over the past 10 years (2013-2023) to identify studies exploring success skills through a range of research methodologies and industries. The review was then narrowed to focus on influential or innovative research published in academic research or by industry experts. Research included in the review used surveys of business leaders and job incumbents as well as analyses of job postings. The findings enable educators and policymakers to prioritize the most important skills when developing programs and policies to address skills gaps. Studies conducted by academic researchers and industry experts may use different terminology and methods, but the results across industries remain remarkably consistent. The most sought-after success skills in business and industry are:

- Communication, Oral and Written;
- Teamwork and Collaboration; and
- Problem Solving and Critical Thinking.

Secondary and postsecondary educational institutions are being challenged to design programs that develop these skills for the future workforce. At the state level, leaders have undertaken efforts to embed success skill development in educational experiences like work-based learning and course curriculum. Through micro-credentialing efforts, states are also trying to communicate the skills that students have attained upon the completion of a degree or certificate program. Despite the real progress that states have made, there is little evidence of coordination between secondary and postsecondary institutions. It is also unclear how businesses perceive the validity of the credentials.



The SREB Dual Enrollment Advisory Panel helps SREB define issues to study, identify promising practices and develop recommendations.

#### The SREB Dual Enrollment Initiative

To help states find solutions to difficult challenges around dual enrollment, the Southern Regional Education Board is leading a multi-year effort to study dual enrollment and explore strategies to realize its potential. The SREB Dual Enrollment Advisory Panel helps SREB define issues to study, identify promising practices and develop recommendations. The panel includes members from each SREB state, including Board and Legislative Advisory Council members, state and district K-12 leaders, state higher education agency leaders, and technical college and university staff.

SREB's Dual Enrollment Initiative is working with states to find effective solutions to dual enrollment concerns such as cost and equity. The project is exploring how dual enrollment can:

- help students earn a college credential in high school;
- assist states in achieving workforce and education goals; and
- ensure students master industry valued success skills.

The panel also identified student access, eligibility, cost, program quality/transfer, funding, data collection and reporting as common dual enrollment challenges across the South. This research report provides a foundation for the Dual Enrollment Initiative's ongoing work within a specific focus on the variety of skills desired by employers that jobseekers should possess to meet the demands of jobs, now and in the future.

For more on the initiative and a list of advisory panel members, visit SREB.org/DualEnrollment.

#### **Success Skills Overview**

Research has demonstrated that success skills are in high demand with employers and provide increasing benefits to individuals. These skills are a combination of personal qualities that enable individuals to effectively interact, collaborate and process information in a variety of professional settings (Robles, 2012; McKinsey Group International, 2018; Deming, 2017; Heckman and Kautz, 2012). Success skills are often improved through training and experience but are also transferable across occupations and industries. Success skills do not include hard skills and are not job-specific technical skills. Instead, they complement hard skills by increasing the effectiveness of people in their jobs. Individuals possessing the right combination of technical and success skills are more successful in the workplace and earn higher salaries (Deming, 2017; Fernandez et al., 2019; Succi and Canovi, 2017).

Despite the demand, skill gaps in interpersonal and advanced cognitive skills persist. Reports from educational associations, institutions and industry experts highlight the ongoing mismatch between requested skills and those held by jobseekers. A recent report published by the National Association of Colleges and Employers reveals that employers ranked critical thinking and communication

#### Hard Skills

Success Skills

Hard skills are specific, measurable abilities or knowledge required to perform a job or task effectively. These skills are often academic or technical in nature and can be learned through education, training or on-the-job experience. Hard skills are usually objective and can be assessed, making them essential for determining a candidate's qualifications for a particular occupation.

Success skills are a set of interpersonal, communication and personal attributes that enable individuals to interact effectively and harmoniously with others in the work-place. Unlike hard skills, success skills, or soft skills, are often more general and transferable across various occupations and industries. Success skills are crucial for building positive working relationships, fostering teamwork and enhancing overall workplace performance.

as the two most important competencies needed for workforce success. However, employers believe only about half of recent graduates are proficient in these skills. Finding competent workers for high-demand industries, such as health care and engineering, is critical to the success of business and industry.

In addition to the identified gaps, desired workforce skills have been shifting at an intensifying pace. According to scholars and industry experts, these changes are largely due to advances in technology, including the introduction of automation to many occupations (Burning Glass Institute, 2020; Deming, 2017; Bughin et al., 2018). Automation has replaced human workers in jobs that are more routine (Deming, 2017). At first, automation had the greatest impact on jobs that were primarily considered low-skill or those requiring manual labor, such as manufacturing.

However, as technology advances, scholars and experts have observed a shift in the job duties across high-skill occupations. In these high-skill areas, automation and AI are being used to perform routine tasks, freeing up workers to focus on more complex and creative aspects of their roles. Therefore, success skills not only increase effectiveness of individuals in their jobs, but they are also crucial to complex tasks that cannot be replicated by machines. Job seekers entering the workforce today need to be prepared with the desired success skills to have enduring competencies that can adapt to the changes in the labor market that are sure to come.

Under the umbrella of success skills, a wide range of attributes have been identified by researchers. Depending on the source, these attributes vary in the number of qualities they include. Some studies may focus on a few key personality traits, while others reach the hundreds. The Perkins Employability Framework categorizes success skills under three key areas: applied knowledge, effective relationships and workplace skills. Although these skill sets have been defined differently, there are a number of success skills that appear repeatedly in research taxonomies.



Job seekers entering the workforce today need to be prepared with the desired success skills to have enduring competencies that can adapt to the changes in the labor market that are sure to come.

#### **Key Success Skills in the Literature** (Grouped with Like Terms)

Success Sk	ills Inventory
Communication Skills (oral and written are sometimes identified separately)	Customer Services/Service Orientation
Teamwork/Collaboration	Professionalism/Conscientiousness/Work Ethic
Problem Solving	Leadership/Supervisory Skills
Critical Thinking	Emotional Intelligence/Social Perceptiveness
Adaptability	Creativity
Time Management/Project Management	Listening
Judgment/Ethical Decision-Making	Teaching/Instructing
Cultural Sensitivity	Self-Direction

SREB staff compiled this list of skills repeated in multiple research taxonomies. Note that different sources define these skill sets in different ways. Please refer Appendix A, pages 14-15, for a full list of sources.



One way of defining success skills has been to explore the skills that are most frequently requested by employers.

#### **What Success Skills Are in Demand?**

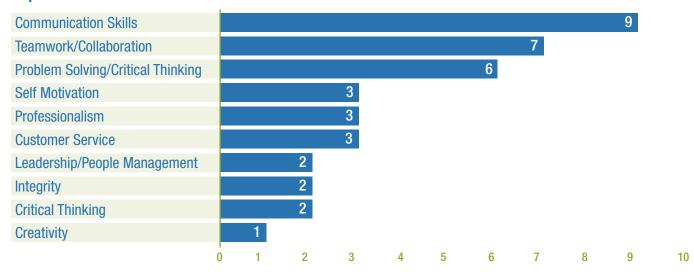
While it is important to understand the broad scope of success skills, it is most useful for education, business and industry leaders to know the skills that are most in-demand. Experts in industry and occupation research, such as the McKinsey Group International and the Georgetown University Center on Education for the Workforce, have leveraged their extensive networks and experience to document the shifting demand in workforce skills and identify high-demand skills. Social scientists engaged in academic research have also explored the demand for and impact of success skills in the labor market. SREB reviewed both sources of research to provide a balanced synthesis of in-demand skills.

One way of defining success skills has been to explore the skills that are most frequently requested by employers. There have been two primary avenues of investigation. Some researchers have conducted surveys of business executives and managers to identify the skills they believe are necessary in their industry. While these surveys provide insight into the skills valued by leaders in different industries, some experts argue that executives may be conceptualizing desired skills that are not reflective of the demand preferences revealed in open positions.

Therefore, another route to determining the demand for success skills is to review job postings. Many researchers have turned to this methodology due to the insight it provides on the current job market as well as the large numbers of available data points.

A research summary in Appendix A, pages 14-15, provides greater detail on the research SREB reviewed, including methodology and top skills identified. Many of the studies listed in Appendix A highlight priority skills found within each

#### Top Success Skills Identified in the Literature Review



Frequency of Inclusion in Top 5 Skills

Source: SREB analysis. Refer to the Summary of Research on page 14 for more detail.

study. The chart highlights the frequency that each skill was listed as a priority from the literature reviewed by SREB. For example, communication was listed as one of the Top Five Skills for nine out of the 10 studies summarized.

The methodology in determining the demand for skills should be considered to contextualize the study findings. When using surveys of business executives, researchers tend to identify effective interpersonal and ethical skills more broadly represented (Robles, 2012; Fletcher and Thornton, 2023). On the other hand, the analysis of job postings elevates communication, teamwork and problem solving (Rios et al., 2020; Williams et al., 2023). These differences are important to note because they can provide insight into the skills required for positions in organizational leadership versus entry-level positions. It is also possible that job postings highlight the skills deemed hard to find by human resources professionals, which may indicate an existing skill gap.

Additionally, desired skills may differ between industries and occupations. These differences may reflect the nature of tasks performed in different roles, levels of expected education in the occupation and the degree to which an industry is experiencing skill disruption from the adoption of automation and AI technology (Burning Glass Institute, 2020). For example, jobs in science-oriented occupations prioritize analytical skills and problem solving (Lyu and Liu, 2021), while health care and management positions prioritize interpersonal skills including communication and leadership (Georgetown University, 2020; Rios et al., 2020).



Communication was listed as one of the Top Five Skills for nine out of the 10 studies summarized.

Occupations in manufacturing are also seeing a decrease in demand for physical and fine-motor skills and an increase in technology skills, social skills and advanced cognitive skills (Burning Glass Institute, 2022; Bughin et al., 2018). Engineering professionals indicate that communication and interpersonal skills are particularly difficult to find in recent engineering graduates, as many are digital natives working in technology-oriented fields (Hirudayaraj et al., 2021). In these cases, the hiring of qualified individuals may center on who can demonstrate the greatest degree of proficiency in success skills.

Levels of education may also influence the types of skills required for certain positions. Jobs requiring only a high school diploma or equivalent highlight professionalism as the most desired skill (Williams et al., 2023) and place skills such as collaboration and problem solving lower. However, positions requiring a postsecondary education more frequently seek candidates with collaboration, problem solving and oral and written communication skills (Williams et al., 2023). These differences highlight the need for employers to find entry-level applicants who are reliable and understand professional norms, while occupations requiring higher levels of education require more advanced success skills.



SREB also gathered data from active job postings to explore if these same skills are in demand across the South. First, labor market data was reviewed to determine the broad occupational gaps predicted across the region over the next 10 years. Workforce deficits are where there are more job openings and demand for workers in a particular occupation or industry than there are qualified workers available to fill those positions. Surplus predictions occur when there are more workers available for a particular type of job or in a specific industry than there are job openings or demand for those workers. The chart showcases top workforce shortage and surplus areas predicted annually over the next 10 years. For example, it is predicted that the SREB region will have a shortage of 29,245 workers to fill open health care practitioners and technical positions.



Jobs requiring only a high school diploma or equivalent highlight professionalism as the most desired skill and place skills such as collaboration and problem solving lower.

The largest gaps are expected in health care, management occupations (covering multiple industries) and computer science. Health care and management occupations are examples of occupations that require interpersonal connections and complex problem solving that cannot be replicated by automation and AI (Deming, 2017). These gaps suggest areas that SREB states should prioritize when reviewing success skills.

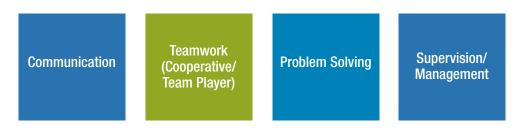


#### Occupation Gaps Projected Over 10 Years, 16 SREB States

SUPPLY DEFICIT	SUPPLY SURPLUS
Health Care Practitioners and Technical (\$92,000) -29,245	Sales and Related Occupations (\$45,300) 45,133
Management Occupations (\$110,800) -29,220	Food Preparation and Serving Related Occupations (\$29,700) 44,663
Computer and Mathematical Occupations (\$91,600) -18,472	Office and Administrative Support Occupations (\$41,700) 31,720
Business and Financial Operations Occupations (\$76,400) -15,313	Production Occupations (\$43,800) 7,168
Installation, Maintenance and Repair Occupations (\$52,100) -13,729	Personal Care and Service Occupations (\$33,500)  6,571
Educational Instruction and Library Occupations (\$57,200) -9,467	Transportation and Material Moving Occupations (\$42,200)  3,397
Construction and Extraction Occupations (\$48,900) -8,814	Protective Service Occupations (\$48,000) 2,516
Architecture and Engineering Occupations (\$89,500) -4,833	Farming, Fishing and Forestry Occupations (\$34,000)  1,195
Health Care Support Occupations (\$32,600) -4,505	Building and Grounds Cleaning and Maintenance Occupations (\$32,800)
Legal Occupations (\$112,900) -3,609	

Source: JobsEQ Occupation Gap Analysis.

To further explore the most in-demand skills across the South, SREB analysts reviewed the most frequently requested success skills for all industries, including the Health Science Career Cluster and the STEM Career Cluster using JobsEQ software. These clusters were selected for their dominance in the projected occupation gaps. The most requested success skills across all industries are:



The table below compares the Top Five most requested success skills for all industries as well as Health Science and STEM Career Cluster Areas. While some variations can be seen, similarities exist across all three analyzed areas. The combined skill list clearly highlights the importance of communication and teamwork. Demand for these skills appears across industries, occupations and research methodologies.

Top 5 Skills in Demand in SREB States Comparing All Industries, Health Science and STEM Career Clusters

All Industries	Health Science	₩ STEM
Communication	Communication	Communication
Teamwork	Teamwork	Teamwork
Problem Solving	Supervision/Management	Project Management
Organization	Interpersonal Relationships	<b>Problem Solving</b>
Supervision/Management	Customer Service	Analytical

<sup>\*</sup> Recurring skills are in bold. The Demand for Success Skills Table on pages 14-15 for JobsEQ source data for all industry sectors.

#### **Developing Skills in SREB States**

SREB states use multiple approaches to address the gaps in success skills in their workforces. States have launched initiatives to enhance teaching and learning of success skills while also communicating the value of degrees and credentials.

Secondary and postsecondary institutions have tried to meet the demand for success skills by implementing curricula that develop these skills in students. Some states have incorporated career readiness curriculum into their CTE courses or as standalone modules. Georgia has launched a statewide effort to provide curriculum to secondary, postsecondary and adult employees. The GeorgiaBEST program uses a train-the-trainer approach to offer instruction and assessment on the state's prioritized set of success skills, referred to as work-readiness skills. After verification, participants receive a GeorgiaBEST certification.

While direct instruction is an important way to introduce skills, there is a consensus that students also need opportunity to practice skills and evaluate them in real-world situations (Cellura and Lepe, 2022; Deep et al., 2020; Evans, 2020; Fettes et al., 2020; Musset, 2019). Project-based learning and work-based learning experiences are particularly suited to these types of experiences. Project-based learning promotes collaborative work in real-world contexts which facilitates deeper learning through practice and feedback (Evans, 2020). It may be particularly effective at helping to develop collaboration, adaptability and management skills (Evans, 2020; Sirotiak and Sharma, 2019).

Work-based learning provides students with the ability to develop success skills while building applicable professional experience. These experiences are particularly rich when paired with guidance from students' institutions (Musset, 2020).

Most SREB states have implemented policies to support work-based learning. To address access challenges to work opportunities, some states have even adopted virtual and simulated workplaces. A simulated workplace allows students to gain success skills while participating in professional environments without having to leave the classroom. In West Virginia, the state has partnered with business and industry to develop protocols and processes necessary for students to experience a workplace environment in CTE classrooms throughout the state. These approaches increase access to work-based learning for students who might otherwise be unable to participate. West Virginia has also partnered with NOCTI, a leading CTE assessment organization, to create a Simulated Workplace assessment to determine the level of Success Skill proficiency attained through related CTE programs and activities.



A simulated workplace allows students to gain success skills while participating in professional environments without having to leave the classroom.

States are also focusing on how to effectively convey to employers the success skills that students have acquired. Some states, like Georgia, Florida, Kentucky and North Carolina, have produced profiles or portraits of graduates that outline the skills students possess when graduating from K-12 schools in the state.

	lls Identified es of Graduates
Adaptability	Empathy
Citizenship	Problem Solving
Collaboration	Responsibility
Communication	Learner's Mindset
Critical Thinking	Professionalism
Decision-Making	Leadership

Departments of education are working

to ensure these profiles reflect teaching, learning and skill development in the state. In North Carolina, the Portrait of a Graduate is supported in the classroom with teacher resource guides for all grade levels that include observational rubrics to support the assessment of skill development provided by the Department of Public Instruction. The Kentucky Graduate Profile complements Kentucky's Strategic Agenda for Postsecondary education. This work builds upon the QualityAssurance Commons study in Kentucky, which highlighted the misalignment of academic outcomes with necessary employment skills.

#### Credentialing

An important element of a successful skills development program is a credential that communicates proficiency to employers. Success skills assessments generally focus on communication, professionalism, teamwork and problem solving. The credentials associated with assessments should be:

- From reputable, familiar organizations;
- Tied to work experience when possible; and
- Transparent in how the conferring of credentials is determined (Cellura and Lepe, 2022).

Some states have adopted statewide credentials using their own assessments or partnering with providers. Many credentialing efforts have focused on secondary settings or are offered through workforce or labor boards. In Florida, a recent digital badge initiative at the postsecondary level aims to translate the skills students receive in general education classes to the workforce.

#### **Key Takeaways**

There are a variety of success skills that are in demand with employers. These skills vary depending on the context of the industry, the tasks performed within the occupation and level of education required. Some key skills that identified across a number of industries and occupations:

- Communication, Oral and Written;
- Teamwork and Collaboration; and
- Problem Solving and Critical Thinking.

The analysis of job postings in SREB states also revealed that management was a top skill desired in high-needs industries. States should consider tailoring success skill development to meet the needs of specific industries and to address the higher-order thinking skills needed in many in-demand occupations. Introducing success skills through a combination of course standards and project-based or work-based learning provides students with authentic opportunities to develop skills.

Credentialing is an important step to convey the employability of students; however, the credentials should be provided by a reputable institution and be widely recognized employers. In the absence of good credentials, workbased learning experiences can signal to employers that students have had exposure to a professional workplace and have been able to acquire meaningful workplace experience.



The analysis of job postings in SREB states also revealed that management was a top skill desired in highneeds industries.

#### References

- Binsaeed, R. H., Unnisa, S. T., and Rizvi, L. J. (2017). The big impact of soft skills in today's workplace. *International Journal of Economics, Commerce and Management, 5(1)*, 456-463.
- Bughin, J., Hazan, E., Lund, S., Dahlström, P., Wiesinger, A., and Subramaniam, A. (2018). Skill shift: Automation and the future of the workforce. McKinsey Global Institute, 1, 3-84.
- Burning Glass Technologies. (2015). *The Human Factor: The Hard Time Employers Have Finding Soft Skills*.
- Cellura, P., Lepe, M. (September 2022). What Do Employers Want to See from Soft-Skills Credentials? MDRC https://www.mdrc.org/publication/what-do-employers-want-see-soft-skills-credentials
- Dalporto, H., and Lepe, M. (August 2022) *Implementing Soft-Skills Programs in a Postsecondary Setting*. MDRC. <a href="https://www.mdrc.org/publication/implementing-soft-skills-programs-postsecondary-setting">https://www.mdrc.org/publication/implementing-soft-skills-programs-postsecondary-setting</a>
- Dawson, N., Martin, A., Sigelman, M., Levanon, G., Blochinger, S., Thornton, J., and Chen, J. (December 2022). How Skills Are Disrupting Work: The Transformational Power of Fast Growing, In-Demand Skills. *In Business-Higher Education Forum*. Business-Higher Education Forum.
- Deep, S., Ahmed, A., Suleman, N., Abbas, M., Naza, U., Shaheen, H., & Razzaq, A. (2020). The Problem-Based Learning Approach Towards Developing Soft Skills: A Systematic Review. *The Qualitative Report*, 25(11), 4029-4054. https://doi.org/10.46743/2160-3715/2020.4114
- Deming, D. J. (2017). The growing importance of social skills in the labor market. *The Quarterly Journal of Economics*, 132(4), 1593-1640.
- Evans, C. M. (2020). *Measuring Student Success Skills: A review of the literature on collaboration*. National Center for the Improvement of Educational Assessment.
- Fernandez, F., and Liu, H. (2019). Examining relationships between soft skills and occupational outcomes among US adults with—and without—university degrees. *Journal of Education and Work, 32*(8), 650-664.
- Fletcher, S., and Thornton, K. R. (2023). The top 10 soft skills in business today compared to 2012. Business and Professional Communication Quarterly, 86(4), 411-426.. <a href="https://doi.org/10.1177/23294906221148453">https://doi.org/10.1177/23294906221148453</a>
- Flores, E., Xu, X., and Lu, Y. (2020). Human Capital 4.0: a workforce competence typology for Industry 4.0. *Journal of Manufacturing Technology Management*, 31(4), 687-703.
- Georgetown University Center on Education and The Workforce (2020). *Workforce Basics: The Competencies Employers Want*.
- Heckman, J. J., and Kautz, T. (2012). Hard evidence on soft skills. Labour economics, 19(4), 451-464.
- Hirudayaraj, M., Baker, R., Baker, F., and Eastman, M. (2021). Soft skills for entry-level engineers: What employers want. *Education Sciences*, *11*(10), 641.

- Jones, M., Baldi, C., Phillips, C., and Waikar, A. (2017). The hard truth about soft skills: What recruiters look for in business graduates. *College Student Journal*, *50*(3), 422-428.
- Lyu, W., and Liu, J. (2021). Soft skills, hard skills: What matters most? Evidence from job postings. *Applied Energy*, 300, 117307. <a href="https://drive.google.com/file/d/1TF-4fhqMp5pMp">https://drive.google.com/file/d/1TF-4fhqMp5pMp</a> DcftCIJWMXY <a href="https://drive.google.com/file/d/1TF-4fhqMp5pMp">cMf5Jt/view</a>
- O\*Net Resource Center (n.d.) https://www.onetcenter.org/content.html#cm2
- Perkins Collaborative Resource Network (n.d.). Employability Skills Framework. <a href="https://cte.ed.gov/initiatives/employability-skills-framework">https://cte.ed.gov/initiatives/employability-skills-framework</a>
- Rios, J. A., Ling, G., Pugh, R., Becker, D., and Bacall, A. (2020). Identifying critical 21st-century skills for workplace success: A content analysis of job advertisements. *Educational Researcher*, 49(2), 80-89.
- Robles, M. M. (2012). Executive perceptions of the top 10 soft skills needed in today's workplace. *Business communication quarterly*, 75(4), 453-465.
- Sigelman, M., Taska, B., O'Kane, L., Nitschke, J., Strack, R., Baier, J., ... and Kotsis, Á. (2022). Shifting Skills, Moving Targets, and Remaking the Workforce. Boston Consulting Group and The Burning Glass Institute.
- Sirotiak, T., and Sharma, A. (2019). Problem-based learning for adaptability and management skills. *Journal of Professional Issues in Engineering Education and Practice, 145*(4), 04019008.
- Succi, C., and Canovi, M. (2020). Soft skills to enhance graduate employability: comparing students and employers' perceptions. *Studies in higher education*, *45*(9), 1834-1847.
- Williams, K. M., Wang, T., Holtzman, S., Leung, T. M., Cherfrere, G., and Ling, G. (2023). Employer Expectations of 21st-Century High School Graduates: Analyzing Online Job Advertisements. *ETS Research Report Series*.

#### Appendix A

#### **Summary of Research in Employer Demand of Success Skills**

#### **Surveys**

Author and Year	Methodology	Top Skills Identified
Robles, 2012	Survey of Business Executives N=90	Integrity Communication Courtesy Responsibility Interpersonal Skills
McKinsey Global Institute, 2018	Survey of C-Suite Executives N=3,031	Social Skills – Teamwork, Advanced Communication Higher Cognitive Skills – Problem Solving, Critical Thinking, Creativity, Project Management
Center for Education and Workforce, Georgetown University, 2020	O*Net Online Database Using Surveys of Analysts and Job Incumbents	Communication Teamwork Customer Service Leadership Problem Solving
Hirudayaraj et al., 2021	Survey of Engineering Firms N=487	Reliability Ability to Work in Teams Responsibility Self-motivation Positive Attitude
Fletcher and Thornton, 2023	Survey of Business Executives N = 105, Phase 1 N = 78, Phase 2	Integrity Adaptable Conscientious Partnership Agency

#### Appendix A (cont.)

#### **Summary of Research in Employer Demand of Success Skills**

#### **Job Advertisements**

Author and Year	Methodology	Top Skills Identified
Burning Glass Institute, 2015	25 million	Communication Skills Organizational Skills Writing Customer Service Problem Solving
Rios et al., 2020	142,000 requiring some college education	Oral Communication Written Communication Collaboration Problem Solving Communication Skills
Lyu and Liu, 2021	60,000 online job advertisements focusing on energy	Cognitive – Problem Solving and Critical Thinking Social – Communication and Collaboration People Management – Human Resources
Williams et al., 2023	68,000 requiring a high school diploma	Professionalism Service Orientation Communication Skills Collaboration Problem Solving

This table uses the terms found in each study; therefore, skill names are not consistent across cells.

#### **Appendix B**

#### Demand for Success Skills Full-Time and Part-Time Positions in SREB States

#### **Across All Industries**

Skill Name	Active Job
Communication Skills (Verbal and written skills)	238,758
Teamwork/Collaboration	152,705
Problem Solving	71,468
Organization	63,797
Supervision/Management	62,612
Interpersonal Relationships/Maintain Relationships	59,859
Analytical	59,281
Self-Motivated/Ability to Work Independently/Self Leadership	55,237
Detail Oriented/Meticulous	52,556
Project Management	51,594

Source: JobsEQ

Data reflect online job postings for all SREB states that were active between 8/23/2022 and 8/23/2023.

#### Appendix B (cont.)

#### Demand for Success Skills Full-Time and Part-Time Positions in SREB States

#### **Health Science Occupations**

Skill Name	Active Job
Communication (Verbal and written skills)	32,898
Cooperative/Team Player	26,460
Supervision/Management	9,449
Interpersonal Relationships/Maintain Relationships	8,266
Customer Service	7,360
Problem Solving	7,253
Organization	7,225
Adaptability/Flexibility/Tolerance of Change and Uncertainty	6,849
Self-Motivated/Ability to Work Independently/Self Leadership	5,903
Critical Thinking	5,871

Source: JobsEQ

Data reflect online job postings for all SREB states that were active between 8/23/2022 and 8/23/2023.

#### **STEM Occupations**

Skill Name	<b>Active Jo</b>
Communication (Verbal and written skills)	20,113
Cooperative/Team Player	13,108
Project Management	9,290
Problem Solving	6,881
Analytical	6,071
Self-Motivated/Ability to Work Independently/Self Leadership	4,847
Supervision/Management	4,576
Organization	4,001
Detail Oriented/Meticulous	3,903
Interpersonal Relationships/Maintain Relationships	3,661

Source: JobsEQ

Data reflect online job postings for all SREB states that were active between 8/23/2022 and 8/23/2023.

## **SREB**

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

**SREB.org** 

November 2023

#### **About SREB**

The Southern Regional Education Board works with states to improve public education at every level, from early childhood through doctoral education. A nonprofit, nonpartisan organization headquartered in Atlanta, SREB was created in 1948 by governors and legislators who recognized the link between education and economic vitality.