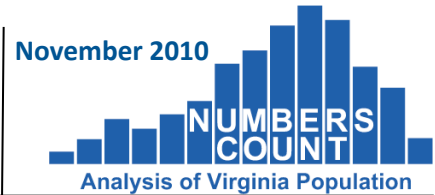


CRITICAL WORKPLACE SKILLS FOR VIRGINIA'S ECONOMIC VITALITY

By Achsah Carrier & Meredith Gunter



Virginia's economic vitality depends on a skilled workforce. A well-prepared workforce increases productivity and is a strategic advantage in attracting new employers to the Commonwealth.

What makes a workforce well prepared?

Employers from all industries across Virginia and the nation agree that professionalism, personal qualities, and people skills are vital. These so-called workplace readiness skills often are more widely valued than academic achievement; and employers seek them in students graduating from high schools, two-year colleges, and four-year colleges and universities.

Where and how are workplace skills developed?

Historically, employers have accepted summer and part-time work experience as evidence of earned workplace skills. Unfortunately, over the past thirty years, the national teen employment-to-population ratio has fallen 50% for males and 30% for females. The 2009 ratio reflects the lowest level of youth employment since World War II.

Employers recognize that, beyond actual work experience, students learn workplace readiness from their families, communities, and schools. In Virginia, research on employer needs (1997 & 2009) led to career and technical education courses incorporating workplace readiness skills instruction; and a test for workplace readiness skills has been offered in Virginia public schools since 2009.

This report provides detail on workplace readiness as defined by Virginia employers in 1997 and 2009. In addition, the report addresses several questions:

- Do employers across the nation agree on skills needed for workplace readiness?

- Do workplace readiness skills matter for students pursuing or achieving a postsecondary degree?
- Where do/should young people learn workplace readiness?
- How can schools and communities help young Virginians prepare for demands of the workplace?

Research in Virginia over 25 years

Demographers from the University of Virginia Weldon Cooper Center for Public Service interviewed 564 employers across the Commonwealth in 1995-96. The object of this research was to understand how the workplace of the 1990s was changing and what skills and qualities employ-

Virginia's Workplace Readiness Skills, 1999

1. Demonstrate reading skills on a level required for employment in a chosen career field.
2. Demonstrate math skills on a level required for employment in a chosen career field.
3. Demonstrate writing skills on a level required for employment in a chosen career field.
4. Demonstrate speaking and listening skills on a level required for employment in a chosen career field.
5. Demonstrate computer literacy on a level required for employment in a chosen career field.
6. Demonstrate reasoning, problem-solving, and decision-making skills.
7. Demonstrate understanding of the "big picture."
8. Demonstrate a strong work ethic.
9. Demonstrate a positive attitude.
10. Demonstrate independence and initiative.
11. Demonstrate self-presentation skills.
12. Maintain satisfactory attendance.
13. Participate as a team member to accomplish goals.

ers considered essential for entry-level employees hired in jobs not requiring a four-year degree. In the course of these interviews, employers revealed a great deal about the skills required for that decade. In addition to modern technical skills (including the then-still-new and increasingly important computer skills), employers also expressed their need for (and difficulty in finding) more traditional character traits and skills. They wanted job applicants who understood the workplace and its climate; had the work ethic and motivation to do the job; and demonstrated the people skills essential for successful relations with customers and coworkers. *Virginia's Changing Workplace: Employers Speak*¹ summarized these interviews, identifying two skill sets: "hard skills" and "soft skills"²:

Employers require new workers to have a number of basic technical skills that have come to be called 'hard skills.' They expect employees to have learned these skills in school: reading, math, writing, speaking, computer literacy, reasoning, problem solving and decision making, understanding the broader picture.

In addition to these basic skills, employers are looking for a number of personal qualities—'soft skills.' Many employers believe that some or all of these soft skills are learned in the home rather than in school: a strong work ethic, a positive attitude, independence and initiative, self-presentation.

Based on this study, Virginia's Career and Technical Education Curriculum Resource Center produced a list of 13 essential "workplace readiness skills," and, in 1999, incorporated the skills into the instructional standards for all career and technical education courses. In 2009, a workplace readiness skills assessment, combined with a specialized technology skills assessment, was approved by the Virginia Board of Education as a new option for earning verified credit toward high school graduation.

The Latest Word from Virginia Employers: Workplace Skills are Vital

In 2009, Cooper Center researchers sought input from Virginia employers on a proposed update of the workplace readiness skills in Virginia's career and technical education curriculum. Three hundred and eighteen employers³ from a variety of fields submitted comments on a list of 21 skills⁴

FOUNDATION SKILLS For Entry-Level Workers	Essential	Useful	Optional
APPLYING AND UNDERSTANDING MATHEMATICS: Uses mathematical reasoning to accomplish tasks.	51%	43%	5%
CREATIVITY, INNOVATION, AND ADAPTABILITY: Contributes new ideas and adapts to changes in the workplace.	57%	41%	2%
DIVERSITY AWARENESS: Works well with customers and coworkers of different ages, genders, races, ethnicities, and backgrounds.	82%	17%	1%
EMPLOYMENT-RELATED FINANCIAL LITERACY: Manages personal finances, budgeting, and savings.	34%	55%	11%
PROFESSIONAL ETHICS: Abides by workplace policies and laws, and demonstrates personal integrity.	95%	5%	0%
READING AND WRITING: Reads workplace documents and writes clearly.	89%	11%	0%
SPEAKING AND LISTENING: Understands directions and communicates effectively with customers and fellow employees.	96%	4%	0%
UNDERSTANDING HEALTH, WELLNESS, AND SAFETY: Follows safety guidelines and manages personal health.	67%	31%	2%
TECHNOLOGY SKILLS For Entry-Level Workers	Essential	Useful	Optional
COMPUTER HARDWARE BASICS: Works with computers and troubleshoots minor problems as needed.	34%	49%	16%
DATA AND FILE-MANAGEMENT: Maintains organized business files and follows management systems and appropriate security practices.	50%	38%	12%
INTERNET USE AND SAFETY: Uses the Internet appropriately for work-related projects.	58%	35%	7%
TECHNOLOGY APPLICATIONS: Learns computer applications as needed.	68%	27%	5%
TELECOMMUNICATIONS: Uses communications devices efficiently.	58%	35%	7%
PROFESSIONAL SKILLS For Entry-Level Workers	Essential	Useful	Optional
JOB ACQUISITION AND ADVANCEMENT: Presents well as a job applicant or employee and as a candidate seeking promotion.	60%	36%	4%
LEADERSHIP AND RESOURCE MANAGEMENT: Manages time and other resources, including people.	54%	42%	4%
LIFELONG LEARNING: Is eager to learn new procedures and improve skills.	63%	36%	2%
PARTICIPATES AS A TEAM MEMBER TO ACCOMPLISH GOALS: Contributes to the success of the team, assists others, requests help when needed, and resolves conflicts effectively.	89%	10%	1%
POSITIVE WORK ETHIC: Arrives at work on time, in appropriate attire, and is supportive of accomplishing the task at hand.	96%	4%	0%
REASONING, PROBLEM-SOLVING, AND DECISION-MAKING: Tackles and resolves problems that arise in completing assigned tasks.	76%	23%	1%
RESEARCH AND SYNTHESIS: Knows how to find and ethically use reliable information to solve problems.	53%	43%	4%
UNDERSTANDS THE "BIG PICTURE": Understands his or her role in fulfilling the mission of this workplace.	64%	34%	3%

proposed for their consideration.

Employers were asked to rate each of the proposed skills as “essential,” “useful,” or “optional.” Most employers considered most of the skills to be essential; and four skills sets— Speaking and Listening, Professional Ethics, Reading and Writing, and Positive Work Ethic — were not rated optional by any employers. Despite the infusion of computer and other technologies in the workplace, technology skills were the most likely among the skills to be considered optional. On the other hand, a positive work ethic was thought to be required in every occupation.

Table 2 lists the skills in order by the percentage of employers considering each to be essential. Positive Work Ethic, Speaking and Listening, and Professional Ethics were the most highly rated of the 21 skills. These rankings are consistent with those in reported in *Are They Really Ready to Work?*⁵, a major study commissioned by Partnership for 21st Century Skills and other national organizations. In this research, Professionalism/Work ethic, Teamwork/ Collaboration, and Oral Communications were at the top of the

lists for high school, two-year college, and four-year college graduates.⁶

In these comments and in the more detailed research that the Weldon Cooper Center did in the mid 1990s, Virginia employers call for the same skills found in national research results. Employers repeatedly assert that they want employees with a good work ethic, who get along with colleagues, and communicate effectively with customers and clients. While many aspects of the workplace have changed over the past two decades, the need for these basic workplace readiness skills has not changed. Employers have wanted these skills and capacities for as long as researchers have been asking about them.

National Research Highlights: Employers Seeking Basic Workplace Skills

The 1990 report from the Commission on the Skills of the American Workforce, *America’s Choice, High Skills or Low Wages*,⁷ found that:

While businesses everywhere complained about the quality of their applicants, few talked about the kinds of skills acquired in school. The primary concern of more than 80 percent of employers was finding workers with a good work ethic and appropriate social behavior: “reliable,” “a good attitude,” “a pleasant appearance,” “a good personality.”

In 1991, under the authority of the United States Department of Labor, the Secretary’s Commission on Achieving Necessary Skills (SCANS) published *What Work Requires of Schools*.⁸ The Commission developed a complex schema of

Rank	Skill	Percentage
1	Positive Work Ethic	96%
2	Speaking & Listening	96%
3	Professional Ethics	95%
4	Participates As A Team Member	89%
5	Reading & Writing	89%
6	Diversity Awareness	82%
7	Reasoning, Problem-Solving, & Decision-Making	76%
8	Technology Applications	68%
9	Understanding Health, Wellness, & Safety	67%
10	Understands The Big Picture	64%
11	Lifelong Learning	63%
12	Job Acquisition & Advancement	60%
13	Telecommunications	58%
14	Internet Use & Safety	58%
15	Creativity, Innovation, & Adaptability	57%
16	Leadership & Resource Management	54%
17	Research & Synthesis	53%
18	Applying & Understanding Mathematics	51%
19	Data & File-Management	50%
20	Computer Hardware Basics	34%
21	Employment-Related Financial Literacy	34%

Secretary’s Commission on Achieving Necessary Skills (SCANS)

FIVE COMPETENCIES

- Resources: Identifies, organizes, plans, and allocates resources
- Interpersonal: Works with others
- Information: Acquires and uses information
- Systems: Understands complex inter-relationships
- Technology: Works with a variety of technologies

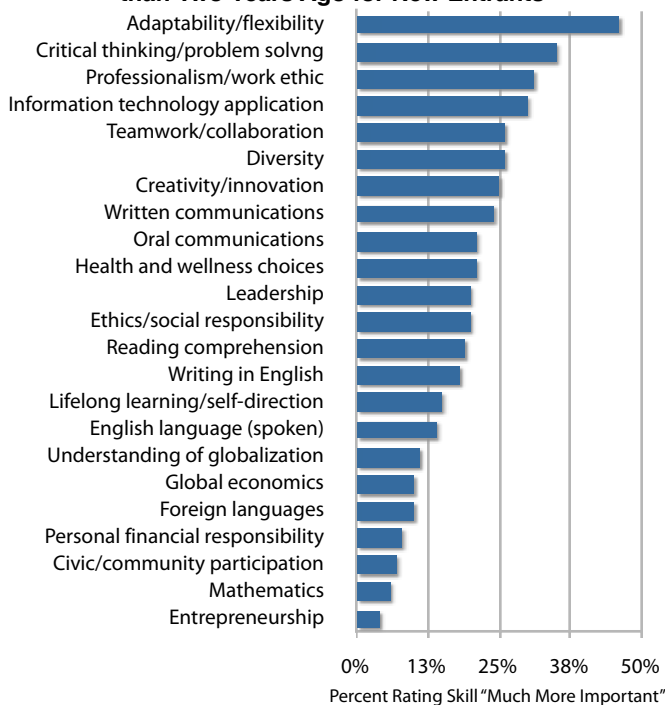
THREE-PART FOUNDATION

- Basic Skills: Reads, writes, performs arithmetic and mathematical operations, listens and speaks
- Thinking Skills: Thinks creatively, makes decisions, solves problems, visualizes, knows how to learn, and reasons
- Personal Qualities: Displays responsibility, self-esteem, sociability, self-management, and integrity and honesty

five competencies and a three-part foundation of skills and personal qualities at the heart of job performance. Twenty years later, these skills and competencies are still sought, both nationally and in Virginia.

In 2008, the Society for Human Resource Management⁹ reported responses from human resource professionals when asked how skill requirements have changed over the past two years. Respondents, from companies employing workers from high school graduates through four-year graduates, indicated that workplace readiness skills are becoming more important in the workplace - not less. As Chart 1 shows, workplace readiness skills such as adaptability/flexibility, critical thinking/problem solving, and professionalism/work ethic, were judged as becoming more important than two years ago.

Chart 1. Skills Considered “Much More Important Now” than Two Years Ago for New Entrants

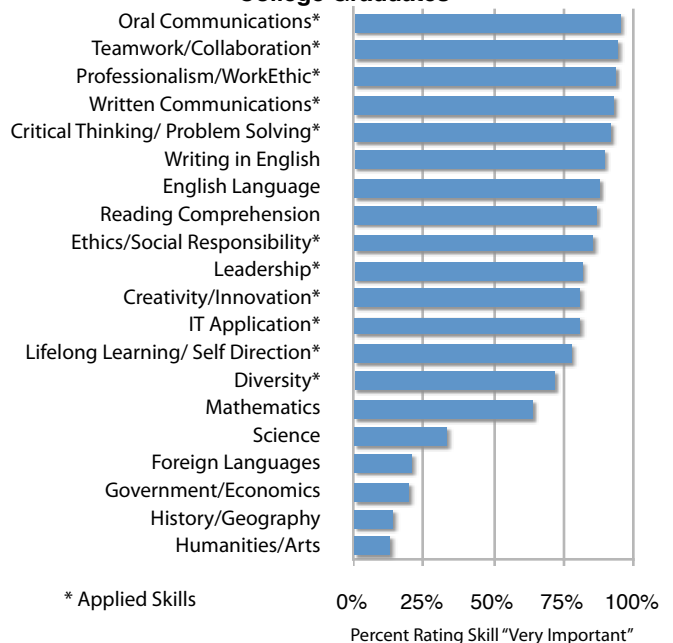


The largest and most important evaluation of workplace readiness skills in recent years was conducted jointly by The Conference Board, Partnership for 21st Century Skills, Corporate Voices for Working Families, and the Society for Human Resource Management, and captured in a report entitled: *Are They Really Ready to Work? Employers' Per-*

spectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce. In this study over 400 employers across the nation ranked the importance of eleven “applied” skills (those called workplace readiness skills in Virginia), and nine basic or “academic” knowledge/skills. Respondents rated the importance of these skills for employees entering the workforce at three education levels: high school graduates, two-year college or technical school graduates, and four-year college graduates.¹⁰ For these employers, applied skills topped the list of skills rated “very important” for employees at all three educational levels.

Charts 2a through 2c show the ratings of skills for four-year college graduates, two-year college/technical school graduates, and high school graduates, respectively. The charts illustrate that applied skills are sought by employers for those entering the workforce at all educational levels. While the order of skills is slightly different, Oral Communications, Teamwork, and Professionalism are the top three skills for all three educational levels. In fact, applied skills were more likely to be considered very important for four-year college graduates than for high school graduates.

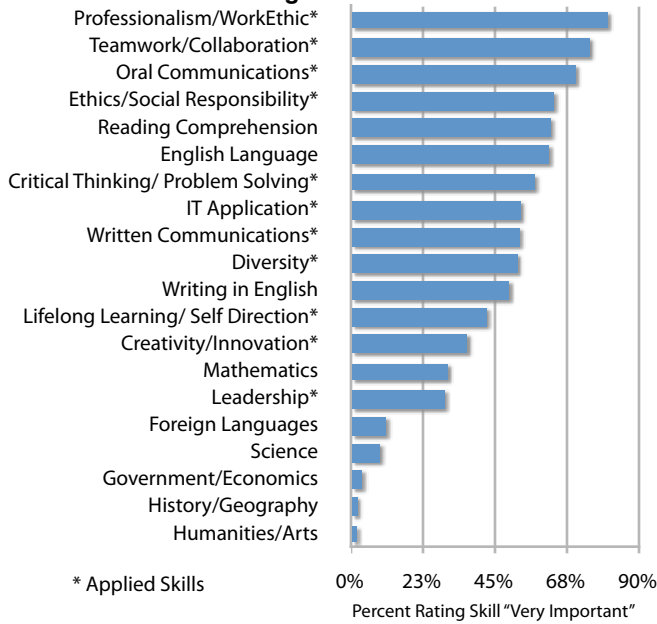
Chart 2a. “Very Important” Skills for 4-year College Graduates



* Applied Skills

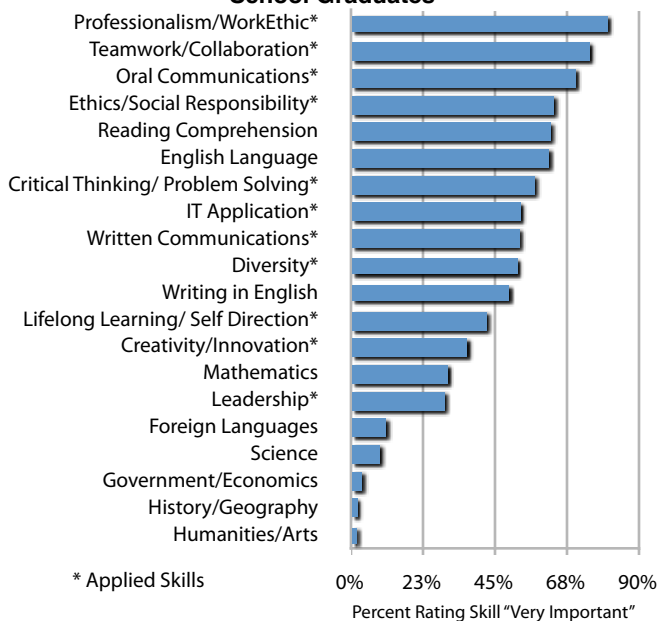
In *Are They Really Ready to Work?*, as in many other studies, a larger percentage of employers rate applied skills

Chart 2b. "Very Important" Skills for 2-year College Graduates



“very important” than gave this rating to academic skills. This shows that applied, or workplace readiness, skills are valued by a wide range of employers across a range of industries. No matter what field of work a student eventually

Chart 2c. "Very Important" Skills for High School Graduates



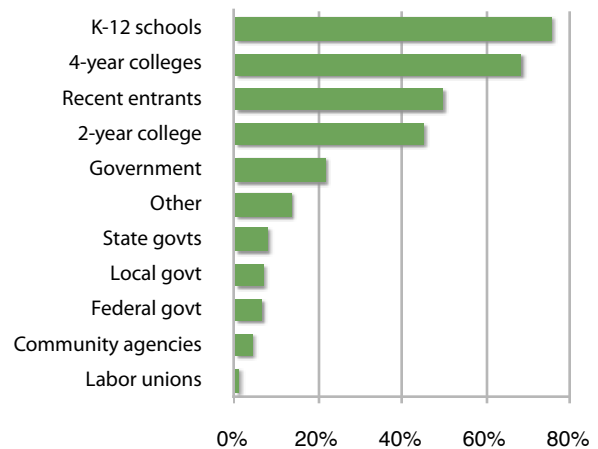
enters, he or she will need to demonstrate these skills. The academic skills are generally rated “important” by a smaller percentage of employers because they are much more likely to be job specific. Foreign languages, science, economics, and art are crucial in some occupations, but not in every occupation. Because the applied skills are general rather than specific to any occupation, they have as a rule not been given a place in any specific curriculum. However, employers are now looking for these skills to be given more curricular support.

Workplace Readiness Skills Are Important, But Should They Be Taught In School?

How do students develop the workplace readiness skills that employers want? Are parents, families, and communities solely responsible for character and skill development in students? Do schools and curriculum have a role to play in this area so important to Virginia employers?

As part of the study *Are They Really Ready To Work?*, employers were asked “who should be responsible for providing the necessary basic knowledge and applied skills for their new entrants?”¹¹ While many respondents wrote in “parents,” which was not included on the list of options, 75 percent of employers indicated that K-12 schools should be responsible (Chart 3).

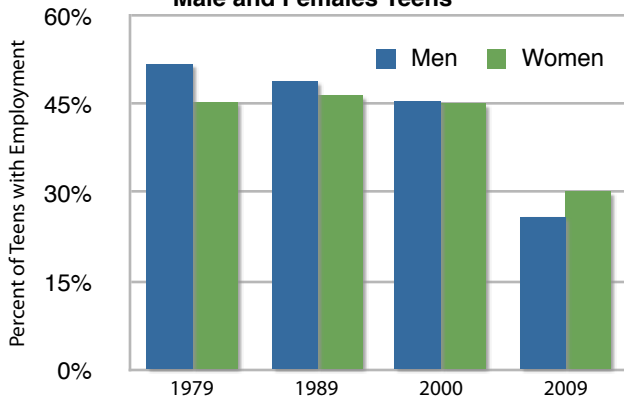
Chart 3. Who is Responsible for Workplace Readiness



Traditionally, many young people have been expected to develop workplace readiness skills through actual work experience. The family business, paper route, summer job, and after-school job have long been a part of the experience of American youth; however, like the paper route, opportunities and time to gain work experience for young people is less common today.

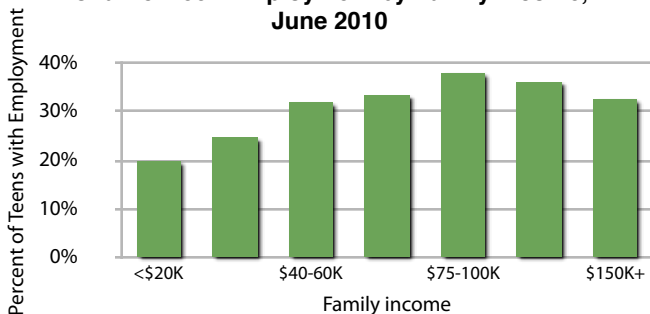
According to Andrew Sum of Northeastern University's Center for Labor Market Studies, experience in the workplace among youth is declining significantly. From 1979 to 2009 the employment to population ratio¹² of youth 16 to 19 fell by half for young men and by a third for young women (See Chart 4). The 2009 employment to population ratio for teens of both genders is the lowest ever recorded in post-World War II history.¹³

Chart 4. Employment/Population Ratios of Male and Female Teens



Low-income youth are significantly less likely than their middle class peers to build work experience in their teenage years (see Chart 5). Racial and ethnic disparities are also very large. Black and Hispanic teens have lower em-

Chart 5. Teen Employment by Family Income, June 2010



ployment rates than white teens from families of the same income level. The disparity is particularly severe for black teens. Sum reports that, "the employment rate for upper middle income White teens was four times as high as that for low income Black teens, (40.1% vs. 9%), an extremely large gap in employment prospects."¹⁴

Many non-working teens spend their out-of-school time in valuable activities, including art, sports, and even additional studies.¹⁵ Despite the advantages that participating teens gain from these activities, Sum is concerned that they lack valuable experience by missing out on work. Work experience:

can instill youth with employer valued soft skills, such as attendance and punctuality, interpersonal skills, customer relations, team work, and occupational skills that are best learned in a workplace setting. A substantial and growing body of literature on the early labor market experiences of young adults over the past thirty years indicates quite consistently that employment during the high school years can generate a diverse number of favorable short-term and long-term positive impacts on their employability, wages, and earnings. These labor market impacts tend to be larger for those high school graduates who do not go on to complete any substantive amount of post-secondary education.¹⁶

Since youth engagement in work experience has decreased significantly over recent decades, schools may now need to provide training in these basic workplace skills that young people once developed in other ways. Workplace readiness skills instruction along with instruction toward specifically employment-related credentials may help to compensate for lack of work experience and give students an understanding of the world of work that they hope to join.

Summary

This review of research on workplace readiness found that:

- Despite changes in the workplace over the past twenty years, employers from all sectors and across the nation rate workplace skills, character, and behavior as vital qualities for entry-level employees;
- These skills are important for a wider range of occupations than are most individual academic skills;

- These skills are considered important for students graduating from high schools, two-year colleges, and four-year colleges and universities;
- Employers believe schools play an important role in teaching these skills, and value work experience as evidence of exposure to sound workplace skills and attitudes;
- Over the past thirty years, the youth employment to population ratio has fallen 50% for males and 30% for females;
- In Virginia, teachers in career and technical education courses have incorporated workplace readiness skills instruction since 1999. These skills have recently been reevaluated and updated and a new assessment is being developed.

Implications/Recommendations

In light of current research on workplace readiness, Virginia policymakers should consider the following points:

1. Career and Technical Education programs in Virginia may be a model for incorporating employer-valued workplace readiness skills into Virginia's schools and classrooms. After 10 years of experience with workplace readiness skills, career and technical educators and programs are established as a proving ground for both the value of these skills and approaches to teaching them.
2. Workplace readiness "skills" include skills, behaviors, attitudes, and values. While career and technical education courses can be a place to learn these skills, the skills must be incorporated into the entire curriculum so that all students have the opportunities provided to those enrolled in CTE courses.
3. In addition, a commitment to workplace skills and attitudes should be reflected in the entire school environment and endorsed by administrators, parents, PTA organizations, and community leaders. Timeliness, appropriate dress, manners, integrity, and interpersonal respect (among other things) can be nurtured in an orderly school environment that demands the best from everyone. Allowing students to dress inappropriately, miss multiple days of school, or behave rudely to others does a disservice to the school environment, to their fellow students, to the employers and citizens of Virginia, and to the future of the students themselves.
4. Employers cannot leave schools on their own to prepare students for the demands of the work environment. While youth work experience through direct employment is falling for many reasons and probably cannot be returned to previous levels, students need experience with and exposure to work environments. This exposure helps them to make sense of their studies in school, and better prepares them for entry into the workplace.
5. Employer involvement in Virginia's schools can create these opportunities. School visits, participating in job and career fairs, offering internships, hosting student work-site visits, sending speakers to career days, and recruiting young workers directly through high schools are all crucially important to developing work-ready graduates from Virginia.
6. The link between high schools and Virginia's community colleges has been bolstered by career coaches - individuals hired by community colleges and located within the high schools to help students develop sound academic and career plans. This model could be adapted to build linkages between schools and the employment community. Economic development or other state funds could be dedicated to creating a network of individuals, one in each school division, to build school/employer partnerships and engagement. Just as the statewide system of career coaches was built incrementally, several positions could be created in a range of Virginia communities as a pilot project, with results evaluated for possible program expansion.

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1. This research on changing workplace skills was commissioned by the Virginia Occupational Information Coordinating Committee and the Virginia Department of Education Vocational, Adult, and Employment Training Services to guide future development of career and technical education.
 2. Julia H. Martin, Achsah H. Carrier, and Elizabeth A. Hill, *Virginia's Changing Workplace: Employers Speak*. (Weldon Cooper Center for Public Service, University of Virginia, 1997) p. 15-16.
 3. Comments on the proposed list were invited from employers on the Career and Technical Education State Advisory Board; employers involved with school division Career and Technical Education programs as advisory board members or in other capacities; and employers indirectly contacted through local Chambers of Commerce, Workforce Centers, and a number of statewide associations.
 4. The revised list was developed by the Career and Technical Education Consortium of States, Virginia's CTE Resource Center, and the Weldon Cooper Center and was based on an evaluation of national research, national assessment programs (including Equipped for the Future Content Standards), and workplace skills curricula in use in seven other states.
 5. J. Casner-Lotto and L. Barrington, *Are They Really Ready to Work? Employers' Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce*. The Conference Board, Corporate Voices for Working Families, Partnership for 21st Century Skills, and Society for Human Resource Management (2006).
 6. Career and technical education programs in Virginia have now been revised in light of these employer comments and related state national research. A revised list of 21 workplace readiness skills was prepared and adopted in 2010. These skills have been integrated into all career and technical education programs and an assessment is being prepared for implementation as part of the secondary industry credentialing initiative. The new list of 21 workplace readiness skills and supporting curriculum materials can be seen at the website of Virginia's CTE Resource Center: www.CTEresourcecenter.org.
 7. National Center on Education and the Economy, *America's Choice: High Skills or Low Wages!* The Report of the Commission on the Skills of the American Workforce (1990) p. 3.
 8. Department of Labor, The Secretary's Commission on Achieving Necessary Skills, *What Work Requires of Schools: A SCANS Report for America 2000* (1991).
 9. Society for Human Resource Management and WSJ.com/Careers, *Critical Skills Needs and Resources for the Changing Workplace* (2008) p. 9.
 10. J. Casner-Lotto and L. Barrington, *Are They Really Ready to Work? Employers' Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce*. The Conference Board, Corporate Voices for Working Families, Partnership for 21st Century Skills, and Society for Human Resource Management (2006) p. 9.
 11. *Ibid.*, p. 31.
 12. The employment to population ratio measures youth working one or more hours for pay, or without pay in a family business, for 15 or more hours per week. These data on employment to population ratios come from the national Current Population Survey conducted by the U. S. Bureau of Labor Statistics and are not available at the state level.
 13. Andrew Sum, "The Collapse of the Nation's Labor Market for Teens and Young Adults (20-24): Designing A Set of Workforce Development Strategies to Improve the Immediate and Long-Term Employment Prospects of the Nation's Youth." Center for Labor Market Studies Northeastern University (2009) Powerpoint.
 14. Andrew Sum, et al., *Vanishing Work Among U.S. Teens, 2000-10: What A Difference a Decade Makes! Four Million Missing Workers in June 2010*. Prepared for the Charles S. Mott Foundation (July 2010) p. 8.
 15. Teresa Morisi, "The Early 2000s: A Period of Declining Teen Summer Employment Rates." *Monthly Labor Review* (May 2010) 23-35.
 16. Andrew Sum, et al., "Education and Labor Market Outcomes for the Nation's Teens and Young Adults since the Publication of America's Choice: A Critical Assessment." Paper Commissioned by the National Center on Education and the Economy for the New Commission on the Skills of the American Workforce (January 2006) p. 20.