

Bridging the Skills Gap: Insights Into High School Students' Perspectives on Skills Important for Their Future Careers

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Conclusions

This study demonstrates that high school students vary in their awareness of and the importance they attribute to skills that employers value for the careers they plan to pursue. Findings reveal that students who are more certain about their career choices have greater skill awareness. Students are also strongly aligned to the top skills that employers consider important, making communication, work ethic, critical thinking, and collaboration necessary for career success. While these skills emerged as highly important across career fields for many students, others varied by career field, suggesting that students' perceptions of the importance of these skills are based on the unique demands of their planned careers. These results reinforce the need to provide broad skill development, along with targeted skill support aligned with students' career aspirations.

This study also shows that the extent to which essential, transferable, and foundational skills are taught in school is significantly related to students' self-rated proficiency in these skills. Findings highlight that most students perceive being taught nearly all the skills in school, with essential skills being most frequently taught in schools and those in which students rate themselves the highest. Overall, this pattern is similar for transferable skills, although fewer students consider themselves highly proficient in these skills. Students think foundational skills in math, documents, and graphics are taught more frequently, and yet they rate themselves lower in skill proficiency. The prevalence of "average" self-ratings across transferable skills and foundational skills may reflect variability in students' perceptions related to the focus or quality of instruction. These results underscore the value of intentional curriculum design that prioritizes skills important for career success.

So What?

There is a clear and persistent gap between the skills that employers need and the skills that individuals have when entering the U.S. workforce. This skills gap poses a risk to the success of both individuals and the organizations that support the U.S. economy. The employment, productivity, and innovation implications of this skills gap must be addressed in part by future workforce entrants, making it imperative to gain greater awareness of high school students' perspectives on work skills valued by employers. Insights from this research help us better understand the views of future workforce entrants and provide a lens into ways in which educators and employers can better prepare students to address the skills gap.

Now What?

Based on findings from this study, schools can address gaps in skill awareness, skill instruction, and skill development. To better prepare students to meet workforce demands, schools should consider the following: (a) embed career readiness skill instruction into the school curriculum and integrate these skills within school subjects, (b) connect learning to real-world experiences that make these skills more concrete and relevant, (c) build in opportunities for students to assess and reflect on their skills by using valid career readiness assessments to identify skill strengths and weaknesses, track growth, and obtain actionable feedback, (d) align curriculum

and graduation requirements with important career-related skills, and (e) help teachers facilitate students' skill development by promoting professional development opportunities.

In addition, employers could also participate in preparing students by considering the following: (a) partner with schools to offer work-based learning opportunities, such as internships, job shadowing, apprenticeships, and mentorship programs, (b) engage with educators and students through career fairs, as guest speakers, and through work demonstrations, (c) collaborate with schools and advisory boards to support efforts that align curriculum and graduation requirements with skills needed in the workplace, (d) support teacher professional development by sharing expertise, co-developing training resources, and participating in professional learning communities, and (e) promote and recognize industry credentials that certify desired skills.

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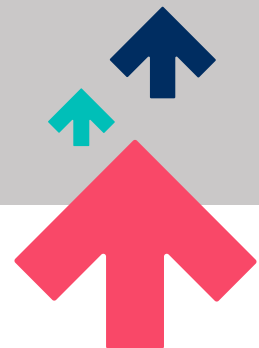
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Introduction

There is a clear and persistent gap between the skills that employers need and the skills that individuals have when entering the U.S. workforce. This skills gap can negatively affect individuals, businesses, and the broader economy. Individuals who lack the necessary skills may experience difficulties obtaining employment, performing well on the job, and advancing in their careers (Donovan et al., 2022). Businesses may face lower employee productivity, higher employee training costs, increased employee turnover, and reduced competitive edge due to less innovation (World Economic Forum, 2025; Zheliabovskii, 2025). A gap in skills can also hamper economic growth and could potentially cost trillions of dollars if the situation continues (Zheliabovskii, 2025). Thus, it is critical for future workforce entrants to develop the workforce skills needed by employers, which are essential for success in their careers.

Workforce skills have been described in many ways. For example, the World Economic Forum (2025) describes core workforce skills as cognitive, interpersonal, and digital competencies that enable workers to adapt to technological, economic, and social change. This world report also consistently highlights the importance of foundational knowledge and applied skills for occupations. In addition, Beier et al. (2025) highlighted the need for a person-centered approach to skill development for the workforce, which emphasizes the cognitive, social, and adaptability traits individuals need to thrive in dynamic work environments and meet changing job demands. The U.S. Department of Education's Office of Career, Technical, and Adult Education (OCTAE), with support from RTI International, developed the Employability Skills Framework to provide a common language that bridges education and work and describes the knowledge and skills needed for success across jobs; these include applied academic skills, critical thinking skills, interpersonal skills, personal qualities, resource management, information use, technology use, communication skills, and systems thinking (U.S. Department of Education, 2018). Across these descriptions, workforce skills are seen as multidimensional, and thus we bring that perspective to this report.

Employers are clear about the high-demand skills they seek from individuals in the workforce. Nine out of ten global executives responding to a LinkedIn survey agreed that soft skills (also called durable skills, essential skills, or 21st-century skills) are “more important than ever”; examples of such skills, which we refer to as essential skills or transferable skills in this report, include communication, adaptability, leadership, teamwork, and problem-solving (Brodnitz, 2024, para. 4). Further, a majority of surveyed employers who are part of the National Association of Colleges and Employers (NACE) consider transferable career readiness skills and abilities such as teamwork, communication, and critical thinking to be important for workforce success (Gray, 2025a). According to the World Economic Forum (2025), employers also consider analytical and creative thinking top priority skills; resilience, flexibility, agility, motivation, self-awareness, curiosity, learning, and technological literacy appear on their list of high-demand skills as well.

In addition to the fact that certain skills are valued by employers, the contribution of career-relevant skills to work success provides another way to gauge their importance. In particular, the current paper focuses on three skill areas: essential skills, foundational workplace skills, and

transferable skills as described in the notes. Research shows that skills within each of these areas are related to important workplace outcomes. For example, essential skills such as those measured by the WorkKeys® Essential Skills assessment¹ contribute to occupational attainment, job performance, work satisfaction, and reduced turnover (ACT, 2024). Foundational workplace skills (fundamental skills that support carrying out additional operations/tasks and learning at work) are also important for work success. Foundational skills such as using math in the workplace, performing tasks based on workplace documents, and using graphics, which are measured by three WorkKeys assessments (Applied Math, Workplace Documents, and Graphic Literacy) and represented by the ACT® WorkKeys® National Career Readiness Certificate™ (NCRC®; an industry-recognized credential),² have been linked to increased job performance and employee productivity, as well as reductions in employee turnover, time-to-hire, cost-to-hire, and training time (Walton et al., 2026). Transferable skills,³ skills that are applicable across occupations and industries, have also been shown to contribute to work success, with communication skills contributing to employability (Wu et al., 2023), critical thinking skills predicting work task performance (Elson et al., 2018), and career development being positively related to job retention (Yarbrough et al., 2016). Further, aligning postsecondary education with the needs of employers and integrating transferable skills into course curricula can foster positive career readiness skill development (Goodarzi et al., 2025). This, in turn, helps students gain a greater competitive advantage as they enter the labor market.

However, according to the *New Hire Readiness Report*, eight out of ten (84%) surveyed hiring managers believe that most high school graduates are unprepared to enter the workforce (U.S. Chamber of Commerce & College Board, 2025). Only 38% of these hiring managers found it somewhat or very easy to identify job candidates with the skills they needed. Further, results from the 2023 Program for the International Assessment of Adult Competencies study of adult cognitive skills revealed lower proficiency for both literacy and numeracy among U.S. adults aged 16 to 65 since 2017 (U.S. Department of Education, 2024), indicating that working adults are less able to make inferences from a section of text, manipulate fractions, or apply spatial reasoning. National Association of Colleges and Employers (NACE) surveys of college students and employers also revealed that new college graduates perceived themselves as more proficient in important career readiness skills and abilities than employers did; for example, there was a 35% gap in leadership skills and a 25% gap in communications skills (Gray, 2025a). Additionally, nearly two thirds of employers (63%) responding to the Future of Jobs Survey (World Economic Forum, 2025) identified skill gaps as a substantial barrier to transforming their businesses over the next 5 years, which can limit their growth and longer-term success.

To address the skills gap, hiring managers indicated that high school graduates can become more prepared through a combination of postsecondary education, skill development, and work experience such as internships (U.S. Chamber of Commerce & College Board, 2025). A large majority of hiring managers (71%) also believed that high school graduates would be better prepared to enter the workforce if they had industry-recognized credentials to corroborate their skills. Further reinforcing the value of skills, 90% or more of hiring managers reported being more likely to hire entry-level employees with critical thinking, problem-solving, and communication skills and affirmed the importance of learning communication, decision-making, and collaboration before entering the workforce. Cole et al. (2021) emphasized that education

systems should cultivate essential skills to better prepare students for their careers, while also recognizing that core skills such as reading, writing, and math remain necessary “foundational building blocks” that enable progress along a career pathway (Cole et al., 2021, p. 7). Notably, 86% of public schools (offering any Grade 9 through Grade 12 courses) rated themselves as doing a good, very good, or excellent job of preparing students for the workforce (National Center for Education Statistics, 2024).

Given the far-reaching implications of the skills gap in the U.S. workforce and the need for future workers to help address these gaps, it is more important than ever to understand high school students’ perspectives on important career-relevant skills. Differences in the perceptions of new college graduates and employers regarding skill proficiency further highlight this need. The current study was designed to address several questions related to high school students’ views on work skills:

- 1) Are high school students aware of employer-valued skills? Does this perception align with students’ certainty in their career choices? What specific skills do students think are important?
- 2) Which essential, transferable, and foundational skills do high school students consider most important for success in their careers, and does this vary across occupational groups?
- 3) To what extent do high school students believe they have developed essential, transferable, and foundational skills? To what extent are these skills taught in school according to students? Does the fact that the skills are taught in school predict students’ perceptions of their skill levels?

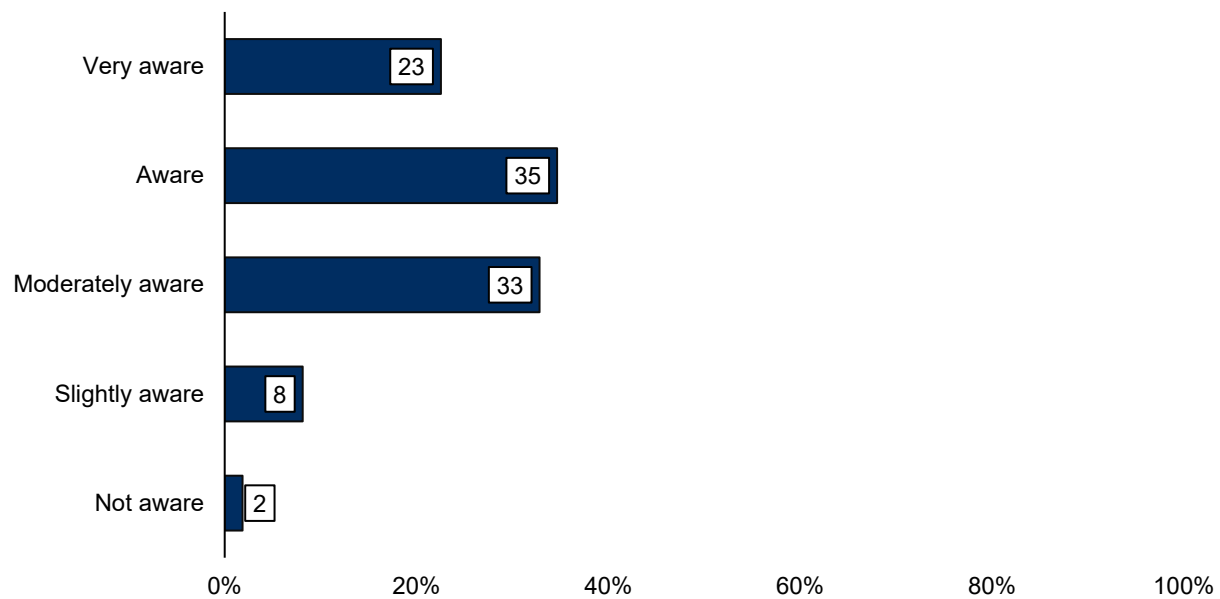
The answers to these questions can help us better understand the perspectives of future workers and provide insights to better prepare students for a successful transition into the workforce.

We surveyed a random sample of high school students in Grades 11 and 12 who registered for the December 2024 or February 2025 ACT National test dates. At the time of ACT registration, all these students had selected a career they wanted to pursue in the future from a provided list; if they did not provide a planned occupation or reported being undecided about a planned occupation, they were excluded from the study.⁴ Through this online survey, students shared their views on work skills valued by employers, including their awareness of and the importance they placed on skills relevant to their preferred careers. We also explored students’ perceptions of how well they had developed employer-valued skills and the extent to which these skills are taught in school. In this brief, we share what we learned from 2,294 high school students on these topics (see the technical appendix for more details about the student sample and the survey questions).

Students Revealed Differences in Awareness of Employer-Valued Skills for Their Future Careers

High school students varied in their overall awareness of the skills employers wanted people to have for their planned careers. More than half (58%) reported being very aware or aware of these skills. Another third (33%) were moderately aware, while 10% indicated that they were only slightly or not at all aware of skills valued by employers for their intended careers.

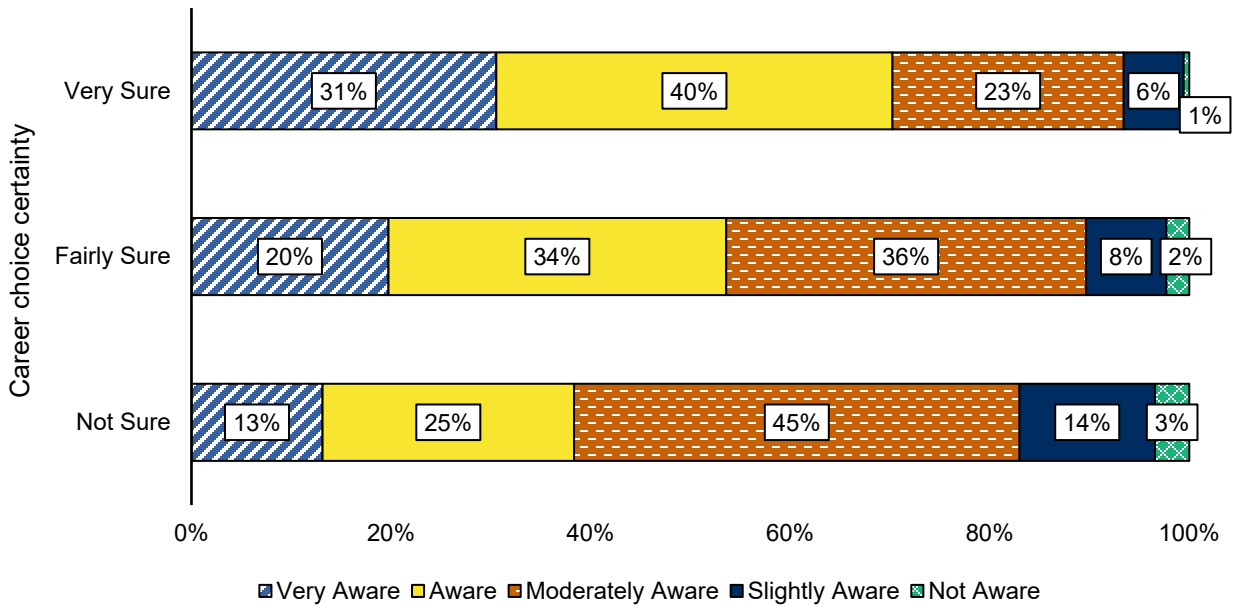
Figure 1. Percentages of Students Rating Their Overall Awareness of Employer-Valued Skills for Their Planned Careers ($N = 2,294$)



Note. Percentages might not add up to 100% due to rounding. The n counts are unweighted sample sizes, while the percentages were calculated after weighting.

We also explored whether students' certainty in their planned career choices varied according to their awareness of the skills needed for those careers. There was a positive relationship between skill awareness and career choice certainty: Students who were more sure about their choices expressed greater awareness of the skills needed for their careers, as shown in Figure 2.⁵ Results showed that among students who were very certain about their career choices, 31% and 40% were very aware or aware of the career skills needed. These percentages of awareness are much higher than those of students who were fairly certain about their career choices (20% for being very aware and 34% for being aware) and of students who were not sure about their career choices (13% for being very aware and 25% for being aware).

Figure 2. Percentages of Students Rating Skill Awareness for Planned Careers by Level of Career Choice Certainty



Note. Percentages were calculated after weighting and might not add up to 100% due to rounding.

Additionally, we examined skill awareness both through an open-ended question⁶ and by having students rate the skills they perceived as most important for their future careers from a set of skills valued by employers.⁷ Table 1 ranks the top 10 most important skills that students thought employers wanted people to have for their future careers based on their responses to the open-ended question.

Table 1. Most Important Skills for Future Careers Identified by Students

**Top 10 Most Important Skills for Future Careers
(by Rank Order)**

Communication (*n* = 455)

Work ethic (*n* = 446)

Critical thinking / problem-solving (*n* = 325)

Collaboration (*n* = 314)

Content knowledge (*n* = 254)

Job-specific skills (*n* = 199)

Creativity (*n* = 155)

Leadership (*n* = 106)

Resilience (*n* = 94)

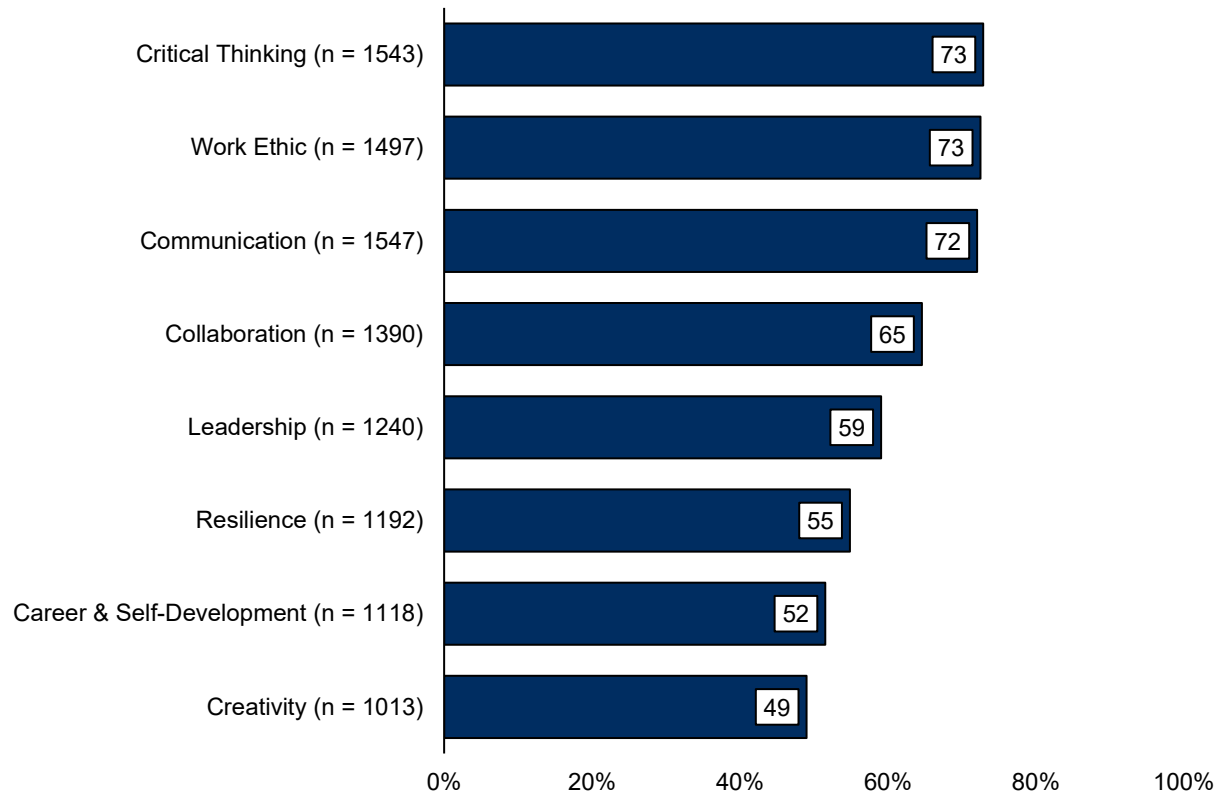
Technology (*n* = 78)

In the high school students' open-ended responses, the skill most mentioned was communication (e.g., talking with people, listening, writing, or presenting). Next was work ethic (also referred to as professionalism), described by students using terms such as reliable, dependable, organized, responsible, accountable, committed to getting the job done, and demonstrating effective time management. The third skill was critical thinking / problem-solving, which students characterized as using judgment, thinking analytically, applying logic, thinking quickly, and directly solving problems. Collaboration followed, highlighted by phrases like working with others, being cooperative and helpful, and showing empathy and compassion. Content knowledge was the fifth skill, encompassing a wide range of subjects from math, science, medicine, and engineering to music, art, and law. Job-specific skills came next, including using graphics, computer-aided design (CAD) in engineering and architecture, and argumentation in law. Creativity was identified as the seventh most important skill, described with terms like open-minded, innovative, and curious. Leadership was next, described as the ability to manage and engage others. Resilience followed, encompassing emotional awareness and stability, persistence, stress management, and the ability to work under pressure. The tenth skill was technology, which some students described as artificial intelligence (AI), computer programming, software, and coding.

Based on students' ratings of employer-valued skills, Figure 3 shows the skills selected by nearly half or more of the surveyed students as most important for their future careers. On average, the surveyed students selected seven or eight skills as most important for their preferred types of careers. Among the top-rated skills, critical thinking, work ethic, and communication were rated most important by nearly three quarters of the surveyed students

(72% to 73%). Two thirds (65%) also selected collaboration as most important. A majority rated leadership (59%), resilience (55%), and career and self-development (52%) as key skills. Additionally, about half (49%) identified creativity as among the most important skills needed for doing well in their future careers.

Figure 3. Percentages of Students Rating Top Most Important Skills Needed to Do Well in Their Planned Careers ($n = 2,053$)



Note. The n counts are unweighted sample sizes, while the percentages were calculated after weighting.

The most important skills that students independently identified in the open-ended question and those they selected from the set of employer-valued skills are well aligned. Communication, work ethic, collaboration, and critical thinking were the top four skills that students identified and the top employer-valued skills that students endorsed. However, there were differences in that students did not independently identify career and self-development as a most important skill, but more than half (52%) did endorse it as a most important employer-valued skill. Technology was identified as a most important skill by some students independently, but this skill was not included among the top student-rated employer-valued skills. Students also identified content-specific and job-specific knowledge as important, but these options were not

included in the set of employer-valued skills given our focus on the foundational, essential, and transferable skills that are more widely applicable across careers.

Skills Perceived as Important by High School Students Varied by Career Choices

Students were given a list of skills and asked to indicate all the skills they thought would be most important for them to have in order to do well in their future occupation. For each of the three skill areas (essential skills, transferable skills, and foundational skills), the skills that students considered most important varied by their planned career category (see Figures 4–12).⁸ Because results are presented for nine career categories, we grouped them into three figures for each skill area to improve readability.

Essential Skills

The percentages of students selecting important essential skills across career categories are highlighted in Figures 4–6.

Collaboration

For engineering careers, the highest percentage of students (71%) considered collaboration an important essential skill. Collaboration was also identified as a key skill by nearly three quarters (73%) of students entering health sciences and technologies careers. Approximately two thirds of students pursuing visual and performing arts (68%), health administration and assisting (65%), and education (64%) reported collaboration as one of the most important skills. Slightly less than two thirds of students going into biological and physical sciences (60%) and business careers (59%) endorsed collaboration.

Work Ethic

Work ethic was the essential skill most frequently selected by students in seven out of nine career groups (ranging from 58% to 81%): It received the highest endorsement from students planning careers in education (81%), health sciences and technologies (80%), social sciences and law (79%), business (77%), health administration and assisting (77%), biological and physical sciences (66%), and computer science and mathematics (58%). Work ethic was also frequently endorsed by students in the remaining two career groups: 74% of students pursuing arts careers and 62% of students pursuing engineering reported work ethic as a skill important for them to have in order to do well in their planned occupation.

Leadership

Leadership was considered a top essential skill by approximately two thirds or more of students planning to pursue careers in business (69%) and education (68%), as well as those in health sciences and technologies (65%) and social sciences and law (61%). Nearly half or more of students entering engineering (57%), health administration and assisting (53%), arts (51%), and

biological and physical sciences (48%) also identified leadership as a most important skill. Additionally, four out of ten students (40%) pursuing careers in computer science and mathematics regarded leadership as a top skill.

Creativity

Creativity was rated highest among students pursuing arts careers (89%). More than half of those planning to enter education (59%) and engineering (53%) also identified creativity as a most important essential skill, while half of students pursuing business (50%) and computer science and mathematics (50%) did the same. Slightly less than half (45%) of students entering biological and physical sciences endorsed creativity. More than one third of students in social sciences and law (37%) and health sciences and technologies (37%) rated creativity as most important. Less than one third (29%) of students entering health administration and assisting identified creativity as a most important skill for their chosen career.

Resilience

Resilience was considered a highly important skill by more than half of students pursuing careers in health sciences and technologies (69%), social sciences and law (65%), and education (59%). Similarly, 57% of students planning to enter health administration and assisting rated resilience as a most important skill. Slightly less than half of those pursuing biological and physical sciences (48%) and visual and performing arts (48%) regarded resilience as highly important. Fewer than half of students entering engineering (46%), computer science and mathematics (44%), and business (43%) endorsed resilience as a most important skill.

Integrity

Integrity was regarded as a most important skill by over half of students pursuing careers in social sciences and law (60%), health sciences and technologies (55%), and education (53%). Four out of ten students in business (40%) and health administration and assisting (40%) also considered integrity a top skill. One third or more of those entering biological and physical sciences (38%), arts (37%), and engineering (34%) viewed integrity as most important. Additionally, one quarter of students in computer science and mathematics (24%) identified integrity as a top skill.

Figure 4. Percentages of Students Reporting Most Important Essential Skills by Business, Engineering, and Computer Science & Mathematics Career Categories

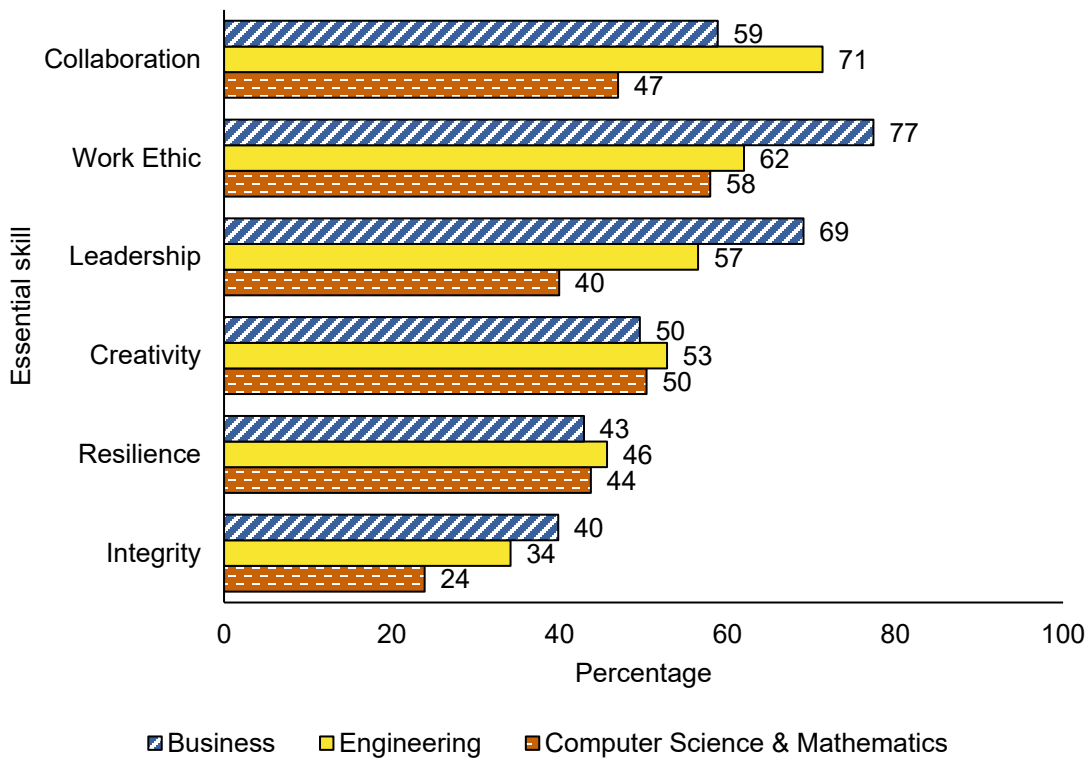


Figure 5. Percentages of Students Reporting Most Important Essential Skills by Biological & Physical Sciences, Health Sciences & Technologies, and Health Administration & Assisting Career Categories

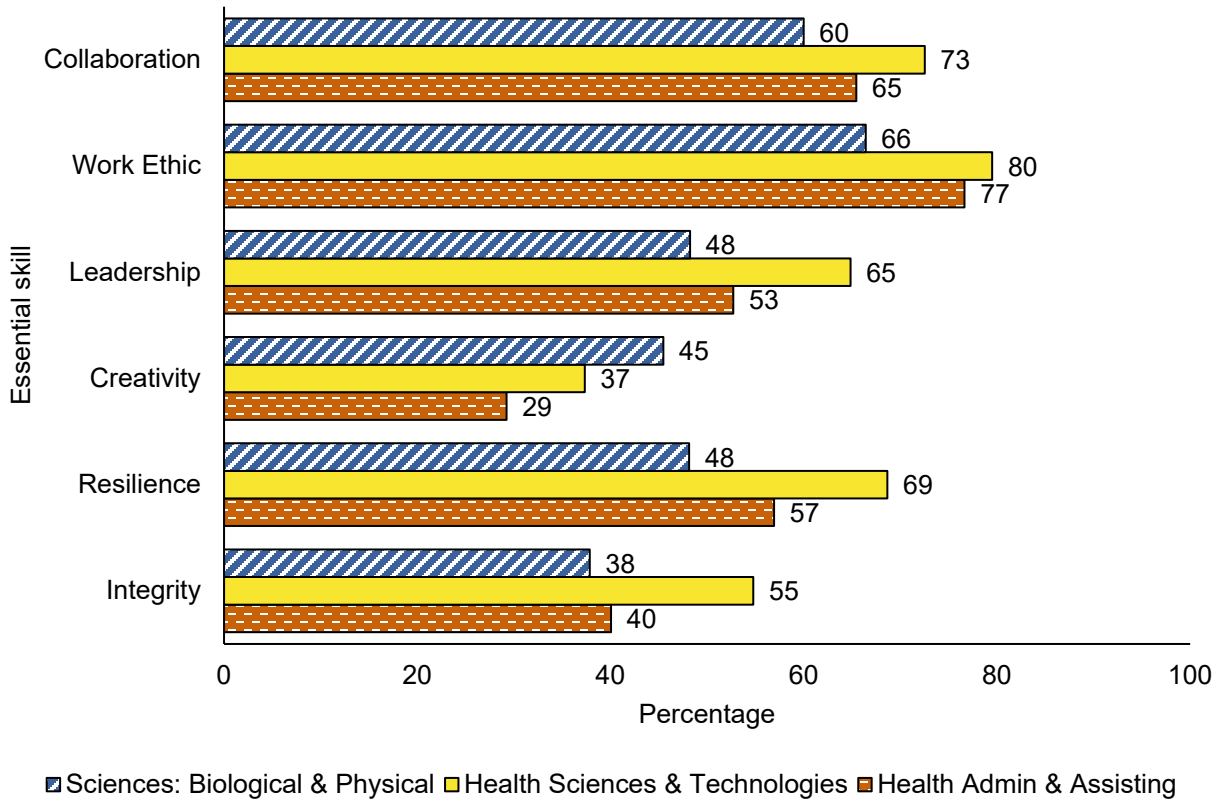
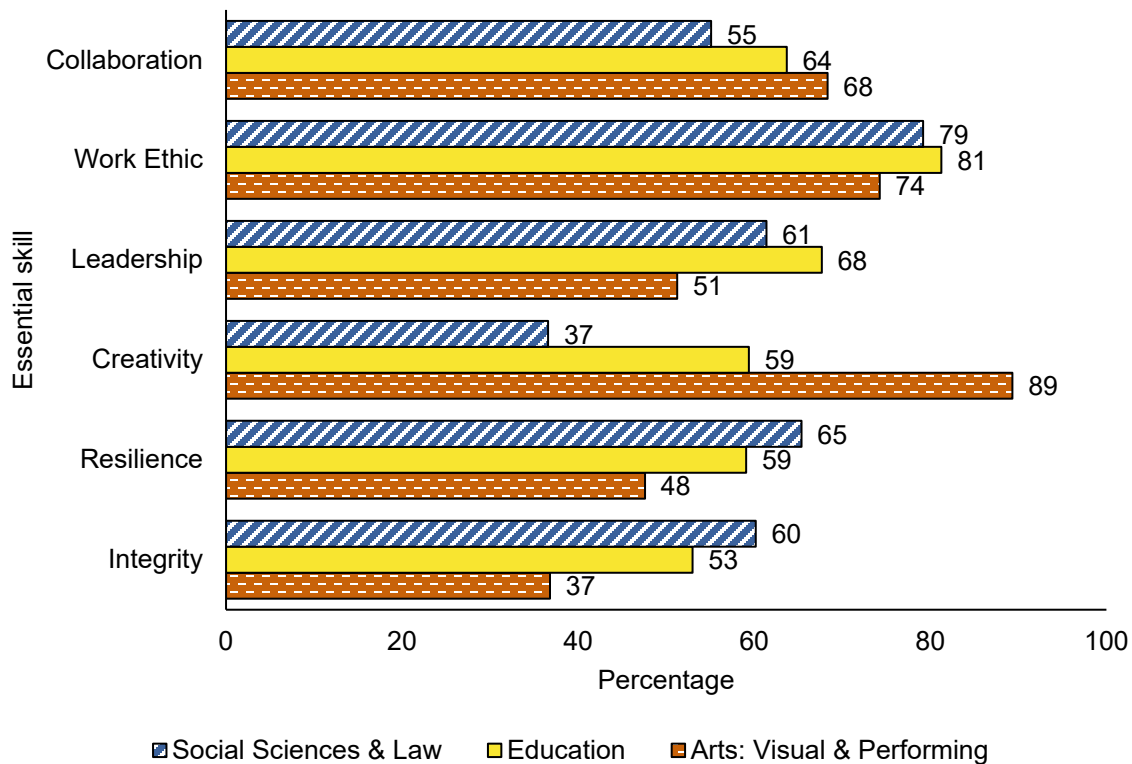


Figure 6. Percentages of Students Reporting Most Important Essential Skills by Social Sciences & Law, Education, and Visual & Performing Arts Career Categories



Transferable Skills

The percentages of students selecting important transferable skills across career categories are shown in Figures 7–9.

Learning Skills

For learning skills, nearly two thirds of students pursuing education (64%) and slightly fewer pursuing arts (60%) reported these skills as important for their careers. Half of the students entering computer science and mathematics (52%) considered learning skills to be among the most important skills. At least four out of ten students identified learning skills as important in health science and technologies (47%), health administration and assisting (45%), engineering (45%), biological and physical sciences (43%), and social sciences and law (42%). Students pursuing business had the lowest endorsement, with only one third (35%) considering learning skills important transferable skills for them to have in order to do well in their planned careers.

Technology

A large majority of students (81%) pursuing computer science and mathematics careers considered technology a most important skill. About half or more of those entering engineering (60%) and biological and physical sciences (49%) also rated technology as a most important

transferable skill for their fields. More than one third of students planning careers in visual and performing arts (40%), business (38%), and health sciences and technologies (36%) reported technology as a most important skill. Only about two out of ten students entering social sciences and law (21%) and education (20%) rated technology as a most important skill.

Equity and Inclusion

Over half of students pursuing careers in arts (54%) and education (53%), and nearly half of those in social sciences and law (49%), reported equity and inclusion as one of the most important skills. Approximately one third of students planning careers in health sciences and technologies (37%), business (32%), and health administration and assisting (30%) also indicated that equity and inclusion was among the most important skills for them to have in order to do well in these fields. About one quarter of students entering biological and physical sciences (26%) and engineering (22%) considered these skills to be among the most important. Equity and inclusion was least frequently endorsed by students pursuing computer science and mathematics (15%).

Critical Thinking

Over three quarters of students identified critical thinking as one of the most important transferable skills needed for careers in social sciences and law (81%), biological and physical sciences (81%), and engineering (76%). While more students selected communication than critical thinking as an important skill for health sciences and technologies, it is worth noting that over three quarters of these students (78%) also considered critical thinking an important skill for careers in this group. Two thirds of students planning careers in business (68%) and computer science and mathematics (68%) identified critical thinking as a key skill. Slightly fewer students pursuing health administration and assisting (65%) and visual and performing arts (63%) careers did the same. Additionally, half of the students (54%) going into education identified critical thinking as an important transferable skill.

Communication

Communication was the transferable skill selected by the highest percentage of students pursuing careers in education (85%), health sciences and technologies (80%), arts (78%), business (70%), and health administration and assisting (70%) as a most important skill. Three quarters (76%) of students entering social sciences and law reported communication as a most important skill for their career group. Nearly two thirds of students (65%) planning careers in biological and physical sciences identified communication as a key skill. Slightly fewer students pursuing computer science and mathematics (60%) and engineering (59%) also regarded communication as one of the most important skills.

Career and Self Development

For career and self-development, two thirds of students pursuing arts careers (67%) reported this as one of the most important skills. Over half of students entering education (55%), business (54%), health sciences and technologies (54%), and social sciences and law (54%)

also considered career and self-development a key skill for their chosen fields. Slightly fewer students in computer science and mathematics (49%), health sciences and technologies (47%), and biological and physical sciences (45%) endorsed it as a most important skill. Career and self-development was least frequently endorsed by students planning to enter engineering (38%).

Figure 7. Percentages of Students Reporting Most Important Transferable Skills by Business, Engineering, and Computer Science & Mathematics Career Categories

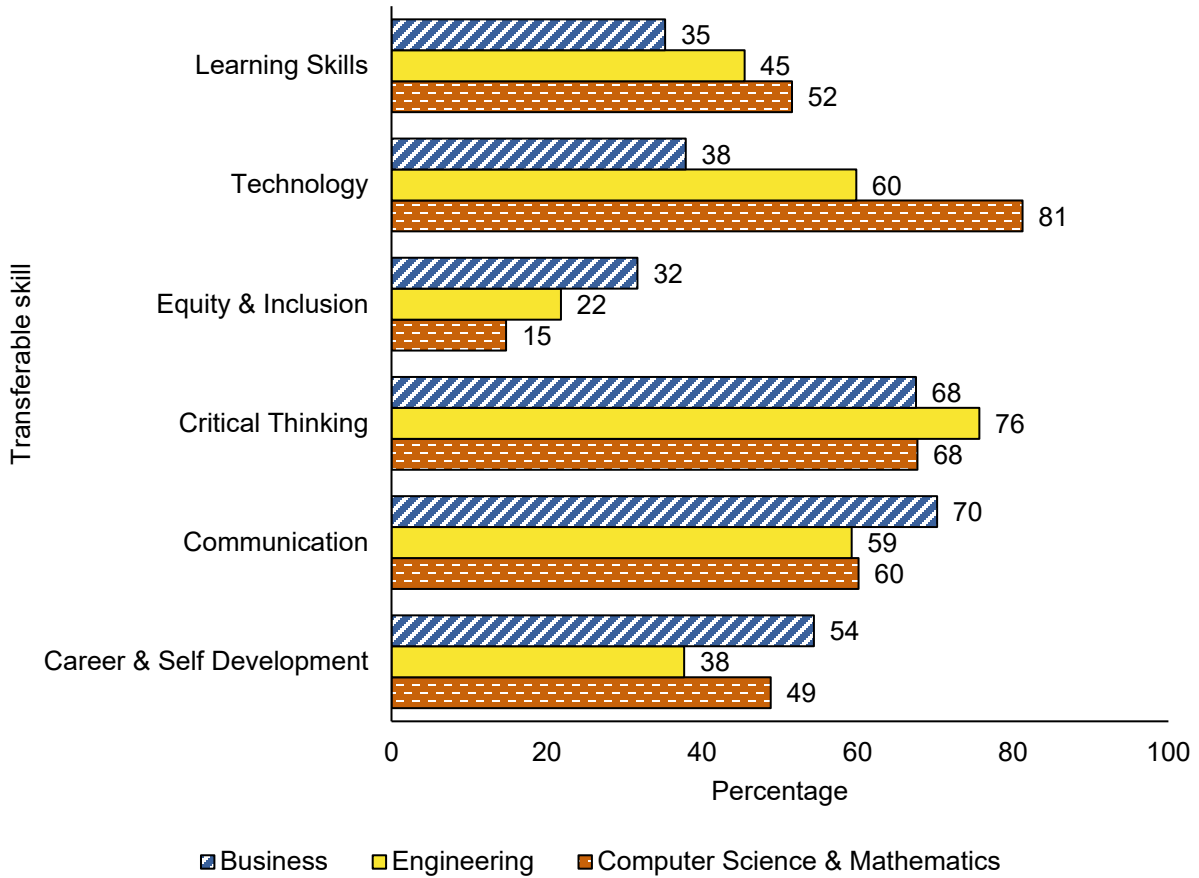


Figure 8. Percentages of Students Reporting Most Important Transferable Skills by Biological & Physical Sciences, Health Sciences & Technologies, and Health Administration & Assisting Career Categories

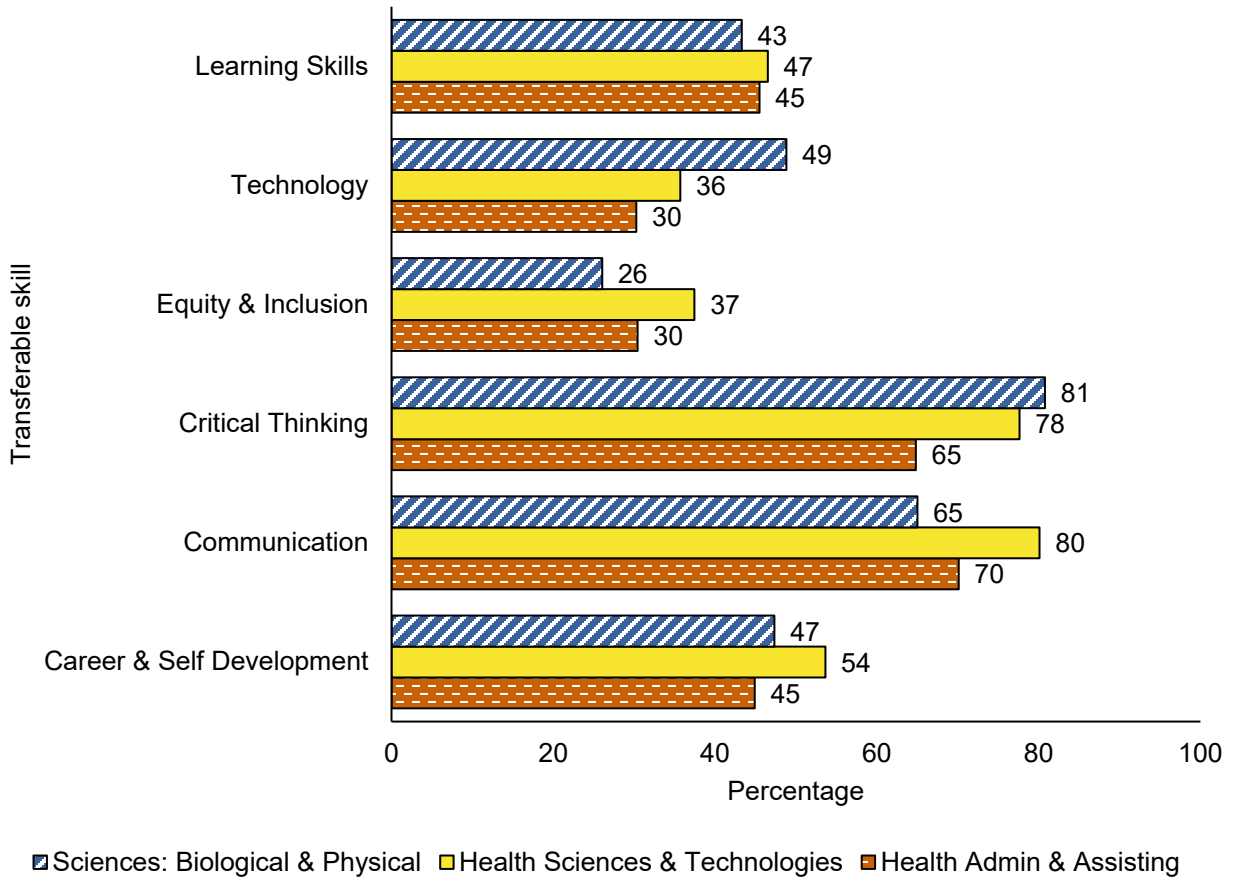
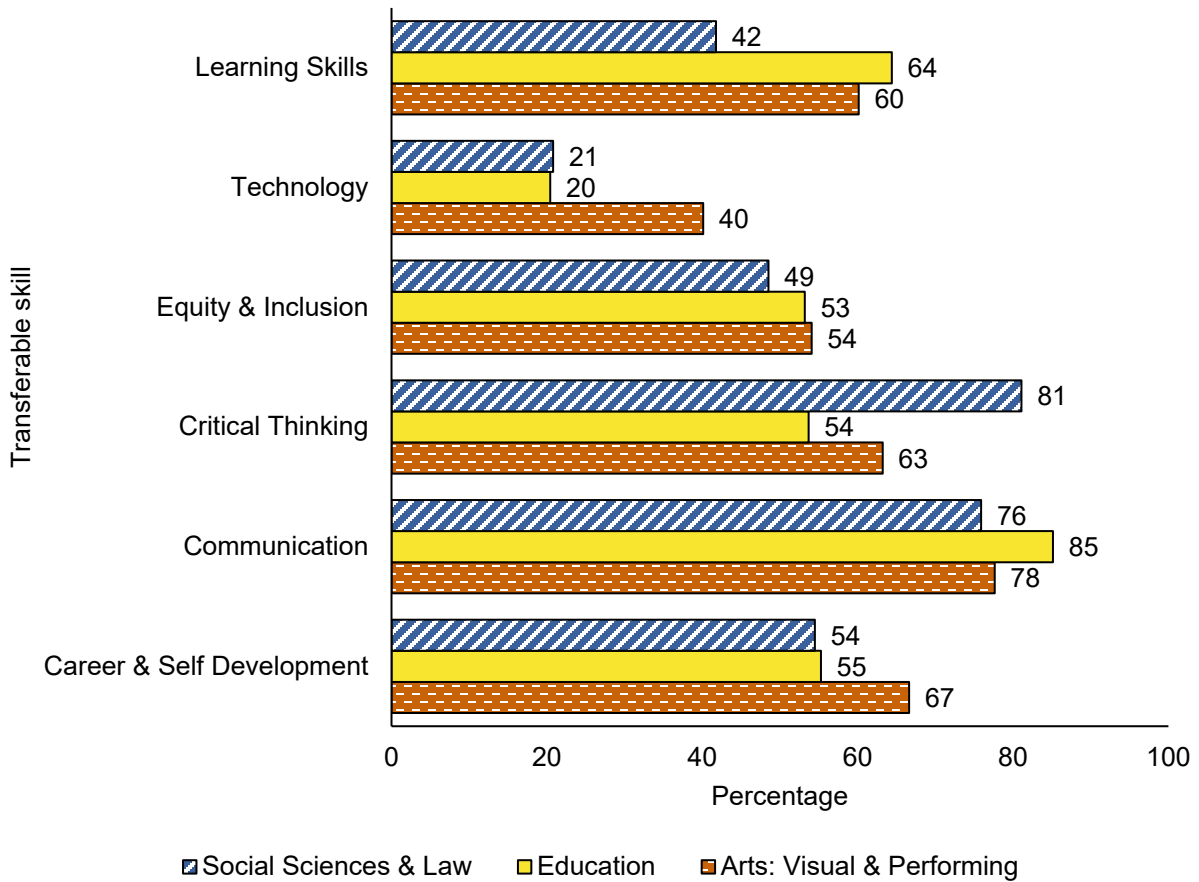


Figure 9. Percentages of Students Reporting Most Important Transferable Skills by Social Sciences & Law, Education, and Visual & Performing Arts Career Categories



Foundational Skills

Figures 10–12 show the percentages of students considering foundational skills important for doing well across career categories.

Documents

The highest percentages of students planning to enter social sciences and law (43%) considered interpreting, comprehending, and putting written workplace material into action an important foundational skill. Three out of ten students pursuing careers in health sciences and technologies (31%) and computer science and mathematics (31%) also identified this as a most important skill. Approximately one quarter of students planning to enter engineering (27%), health administration and assisting (24%), and business (23%) careers reported that using workplace documents was a most important foundational skill. Additionally, two out of ten students pursuing education careers considered this skill most important.

Graphics

More than one third of students planning to enter computer science and mathematics (38%) and biological and physical sciences (35%) identified the interpretation and use of graphics such as tables, diagrams, and charts as one of the most important skills for careers in these fields. Slightly less than one third of students pursuing business (31%) and engineering (31%) also selected using graphics as a most important skill. Additionally, nearly one quarter of students in health sciences and technologies (24%) and visual and performing arts (24%) considered the use of graphics a most important skill for their chosen careers.

Math

Applying and integrating math concepts and procedures was considered one of the most important skills by more than two thirds of students pursuing careers in engineering (70%) and at least half of students pursuing careers in business (51%) and biological and physical sciences (50%). Slightly less than half (47%) of students planning careers in computer science and mathematics endorsed the use of math as a most important skill. Additionally, three out of ten students in health sciences and technologies and two out of ten students in health administration and assisting and in education reported that applying math was important for their future careers.

Figure 10. Percentages of Students Reporting Most Important Foundational Skills by Business, Engineering, and Computer Science & Mathematics Career Categories

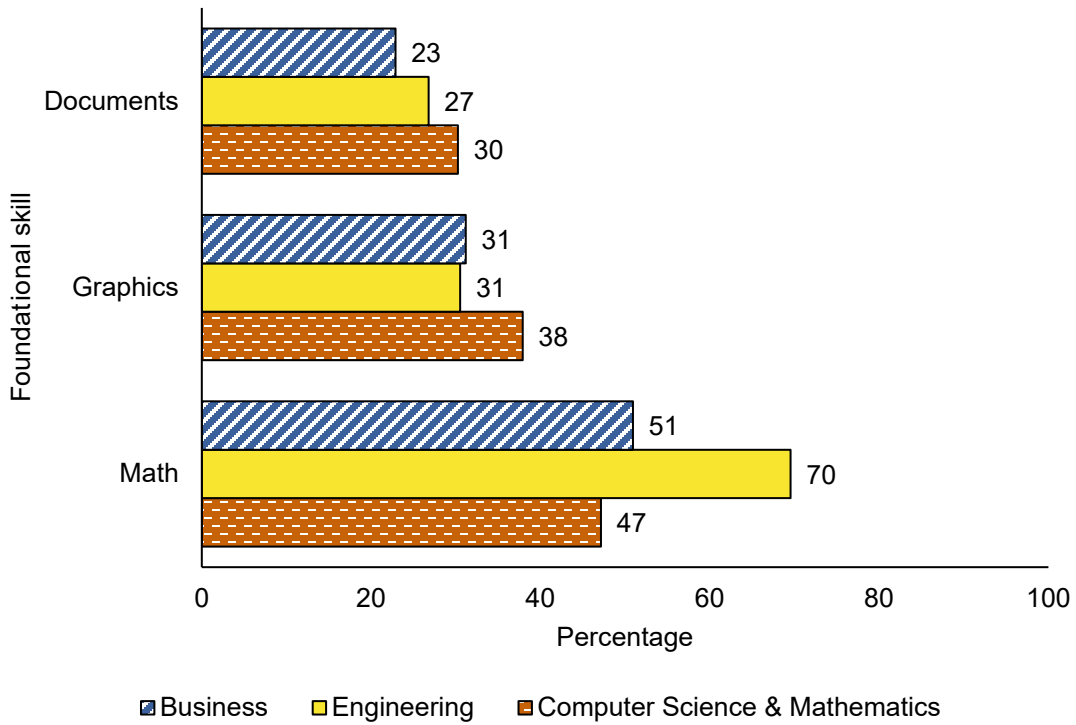


Figure 11. Percentages of Students Reporting Most Important Foundational Skills by Biological & Physical Sciences, Health Sciences & Technologies, and Health Administration & Assisting Career Categories

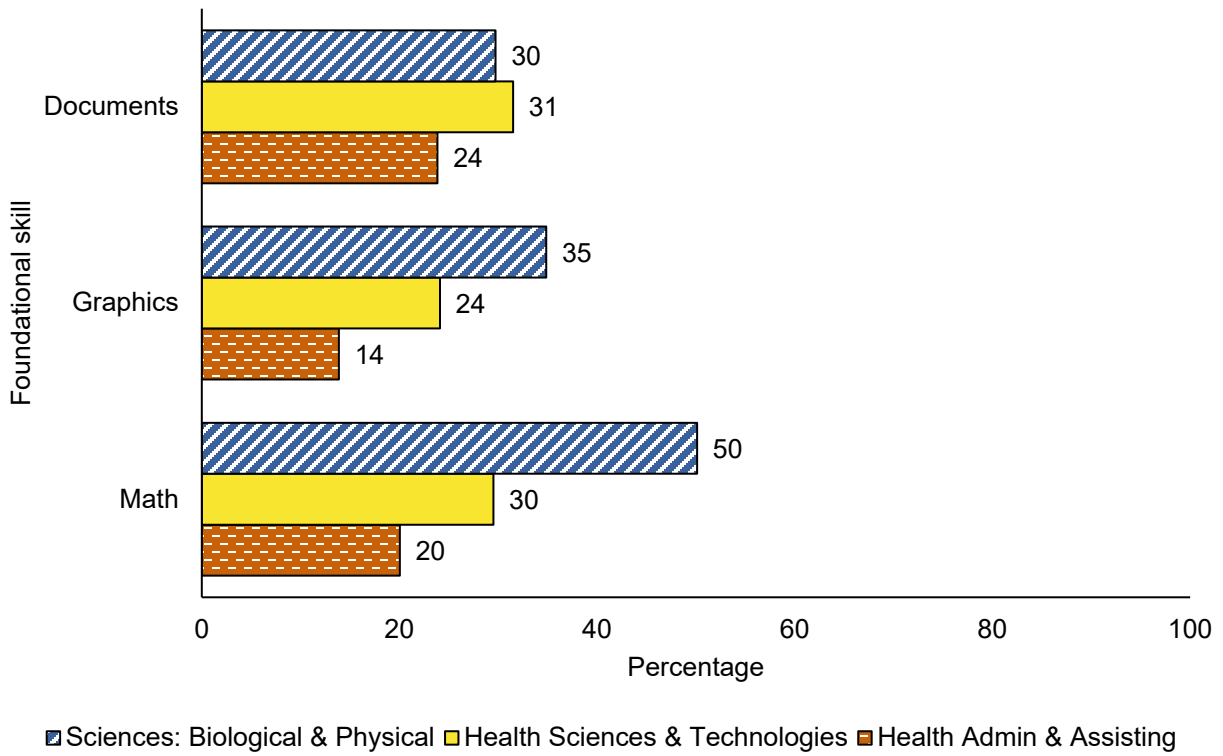
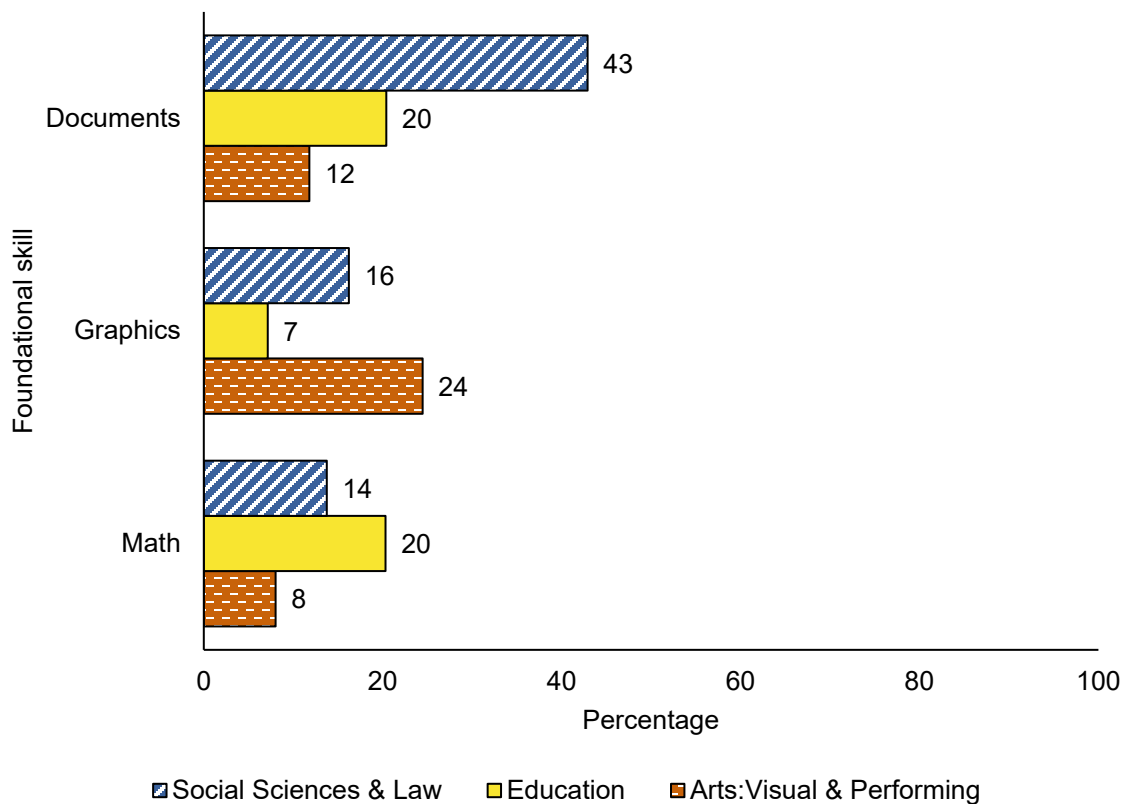


Figure 12. Percentages of Students Reporting Most Important Foundational Skills by Social Sciences & Law, Education, and Visual & Performing Arts Career Categories



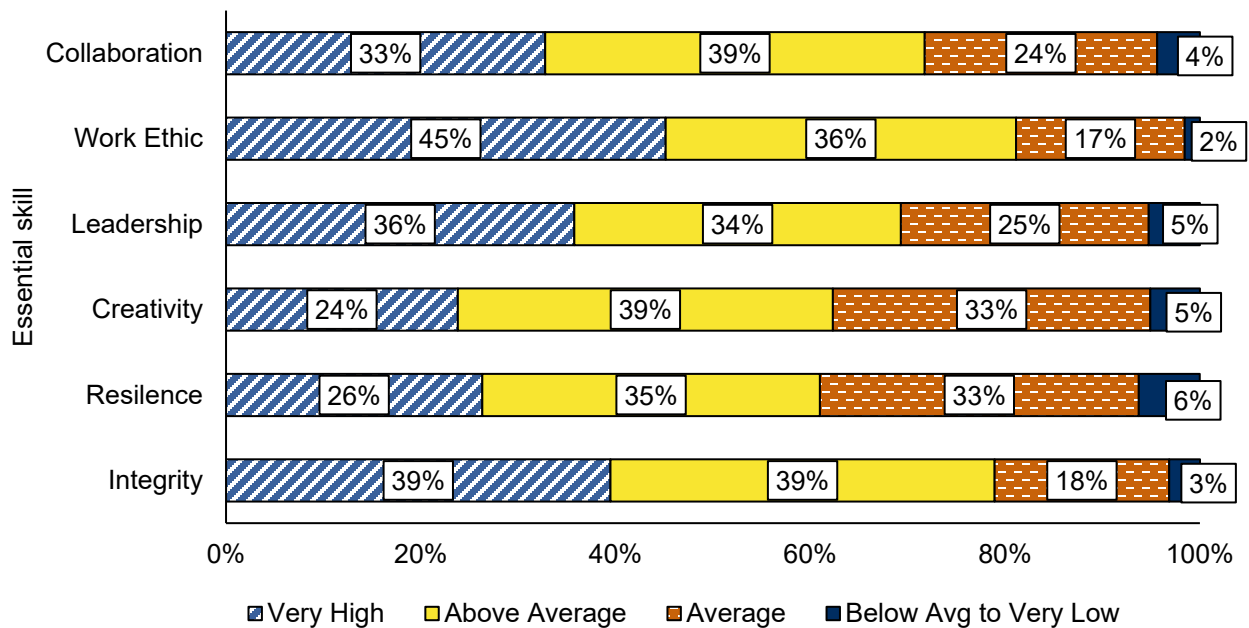
Teaching Important Career Skills in School Makes a Difference in Students' Perceived Skill Levels

We gained additional insight from students' ratings of their own skill levels (0 = very low, 1 = below average, 2 = average, 3 = above average, and 4 = very high) and their ratings of how extensively the skills were taught in school for each of the three career-relevant skill areas.⁹ Overall, students' self-rated skill levels were fairly high and similar for essential skills ($M = 3.00$, $SD = 0.55$) and transferable skills ($M = 2.95$, $SD = 0.55$), with foundational skill levels ($M = 2.63$, $SD = 0.73$) rated slightly lower. Students' self-ratings of how much the skills were taught in school (0 = not at all, 1 = somewhat, 2 = quite a bit, and 3 = a lot) were similar for essential skills ($M = 1.85$, $SD = 0.66$), transferable skills ($M = 1.91$, $SD = 0.60$), and foundational skills ($M = 1.86$, $SD = 0.65$). The following sections provide more details showing the extent to which students believed they had developed these important work skills, how much these skills were taught in school, and how the skills taught in these areas were related to students' self-ratings.

Essential Skills

Nearly half of students (45%) rated their work ethic as very high, while between 33% and 39% rated their integrity, leadership, and collaboration skills as very high (Figure 13). About one quarter of students rated their resilience (26%) and creativity (24%) as very high. The percentages of students rating their skills as above average ranged from 34% to 39% for the six essential skills. Additionally, one third (33%) rated their creativity and resilience as average, and one quarter rated their leadership (25%) and collaboration (24%) skills as average.

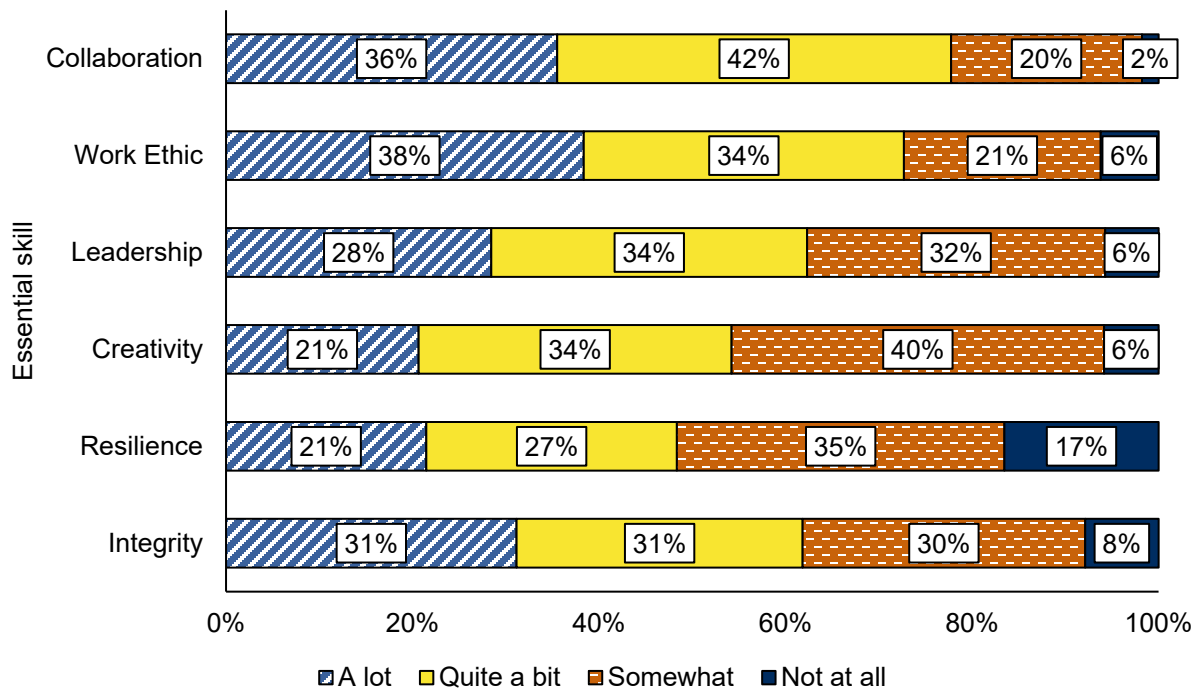
Figure 13. Percentages of Students Rating Their Essential Skill Levels



Note. Percentages were calculated after weighting and might not add up to 100% due to rounding. The below average and very low categories were collapsed due to a low number of respondents endorsing each.

The essential skills most frequently taught “a lot” or “quite a bit” were collaboration (78%) and work ethic (72%; Figure 14). Following these skills were leadership and integrity, which 62% of students indicated were taught to the same extent. About half of students reported that creativity (55%) and resilience (48%) were taught a lot or quite a bit. Four in ten students said that creativity was taught “somewhat” in school. Similarly, approximately one third (30% to 35%) reported that resilience, leadership, and integrity were taught somewhat. Two in ten students indicated that work ethic and collaboration were taught somewhat. Notably, 17% of students reported that resilience was not taught at all in their schools.

Figure 14. Percentages of Students Rating Extent to Which Essential Skills Are Taught in School



Note. Percentages were calculated after weighting and might not add up to 100% due to rounding.

Students were consistent in their ratings, showing alignment between the skills most frequently taught in schools (collaboration and work ethic) and the skills in which they rated themselves the highest. While 78% of students reported higher skill levels in integrity, fewer perceived that this skill was taught a lot or quite a bit. Students’ lower ratings of their skill levels and their perceptions of instruction for resilience and creativity indicated that these areas were less emphasized.

To explore whether students’ perceptions of the extent to which essential skills, transferable skills, and foundational skills are taught in school were potentially associated with self-ratings of their skills in each of these categories, we conducted multiple linear regression analyses¹⁰ (see the technical appendix for regression statistics, Tables A2–A4). These models helped us further understand the relationship between instruction in career readiness skills during high school and students’ career skill development. We present the results for each of the regression models in each of the relevant sections below.

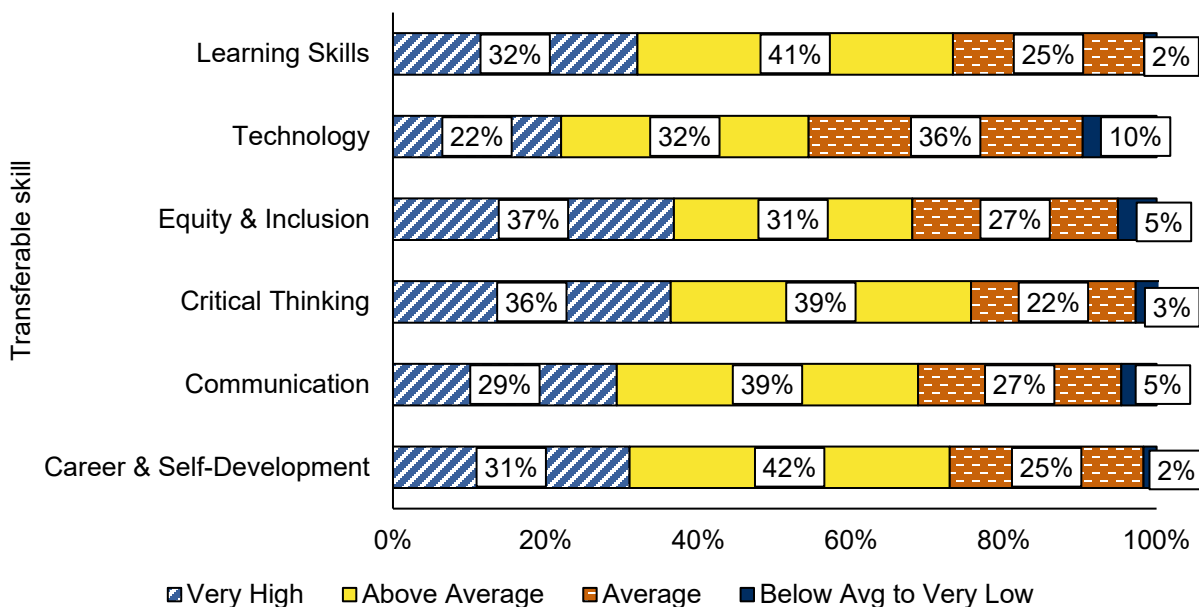
For the essential skills model (Table A2), students rated their essential skills higher when they reported that their schools taught essential, transferable, and foundational skills. All three categories of career skills were statistically significant predictors of students’ self-rated essential skills. The more these skills were taught, the higher students’ self-assessed essential skill

levels. With every 1-point increase in essential skills taught, the self-rated average essential skill level increased by 0.13 points. And with every 1-point increase in transferable and foundational skills taught, the self-rated average essential skill level increased by 0.09 points and 0.08 points respectively.

Transferable Skills

Students provided perceptions of their own proficiency across transferable skills and the extent to which these skills were taught in school. Approximately one third of students (31% to 37%) rated themselves as very high in four out of six transferable skills: equity and inclusion, critical thinking, learning skills, and career and self-development (Figure 15). Fewer students reported very high levels of competence in communication (29%) and technology (22%). Additionally, four out of ten students rated their career and self-development (42%) and learning skills (41%) as above average. More than one third of students (36%) indicated average skill in technology, while another 10% rated themselves as below average or very low in this area. For five of the six transferable skills, roughly one quarter of students (22% to 27%) rated themselves as average.

Figure 15. Percentages of Students Rating Their Transferable Skill Levels

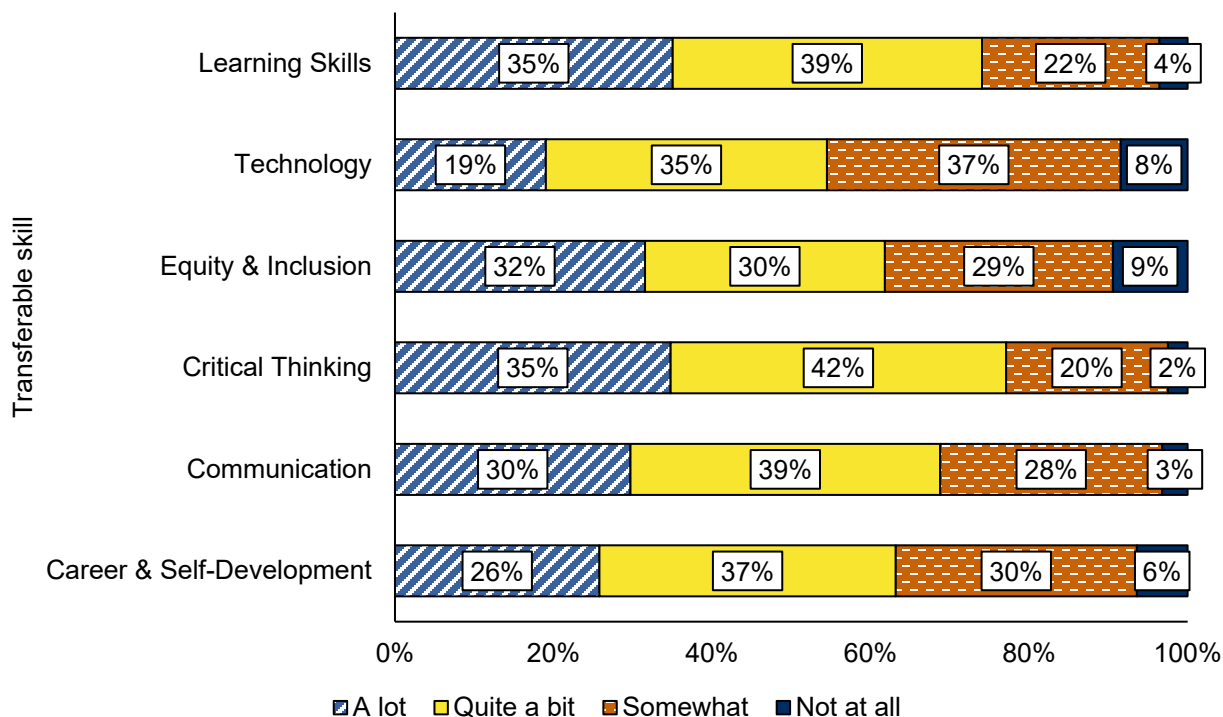


Note. Percentages were calculated after weighting and might not add up to 100% due to rounding. The below average and very low categories were collapsed due to a low number of respondents endorsing each.

The transferable skills that the highest percentages of students reported were taught a lot or quite a bit were critical thinking (77%) and learning skills (74%; Figure 16). Additionally, many students indicated that communication (69%), career and self-development (63%), and equity

and inclusion (62%) were taught to a similar extent. About half of students (54%) reported that technology was taught a lot or quite a bit. More than one quarter (28% to 37%) reported that technology, career and self-development, equity and inclusion, and communication were taught somewhat. Finally, two in ten students indicated that learning skills (22%) and critical thinking (20%) were taught somewhat in their schools.

Figure 16. Percentages of Students Rating Extent to Which Transferable Skills Are Taught in School



Note. Percentages were calculated after weighting and might not add up to 100% due to rounding.

Students were generally aligned in the transferable skills they rated themselves highly in and those they perceived as being taught most frequently, especially critical thinking and learning skills. While students believed that communication and equity and inclusion were taught at relatively high rates, students' self-ratings in these areas were not as high as for critical thinking and learning skills. Technology stands out as a skill in which students rated themselves lower and perceived less instructional emphasis. The prevalence of "average" self-ratings across these skills may reflect the variability students perceived in instructional quality or emphasis.

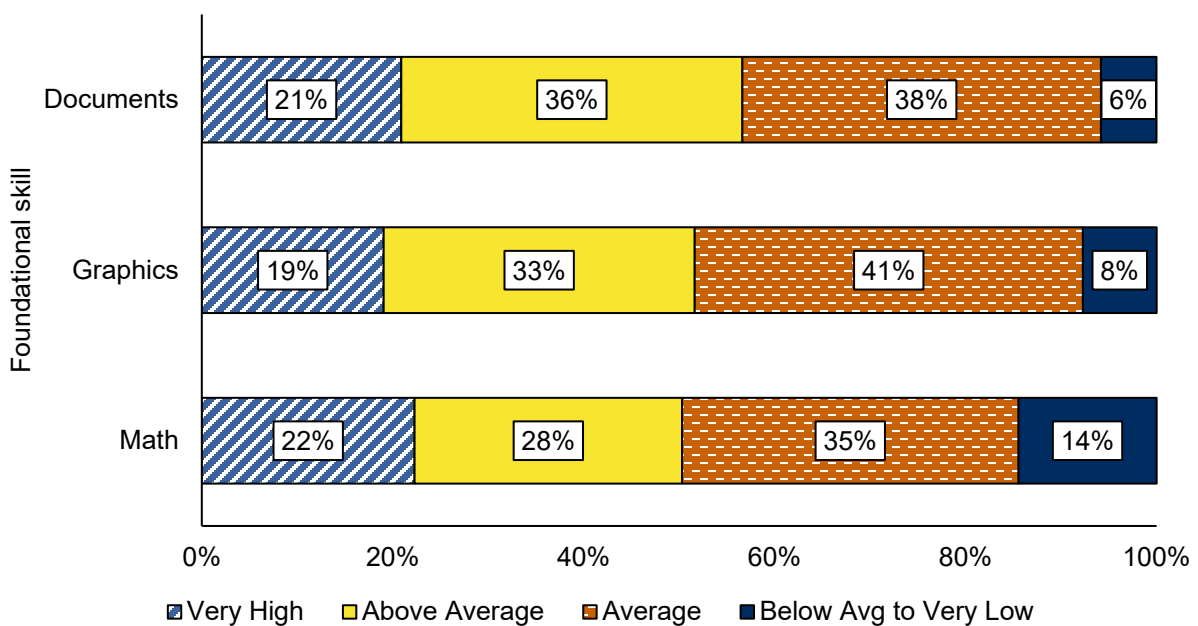
In the transferable skills regression model (Table A3), greater emphasis on teaching transferable skills and foundational skills in schools was associated with higher student self-ratings of transferable skills. There was a significant positive relationship between targeted instruction in these transferable skills and students' perceived skill levels; this pattern also held

for foundational skills. With every 1-point increase in transferable and foundational skills taught in school, the self-rated average transferable skill level increased by 0.14 points and 0.13 points respectively. Additionally, higher ACT Composite scores were associated with higher self-rated transferable skills, suggesting a link between academic achievement and perceived career readiness.

Foundational Skills

Students provided perceptions of their own proficiency across the three foundational skills and indicated the extent to which these skills were taught in school. About two in ten students rated their foundational skill levels as very high: 22% for math, 21% for documents, and 19% for graphics (Figure 17). One third of students (33%) rated themselves as above average in using graphics, while 36% did so for using documents, and a little more than one quarter (28%) did so for applying math. More than one third of students (35% to 41%) considered themselves to have average skill levels across all three foundational skills. For math, 14% of students rated themselves as below average or very low.

Figure 17. Percentages of Students Rating Their Foundational Skill Levels

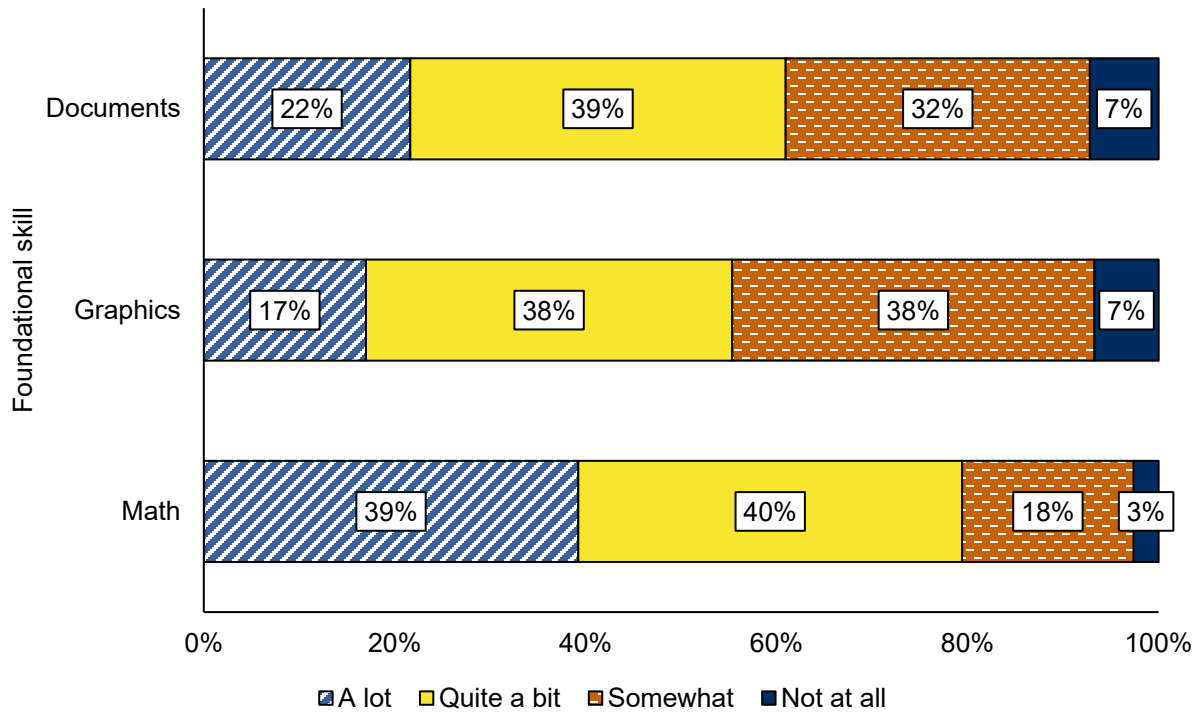


Note. Percentages were calculated after weighting and might not add up to 100% due to rounding. The below average and very low categories were collapsed due to a low number of respondents endorsing each.

Shifting the focus to perceptions of how much these foundational skills were taught in schools, over three quarters of students (79%) reported that applying math was taught a lot or quite a bit in their schools (Figure 18). More than half indicated that using documents (61%) and using graphics (53%) were taught to a similar extent. Additionally, approximately one third reported

that using graphics (38%) and using documents (32%) were taught somewhat, and 18% indicated that math was taught somewhat in their schools.

Figure 18. Percentages of Students Rating Extent to Which Foundational Skills Are Taught in School



Note. Percentages were calculated after weighting and might not add up to 100% due to rounding.

While most students perceive that math is taught extensively (“a lot” or “quite a bit”), only half rated themselves as very high or above average in this skill. The most common self-rating for applying math was average, and this skill also had the highest percentage of students who felt below average or very low. Although a majority of students perceived that both using documents and using graphics were taught a lot or quite a bit, fewer considered themselves highly proficient or above average in these skills. The largest group rated themselves as average. This suggests a gap between perceived instruction and self-assessed skill levels.

The foundational skills regression model (Table A4) showed that students who reported that foundational skills and transferable skills were taught more in their schools rated their own foundational skill levels higher. There was a significant positive relationship between targeted instruction in foundational skills and students’ perceived skill levels. With every 1-point increase in foundational skills taught in school, the self-rated average foundational skill level increased by 0.28 points. A similar but smaller significant positive association was found between transferable skills taught and higher self-rated foundational skills. With every 1-point increase in transferable skills taught in school, the self-rated average foundational skill level increased by

0.10 points. Additionally, higher ACT Composite scores were associated with higher self-rated foundational skills, linking academic achievement and perceived career readiness.

Discussion

The gap between the work skills employers seek and those possessed by individuals entering the U.S. workforce poses a risk to the success of both individuals and the organizations that support the U.S. economy. The employment, productivity, and innovation implications of this skills gap must be addressed, in part, by future employees, making it imperative to better understand high school students' perspectives on work skills valued by employers. In this study, we focused on students' awareness of employer-valued skills, the importance they attribute to these skills for career success, and the similarities and differences in which skills matter most for their planned careers. We also examined students' perceptions of how well they have developed important work skills and the extent to which these skills are taught in school. Insights from this research help us better understand the views of future workers and provide a lens into ways we can better prepare students to address the skills gap.

High school students showed variation in their awareness of the skills that employers value for the careers they planned to pursue. While a majority reported that they were very aware or aware of these skills, a third were only moderately aware of them, and another 10% were slightly or not at all aware of these skills. It is encouraging that many students are mindful of the workforce skills employers seek and concerning that a sizable proportion of students preparing to enter the workforce have a gap in their knowledge about what skills employers need. This makes it even more difficult for students seeking employment given that the forthcoming *NACE Job Outlook 2026* report indicates that nearly 70% of employers report using skills-based hiring in their employment processes (Gray, 2025b).

To further unpack students' awareness, we explored whether their certainty in their planned career choices was related to their awareness of the skills needed for those careers. Findings showed that students who were certain about their career choices were more aware of the skills needed for their future careers. For example, among students who were very sure of their career choices, 31% were also very aware of the necessary career skills, whereas among students who were not sure about their career choices, only 13% were very aware of necessary career skills. This was a consistent pattern, in that students who reported being more certain about their career choices had higher skill awareness, while those less certain tended to have lower awareness. This relationship between skill awareness and career certainty is reinforced by literature on career planning, which highlights the critical role of information in enhancing students' educational and occupational choices (Milosheva et al., 2021; Owen et al., 2020). When students understand what is needed in the workplace, they are better equipped to set realistic goals, seek relevant experiences, and navigate transitions from school to work. These findings reinforce the importance of career skills education that provides sufficient exposure to and guidance on what employers value before students enter the workforce. By increasing students' awareness of these skills, schools can help students better prepare for career success and support them in making more informed and more certain career choices. This is particularly

relevant for students who are not as sure about the direction they want their future careers to take.

High school students demonstrated substantial awareness of valued work skills, with strong alignment to the skills that employers consider important. Both students' open-ended responses and their ratings of employer-desired skills revealed insights into their awareness of and alignment with employers' needs. Communication, work ethic, critical thinking, and collaboration were the top four skills that students independently identified as most important. Students also most frequently endorsed these same four skills when presented with a list of employer-valued skills, with nearly three quarters of students rating them as most important. Additionally, leadership, resilience, and creativity showed up as top skills identified independently by students and endorsed through student ratings. These results reflect a high degree of alignment between high school students' perceptions and employer priorities, which is consistent with surveyed new college graduates being aligned overall with employers on the importance of transferable career readiness skills and abilities (Gray, 2025a).

Despite the considerable alignment between students' top skills and employers' top skills, there were some gaps. Employers recognized the importance of career and self-development, and while more than half of students endorsed career and self-development as an important employer-valued skill, they did not independently identify it as a top skill in their open-ended responses. This may indicate that students recognize its importance when prompted but do not spontaneously view it as central to career success. This may also reflect students' focus on more tangible or immediate skills as they prepare to enter the workforce, while employers recognize the importance of ongoing learning and development throughout one's career. Some students identified technology as a key skill in their open-ended responses, but it was not among their top-rated skills. Conversely, employers included technology in their top skills. This may suggest a potential gap between students' understanding of the role of technology in their future careers and what employers think future workers will need to be successful in the modern workforce. Students also independently identified content knowledge and job-specific skills as most important, but they were not included in the employer-valued skill set for this study, which focused on essential, transferable, and foundational skills. The presence of content knowledge and job-specific skills in student responses does highlight their awareness of the need for specialized expertise in conjunction with essential and transferable skills. The strong alignment between student and employer perspectives on what work skills are most important is promising, although the gaps related to technology and career and self-development suggest the need for more targeted efforts to better prepare students for the workforce.

One unique value of the current study is the examination of skills endorsed by students with different planned careers. This perceived importance of skills varied across career categories. For example, in essential skills, work ethic stands out as the most widely endorsed essential skill across careers, but especially among students aspiring to careers in education, health sciences and technologies, social sciences and law, and health administration and assisting, where over three quarters of students identified it as most important. This strong emphasis may reflect the perceived need for reliability and responsibility in fields that directly impact others' learning and well-being. Collaboration emerged as a top essential skill for engineering and

health sciences and technologies careers, suggesting that students recognize the collaborative nature of technical problem-solving and working with others on projects. Creativity, while highly valued in arts, also received substantial endorsement in education and engineering, indicating that students may view innovation and flexibility as increasingly important beyond traditionally creative fields.

Leadership is prioritized by students in business, education, health sciences and technologies, and social sciences and law, suggesting that students expect these sectors to require assertiveness and the ability to influence others. Resilience, which encompasses stress management and emotional regulation, is endorsed by the highest percentages of students pursuing health sciences and technologies and social sciences and law, followed by education and health administration and assisting, perhaps reflecting the challenges and pressures inherent in these professions. Integrity, while less universally endorsed, is still regarded as a key essential skill by more than half of students in social sciences and law, health sciences and technologies, and education, highlighting the ethical demands of these fields.

Similar to essential skills, many transferable skills emerged as most important across career fields, while others varied by career field. Communication was widely considered a most important skill, especially among students pursuing education, health sciences and technologies, arts, business, and health administration and assisting, where 70% or more of students identified it as most important. This widespread endorsement emphasizes the role of effective communication in diverse professional contexts.

Critical thinking was also highly endorsed, particularly in social sciences and law, biological and physical sciences, and engineering, with over three quarters of students considering it the most important transferable skill. Students pursuing careers in these fields may have the view that analytical skills and logical reasoning are especially needed for success in fields that demand problem-solving and evidence-based decision-making. Technology was most important for eight out of ten students planning to enter careers in computer science and mathematics, perhaps reflecting the increasing importance of leveraging new technologies, such as artificial intelligence, in this and other STEM-related fields (National Science Foundation, 2024). However, the perceived importance of technology drops in fields such as social sciences and law and education, perhaps suggesting that students view technology as more specialized rather than universally needed.

Learning skills and career and self-development were strongly endorsed by students entering education and visual and performing arts careers, reinforcing the importance of adaptability and lifelong learning in instructional and creative careers. Equity and inclusion, while a less frequently selected transferable skill, is most valued in arts and education, suggesting that students in these fields may be particularly attuned to the need for cultural awareness and adapting to diverse environments.

Students from multiple career categories identified foundational skills as important, indicating that these skills are valued across fields. At least half or more of students identified math as a critical foundational skill for engineering, business, and biological and physical sciences, and

nearly half pursuing computer science and mathematics also endorsed this skill, highlighting its cross-disciplinary relevance. The prominence of math in these fields underscores how mathematical reasoning and problem-solving are essential for success in STEM and business-related occupations. For STEM, this is reinforced in a recent survey study where nine out of ten high school students agreed that STEM skills helped with solving complex real-world problems (Schnieders & Bobek, 2025).

The use of documents was valued most by students planning careers in social sciences and law, with moderate endorsement in health sciences and technologies and computer science and mathematics. This skill involves reading and employing written materials—such as policies, contracts, and regulations—which are particularly relevant in social sciences and law. These fields rely heavily on textual analysis, comprehension, and adherence to written standards. While the use of documents is less emphasized in other fields such as arts, the skill remains important for effective communication and compliance.

The use of graphics was identified as a key skill by more than one third of students entering computer science and mathematics and biological and physical sciences, with slightly less emphasis by students pursuing business and engineering. Interpreting and using graphic information presented in charts, graphs, and other visual formats is increasingly vital in these and other data-driven fields. The growing need to navigate complex data and use data to make strategic decisions depends on developing appropriate data visualizations and analyses of patterns and trends, reinforcing the importance of skills in the use of graphics. The lower endorsement of this skill in some fields (e.g., education, health administration and assisting) may reflect a lack of perceived relevance or gaps in how these skills are taught and contextualized for different career paths.

These findings reinforce the importance of foundational skills as building blocks for career readiness. While they are universally important, their perceived relevance varies by career category. Foundational skills are necessary but not sufficient, as student perceptions and employer needs also reinforce the importance of essential and transferable skills. Students' perceptions of the importance of essential and transferable skills are also influenced by the unique demands of their intended careers. This reinforces the need to provide not only broad skill development but also targeted skill support aligned with students' career aspirations. Differentiated instruction and career guidance can help students better understand the relevance of these skills in their chosen fields.

Most students reported being taught nearly all of the 15 essential, transferable, and foundational skills included in this study. Findings also revealed alignment between the essential skills students perceived as most frequently taught in schools and those in which they rated themselves the highest. For example, collaboration and work ethic were both the skills most commonly taught (“a lot” or “quite a bit”) and the skills where students most frequently rated themselves as “very high.” However, students' perceptions of the skills taught in schools and their self-rated proficiency in these skills were not entirely aligned. Integrity, for instance, was a skill where many students reported relatively high proficiency, yet fewer perceived it as being taught extensively. Resilience and creativity were less emphasized in school and also received

lower self-ratings, suggesting that limited instructional focus may contribute to lower student proficiency in these areas.

Students were also generally aligned in the transferable skills they rated themselves highly in and those they perceived as being taught most frequently, especially critical thinking and learning skills. While students believed that communication was taught at relatively high rates, their self-rated proficiency in this area was not as high as for critical thinking and learning skills. Technology was a transferable skill in which students rated themselves lower and perceived less instructional emphasis. Perhaps technology is moving too quickly and schools are not able to keep up with it, making instruction more challenging and leading to students' inability to develop these skills. The prevalence of "average" self-ratings across transferable skills may reflect the variability students perceived in instructional quality or emphasis.

Similarly, foundational skills in math, documents, and graphics were perceived as taught more frequently than students rated themselves as proficient. For example, while most students perceived that applying math was taught extensively ("a lot" or "quite a bit"), only half rated themselves as very high or above average in this skill. The most common self-rating for math was average, and this skill also had the highest percentage of students who felt below average or very low. Although a majority of students perceived that both using documents and using graphics were taught a lot or quite a bit, fewer considered themselves highly proficient or above average in these skills. Most students rated themselves as average in these foundational skills. This illuminates a gap between perceived instructional exposure and self-assessed skill proficiency.

Regression analyses reinforced the importance of targeted instruction in essential, transferable, and foundational skills. After we controlled for demographic and contextual variables, the extent to which these skills were taught in school remained a significant predictor of students' self-rated skill levels. Further, all three groups of career skills, when taught in school, were statistically significant predictors of essential skills. Both transferable skill instruction and foundational skill instruction contributed to students' perceived greater proficiency in transferable skills, and this pattern held for foundational skills. These findings underscore the value of intentional curriculum design that prioritizes career readiness skills across multiple domains. Additionally, higher ACT Composite scores were associated with higher self-rated foundational skills and transferable skills, linking academic achievement and perceived career readiness. This is consistent with recent research showing that ACT Composite scores are correlated with a WorkKeys NCRC foundational skills total score, although each provides unique information, with WorkKeys informing career readiness (Allen, 2025).

Limitations and Future Directions

It is important to note that findings from this study are based on self-reported data, which are influenced by students' subjective perceptions and experiences. Therefore, drawing any strong conclusions about skills gaps would be premature. In addition, the study's sample was limited to students who registered for the ACT, selected a planned career at the time of registration, and opted to respond to the survey. As a result, the sample may not fully represent the broader high

school population. The low survey response rate is also a limitation, as nonrespondents may hold different perceptions than those who participated. For the regression analysis, a few race/ethnicity categories were collapsed due to low sample sizes, and only a limited number of household income categories were available. These constraints reduce the level of detail in the data and may obscure meaningful differences across groups, limiting the accuracy and interpretability of the findings.

Future research could examine how targeted instructional interventions influence students' skill development, shedding more light on which approaches more effectively help build essential, transferable, and foundational skills. Research could also explore the contributions of non-school learning environments—such as internships, part-time work, and other real-world experiences—in helping students strengthen these skills. Additionally, future studies may investigate how skill development varies for students who have not yet selected a planned career, offering insights into whether uncertainty about future goals shapes the ways in which students perceive, acquire, or prioritize important workforce skills.

Recommendations

Based on the findings from this study, schools and employers can take actions to help address potential gaps in skill awareness, skill instruction, and skill development, with the goal of better preparing students to meet the demands they will face when entering the workforce.

Schools

Integrate skills across school subjects. To better help students develop the important skills they will need when entering the workforce, schools could embed career readiness skill instruction in the curriculum. Given that many of these skills (e.g., communication, work ethic, critical thinking, collaboration, resilience, creativity) are relevant to both education and work, this would both benefit their in-school efforts and apply to their future careers. Students who perceive these skills as being taught more frequently can also become more aware of their importance. Encourage teachers to design lessons and use assessments that require students to demonstrate these skills in various contexts (e.g., science labs, history debates, group projects). Educators can also use cross-curricular projects where students must collaborate, solve problems, and communicate, reinforcing these skills as universally valuable. For skills that are less emphasized, educators can create more targeted lessons and incorporate activities that feature creatively solving challenges or building resilience.

Connect learning to real-world experiences. When increasing awareness of work skills that may seem nebulous for students during high school, schools can take approaches that will make these skills more concrete and relevant to them. To increase awareness of these skills, encourage teachers to use project-based learning where students tackle real-world problems, to facilitate internships that immerse students in the daily skills used in a workplace, and to promote work-based learning that mimics workplace scenarios to make skill development authentic and relevant. These efforts can help students better see the importance of essential, transferable, and foundational skills for their future careers. Schools can also partner with local

businesses, nonprofits, and community organizations to offer internships, job shadowing, and mentorship programs.

Assess and reflect on skill development. When helping students understand the skills they have and those they need to further develop to set themselves up for success in the workforce, build in opportunities to assess and reflect on these skills. Encourage educators to use valid career readiness assessments and incorporate feedback to help students identify their skill strengths and areas for improvement. Educators can also use formative assessments (e.g., rubrics, self-assessments, peer reviews) to help students track their growth in essential, transferable, and foundational skills. The feedback provided by skill measures is important for helping students reflect on workforce skills and for further informing students of potential opportunities for future careers. Actionable feedback is also necessary to motivate students to continue developing and practicing their skills when responding to assessment results.

Align curriculum and graduation requirements with employer-valued skills. When advancing skills identified as critical by both employers and students, it is important to ensure that these skills are part of the school curriculum standards adopted by the state and district. For example, there are already states and districts engaging in efforts to create high school graduate personas or portraits that can help shape these kinds of alignments. This helps to guarantee that these skills will be part of the curriculum and students will be prepared for workforce expectations. Encourage relevant stakeholders to review and revise standards to make sure essential, transferable, and foundational skills are represented. Work with advisory boards that include employers, educators, and students to keep curriculum relevant and responsive to workforce needs. Support graduation requirements that reflect mastery of these skills, possibly through portfolios, capstone projects, or industry-recognized credentials.

Support professional development for teachers. To better help students develop skills needed for the workforce, schools must first support teachers in being prepared to facilitate this development by offering professional development opportunities. Provide educators with the training and resources they need to effectively teach and assess career readiness skills. Offer workshops and resources that focus on varied approaches to teaching skills in the context of academic subjects using real-world examples, strategies to develop these skills among adolescents, and appropriate techniques for measuring these skills. Foster professional learning communities where teachers can share best practices and collaborate on skill-building strategies. Augment teacher professional development with employer input on skills they know students will need in order to transition successfully from school to work.

Employers

Offer work-based learning opportunities. Employers can partner with schools to offer internships, job shadowing, apprenticeships, and mentorship programs. Students want to participate in these opportunities, which can be difficult to find. Thus, employers can become a more engaged resource and ensure these experiences are available. By putting students in real workplace environments, employers can help make essential, transferable, and foundational skills more concrete and relevant. Such partnerships also allow students to practice these skills

and better recognize their importance on the job and the need to develop them. For employers, these opportunities create a funnel of workforce entrants who have not only developed the skills they need but also developed knowledge of their organizations, making the school-to-work transition more successful.

Engage directly with educators and students. Employers can serve as guest speakers in classrooms, participate in career fairs, and host workshops or demonstrations of new technologies. By sharing real-world insights and expectations, employers help students and educators stay informed about current workforce trends and skill requirements. These efforts can also help students make connections between their education and employment, increasing the relevance of what they are learning. This direct engagement can also demystify emerging technologies and encourage students and educators to explore ways in which new tools may be used in work and educational contexts.

Support curriculum alignment and skill assessment. Employers can collaborate with schools and advisory boards to support efforts that align curriculum and graduation requirements with the skills most valued in the workplace. This may include advocating for the integration of specific career readiness skills into curriculum standards and assessments. Employers can work with school leaders and teachers to map skills needed on the job to the curriculum and determine what proficiency looks like in practice. Employers and educators can also co-create performance tasks that demonstrate important skills. Working together, they can further expand work-based learning pathways that offer more options for building skills.

Collaborate on professional development for teachers. Employers can support teacher professional development by sharing expertise, co-developing training resources, and participating in professional learning communities. This can help educators stay current with workforce needs, as they are able to keep a finger on the pulse of the labor market landscape. This can also equip educators with greater knowledge of career readiness skills that will enable them to teach and assess such skills more effectively.

Champion industry-recognized credentials. Employers can promote and recognize industry credentials that certify important work skills. Students can prepare for and earn these credentials before graduation if employers publicize the credential levels they value for different job roles and work with educators to shape course sequences that support being ready to achieve career readiness credentials. By valuing these credentials in hiring and career development, employers signal to students and educators the importance of developing and demonstrating these skills when preparing to enter the workforce and documenting these skills when searching for jobs.

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Notes

1. Essential skills “include interpersonal, self-regulatory, and task-related behaviors important for adaptation to and successful performance in education and workplace settings” (Camara et al., 2015, p. vi). Below are descriptions of the six essential skills measured by the WorkKeys Essential Skills assessment (ACT, 2024).

Skill	The extent to which a person’s actions demonstrate . . .
Work ethic	Persistence, goal striving, reliability, dependability, and attention to detail at work
Collaboration	The ability to work on teams, empathy, helpfulness, trust, and trustworthiness
Resilience	Stress management, emotional regulation, a positive response to setbacks, and poise
Creativity	Ingenuity, creative thinking, inquisitiveness, flexibility, open-mindedness, and embracing diversity
Leadership	Assertiveness, influence, optimism, and enthusiasm
Integrity	Honesty, sincerity, fairness toward others, and modesty at work

2. The ACT WorkKeys assessments measure foundational skills required for success in the workplace. Foundational skills serve as the foundation for carrying out additional operations/tasks and learning, which are important for training and workplace success.

The ACT WorkKeys National Career Readiness Certificate (NCRC) is a portable, evidence-based credential earned by completing three WorkKeys assessments (Applied Math, Graphic Literacy, and Workplace Documents) and achieving scores that reflect proficiency in these skill areas. The NCRC certifies the foundational work skills needed for success in jobs across industries and occupations. Below are descriptions of these skill areas (ACT, 2025).

WorkKeys assessment	Skill description
Applied Math	Measures the skills people use when applying mathematical reasoning and problem-solving techniques to solve work-related problems
Graphic Literacy	Measures the skills people use to comprehend information presented in graphical format (e.g., tables, graphs, charts, digital dashboards, flowcharts, timelines, forms, maps, blueprints) and then find, summarize, compare, and analyze this information to solve work-related problems
Workplace Documents	Measures the skills people use to read and employ written workplace documents to do a job. Documents include, but are not limited to, messages, emails, letters, directions, signs, notices, bulletins, policies, websites, contracts, and regulations and are based on materials that reflect the actual reading demands of the workplace.

3. Transferable skills are applicable across occupations and industries. The transferable skills used in this report are informed by a combination of frameworks and sources (Cole et al., 2021; NACE, 2022; U.S. Department of Education, 2018; World Economic Forum, 2025) and described as follows:

Skill	Description
Communication	Clearly and effectively exchange information by listening attentively, writing clearly, and sharing thoughts in an organized way
Critical thinking	Analyze information logically, identify and solve problems, and summarize and interpret data accurately
Equity and inclusion*	Demonstrate the awareness, attitude, knowledge, and skills required to equitably engage and include people from different cultures and backgrounds
Learning skills	Set learning goals, evaluate your knowledge, and use learning strategies to achieve goals
Career and self-development	Proactively develop yourself and your career through awareness of your strengths and weaknesses, seeking out opportunities to learn, navigating career opportunities, and networking to build relationships
Technology	Understand and identify appropriate technology, adapt to new technologies, and troubleshoot problems to accomplish goals

*Drawn from NACE, this skill competency is currently under review. Recent federal executive orders and subsequent guidance, as well as court decisions and regulatory changes, may create legal risks that either preclude or discourage campuses and employers from using it (NACE, 2022).

4. When students register for the ACT test, they have the option of providing information about their occupation plans. Students are asked “What is your first choice of occupation (vocation)?” Students are provided a list of 294 occupations to choose from and may also indicate that they are undecided. This is followed by an additional question asking students how sure they are of their planned occupation: not sure, fairly sure, or very sure. When selecting the sample for this survey, we included only students who had a valid occupation choice to ensure that these data were available in the final analytic sample.

5. A chi-square test of independence was conducted to explore whether skill awareness was associated with career certainty. There were five skill awareness responses (very aware, aware, moderately aware, slightly aware, and not aware) and three career certainty (sureness) responses (very sure, fairly sure, not sure). Chi-square results were $\chi^2 = 122.66$, $p < .001$. The statistics from the chi-square tests reflect the weighting.

6. Qualitative analysis procedures were conducted to analyze students’ responses to the open-ended question. Responses from 2,082 students were analyzed. All responses were read, segmented by relevance (irrelevant comments were excluded), and coded by a qualitative research expert to construct tentative skill categories. These categories were then reviewed and

verified by a second qualitative research expert. Skill categories were examined and further combined into broader groups.

7. In this report, the set of skills from which students selected the most important ones included six essential skills represented by the WorkKeys Essential Skills assessment (work ethic, collaboration, creativity, leadership, resilience, integrity); three foundational skills measured by the WorkKeys NCRC assessments (applying math, using documents at work, using graphics); and six transferable skills (learning skills, technology skills, critical thinking, communication, career and self-development, equity and inclusion). We grouped these skills into two categories based on the WorkKeys assessments offered by ACT plus a broader category reflecting transferable skills. Other skills frameworks may categorize these skills differently. The literature indicates that these skills are broadly applicable across industries and career fields and are important for work success (Elson et al., 2018; Gray, 2024; Walton et al., 2026; World Economic Forum, 2025; Wu et al., 2023; Yarbrough et al., 2016).

We evaluated how much each skill was valued by employers by examining the consistency of work skill rankings across three reports: the American Association of Colleges & Universities Employer Report (Finley, 2023), Williams et al. (2023), and the Future of Jobs Report (World Economic Forum, 2025). Each report used different metrics and examined a distinct subset of skills. To enable comparison, we rank-ordered the skills within each report. We then cross-referenced the skills identified for this study with those in each employer-focused report to determine their relative rankings and to identify which skills were consistently ranked highly across these sources. The employer-desired skills that appeared in the top third of rankings in at least one report and in the top two thirds in at least one additional report included communication, resilience, work ethic, collaboration, leadership, critical thinking, technology, career and self-development, and creativity. However, it should not be assumed that other skills are not valued by employers.

8. We examined students' selections of important skills (they could select as many as they considered most important for their careers) in each of the three skill areas (essential skills, transferable skills, foundational skills) by their planned career category. Type of occupation was based on students' planned career choices, which were grouped into 18 broader ACT categories of related occupations. For some analyses, we grouped students according to these categories and included categories with 100 students or more. This resulted in nine categories (with example careers):

- Business (e.g., financial planning, real estate, small business management/operations, fashion merchandising, marketing management/research)
- Engineering (e.g., biomedical engineering, civil engineering, industrial engineering, mechanical engineering, environmental health engineering)
- Computer science and mathematics (e.g., webpage design, statistics, computer network/telecommunications, data management technology)
- Biological and physical sciences (e.g., chemistry, physics, microbiology and immunology, genetics, astronomy)

- Health sciences and technologies (e.g., physical therapy, surgical technology, dental hygiene, physician assisting, athletic training)
- Health administration and assisting (e.g., medical records, veterinarian assisting, occupational therapy assisting, hospital/facilities administration)
- Social sciences and law (e.g., economics, court reporting, anthropology, psychology, paralegal/legal assistant)
- Education (e.g., curriculum and instruction, elementary education, educational administration, science education, physical education)
- Visual and performing arts (graphic design, photography, music, dance, cinema/film)

9. Students rated their own skill levels using a 5-point scale (very high = 4, above average = 3, average = 2, below average = 1, very low = 0). They also rated the extent to which the skills valued by employers were taught in school using a 4-point scale (a lot = 3, quite a bit = 2, somewhat = 1, not at all = 0). Percentages, means, and standard deviations were weighted.

10. We examined potential factors that could predict students' self-rated essential, transferable, and foundational skill levels using three multiple linear regression models. The dependent variables were students' self-rated skill levels in each of the three skill areas. We calculated the average scores using students' ratings for each skill in a skill area (very high = 4, above average = 3, average = 2, below average = 1, very low = 0). The independent variables were the extent to which essential skills, transferable skills, and foundational skills were taught in school. The skill-taught score for each area was the average score of each skill taught in this area (a lot = 3, quite a bit = 2, somewhat = 1, not at all = 0). We also included covariates in the model, including race/ethnicity, gender, family income, parental education level, school type, school affluence, and ACT Composite score.

Personal demographics were self-reported at the time of ACT registration. Four dummy variables were created to represent race/ethnicity (i.e., Asian, Black, Latinx, and other racial/ethnic groups), with White being the reference group. Due to low n counts, the Other group included Native American, Native Hawaiian / other Pacific Islander, and two or more races/ethnicities. For gender, the dummy variable "male" was included in the model, with female being the reference group. For family income, two dummy variables were created to represent the low-income group (annual family income less than \$36,000) and the moderate-income group (annual family income between \$36,000 and \$100,000), with the high-income group (annual family income more than \$100,000) being the reference group. For parental education, two dummy variables were created to represent students whose caregiver(s) had some college experience but did not have a bachelor's degree from a 4-year institution and students whose caregiver(s) had a bachelor's degree or higher; students whose caregiver(s) did not have any college experience formed the reference group. Three dummy variables were created to represent the rural, town, and urban school type groups, with the suburban group forming the reference group. The school affluence indicator used a proprietary algorithm developed to rank the socioeconomic status of an institution. Data points ranging from specific variables to census data were incorporated into the formula. There were five levels of affluence: low, below average,

average, above average, and high, which were converted to 1–5 in the models. Students whose race/ethnicity, family income, parental education, and school type information were missing were excluded from the analysis. See the technical appendix for the relevant questions and regression statistics.

Technical Appendix

This survey study focused on students' perspectives on job skills, including the extent to which they were aware of the skills that employers wanted people to have, their self-rated skill levels, the extent to which these skills were taught in school, and the skills they considered most important to have in order to do well in their planned occupations. We focused on 15 skills in three skill areas—essential skills, transferable skills, and foundational skills. This report summarizes the findings from the quantitative and qualitative data analyses.

Sample

The target population was high school students in Grades 11 and 12 who registered for the December 2024 or February 2025 ACT National test and reported that they were residing in the United States. It excluded students who did not provide a planned occupation or reported they were undecided on their planned occupation when registering for the ACT. The sampled population was $N = 121,539$ and did not include students who opted out of ACT communications or who were included in recent student survey samples. A stratified random sample of 96,260 Grade 11 and Grade 12 high school students nationwide was drawn from the sampled population for this study. These students were presumed to be college-bound, although it is possible that some of them will not attend college. The sample was stratified on race/ethnicity.

Students were invited via email to participate in the online survey. The survey opened on February 12th, 2025, and closed on March 28th, 2025. A total of 2,294 students answered at least half of the required questions (i.e., the selected-response questions). This group was used as the analytical sample of the survey (a response rate of 2%). This response rate is not unusual for online surveys, and we do not know whether nonrespondents' opinions would have been similar to those of the respondents, which is a limitation of this study.

We used propensity weighting to weight the responses to match the sampled population, compensating for the differences in sample size and the overrepresentation of respondents from subgroups.

Student characteristics (gender, race/ethnicity, family income, parental education, high school GPA) are reported in Table A1 for the survey's sampled population, the analytical sample, and the weighted analytical sample. All the characteristics in the table were reported by students and were collected when the students registered for the ACT. Also, students who chose to participate in the survey were asked to provide additional information about family income at the end of the survey.

Table A1. Characteristics of the Sampled Population, Analytical Sample, and Weighted Analytical Sample (Percentage ^a)

Characteristic	Group	Sampled population (<i>N</i> = 121,539)	Analytical sample (<i>n</i> = 2,294)	Weighted analytical sample (<i>n</i> = 2,294)
Gender	Female	59	67	58
	Male	40	31	40
	Other/unknown	1	2	2
Race/ethnicity	Asian	7	9	7
	Black / African American	15	10	14
	Hispanic/Latinx	15	13	14
	Other ^b	6	5	6
	White	53	59	54
	Race/ethnicity missing	3	4	4
Family income	Less than \$36,000	20	12	10
	\$36,000 to \$100,000	22	30	23
	More than \$100,000	39	53	39
	Family income missing	28	5	29
Parental education ^c	No college	13	9	14
	Some college	15	15	15
	College or higher	60	66	60
	Parental education missing	12	9	12
High school GPA	3.5 and above	64	76	66
	2.5–3.4	21	13	21
	2.4 and below	2	1	2
	HSGPA missing	13	10	12

^a Some percentages in the table do not add up to 100% due to rounding. ^b Other races/ethnicities include Native American, Native Hawaiian / other Pacific Islander, and two or more races/ethnicities. ^c Parental education levels: no college = less than high school or high school graduate / GED; some college = business/technical school, certificate program, some college with no degree or certificate, or associate's degree (2 year); college or higher = bachelor's degree (4 year) or higher.

Regression Results Tables

Table A2. Regression Coefficients for Predicting Self-Rated Essential Skills

Independent variable	Estimate	Standard error	t	p
(Intercept)***	2.60	0.10	26.05	0.00
Essential skills taught***	0.13	0.04	3.63	0.00
Transferable skills taught*	0.09	0.04	2.05	0.04
Foundational skills taught**	0.08	0.03	2.80	0.01
Asian	-0.02	0.06	-0.33	0.75
Black	0.01	0.05	0.26	0.79
Latinx	0.01	0.05	0.28	0.78
Other race/ethnicity	-0.14	0.06	-2.17	0.03
Male	-0.07	0.03	-2.41	0.02
Parental education (some college)	-0.10	0.04	-2.41	0.02
Parental education (no college)	-0.05	0.05	-0.95	0.34
Middle family income (\$36,000 to \$100,000)	-0.12	0.04	-3.40	0.00
Low family income (less than \$36,000)	-0.14	0.05	-2.69	0.01
ACT Composite score	0.00	0.00	0.01	0.99
School type (rural)	0.00	0.04	0.01	0.99
School type (town)*	0.10	0.05	2.07	0.04
School type (urban)	-0.06	0.04	-1.75	0.08
School affluence ^a	-0.01	0.01	-0.51	0.61

^a The school affluence indicator used a proprietary algorithm developed to rank the socioeconomic status of an institution. Data points including specific variables and census data were incorporated into the formula. There were five levels of affluence: low, below average, average, above average, and high. The five levels were converted to numbers 1–5 in the regression models.

***Significant at $p < .001$; **significant at $p < .01$; *significant at $p < .05$.

Table A3. Regression Coefficients for Predicting Self-Rated Transferable Skills

Independent variable	Estimate	Standard error	t	p
(Intercept)***	2.04	0.10	20.66	0.00
Essential skills taught	0.03	0.04	0.84	0.40
Transferable skills taught***	0.14	0.04	3.34	0.00
Foundational skills taught***	0.13	0.03	4.74	0.00
Asian	-0.05	0.06	-0.95	0.34
Black	0.13	0.05	2.85	0.00
Latinx	0.00	0.05	0.07	0.95
Other race/ethnicity	-0.03	0.06	-0.50	0.62
Male	-0.06	0.03	-1.93	0.05
Parental education (some college)	-0.08	0.04	-1.95	0.05
Parental education (no college)	-0.04	0.05	-0.74	0.46
Middle family income (\$36,000 to \$100,000)	-0.03	0.03	-0.73	0.47
Low family income (less than \$36,000)	0.03	0.05	0.64	0.52
ACT Composite score***	0.02	0.00	6.37	0.00
School type (rural)	0.05	0.04	1.10	0.27
School type (town)	0.08	0.05	1.80	0.07
School type (urban)	0.01	0.04	0.39	0.70
School affluence	-0.01	0.01	-0.99	0.32

***Significant at $p < .001$.

Table A4. Regression Coefficients for Predicting Self-Rated WorkKeys Foundational Skills

Independent variable	Estimate	Standard error	<i>t</i>	<i>p</i>
(Intercept) ^{***}	0.95	0.12	7.98	0.00
Essential skills taught	-0.02	0.04	-0.48	0.63
Transferable skills taught*	0.10	0.05	2.01	0.04
Foundational skills taught ^{***}	0.28	0.03	8.26	0.00
Asian	-0.02	0.07	-0.24	0.81
Black	0.05	0.06	0.82	0.41
Latinx	-0.04	0.05	-0.74	0.46
Other race/ethnicity	0.01	0.07	0.18	0.86
Male	0.14	0.03	4.12	0.00
Parental education (some college)	0.05	0.05	0.91	0.37
Parental education (no college)	0.14	0.06	2.16	0.03
Middle family income (\$36,000 to \$100,000)	-0.04	0.04	-0.94	0.35
Low family income (less than \$36,000)	-0.05	0.06	-0.75	0.45
ACT Composite score ^{***}	0.04	0.00	12.64	0.00
School type (Rural)	0.09	0.05	1.84	0.07
School type (Town)	-0.04	0.06	-0.80	0.43
School type (Urban)	-0.01	0.04	-0.16	0.87
School affluence	-0.01	0.01	-0.77	0.44

^{***}Significant at $p < .001$; *significant at $p < .05$.

Survey Instrument

The following are the survey items explored for this issue brief:

1. To what extent are you aware of the skills that employers want people to have for your future planned occupation? (Scale: Very Aware, Aware, Moderately Aware, Slight Aware, Not Aware)
2. What is the most important skill you think employers want people to have for your future planned occupation? (Open-ended)
3. How would you rate your skill level in each of the following skill areas? (Scale: Very High, Above Average, Average, Below Average, Very Low)
 - Integrity (e.g., tell the truth consistently, share your real feelings, and be fair towards others)
 - Resilience (e.g., manage stress effectively and identify and manage emotions)
 - Creativity (e.g., generate new ideas, adapt easily to new situations, and be open to new ideas)
 - Career & Self-Development (e.g., be aware of your strengths and weaknesses and seek out opportunities to learn)
 - Communication (e.g., listen attentively, write clearly, and share thoughts in an organized way)
4. How would you rate your skill level in each of the following skill areas? (Scale: Very High, Above Average, Average, Below Average, Very Low)
 - Critical Thinking (e.g., analyze information logically, identify and solve problems, and summarize and interpret data accurately)
 - Equity & Inclusion (e.g., adapt to diverse environments and seek cross-cultural interactions and experiences)
 - Leadership (e.g., plan, initiate, manage, complete, and evaluate projects; motivate and inspire others)
 - Professionalism (e.g., be on time, demonstrate dependability, and meet or exceed goals and expectations)
 - Teamwork (e.g., collaborate with others, build positive relationships, and provide empathy and help others)
5. How would you rate your skill level in each of the following skill areas? (Scale: Very High, Above Average, Average, Below Average, Very Low)
 - Technology (e.g., identify appropriate technology, adapt to new technologies, troubleshoot problems, use AI and big data)
 - Learning Skills (e.g., set learning goals, evaluate your knowledge, and use learning strategies)

- Math (e.g., use percentages to find discounts for products and identify mistakes in a spreadsheet with calculations)
 - Graphics (e.g., interpret trends and patterns in a graph and identify a graphic that accurately represents data)
 - Documents (e.g., apply instructions from manuals in new situations and infer the meaning of phrases based on their context)
6. To what extent do you think skills in each of the following areas are **taught in your school?** (Scale: A lot, Quite a bit, Somewhat, Not at all)
- Integrity (e.g., tell the truth consistently, share your real feelings, and be fair towards others)
 - Resilience (e.g., manage stress effectively and identify and manage emotions)
 - Creativity (e.g., generate new ideas, adapt easily to new situations, and be open to new ideas)
 - Career & Self-Development (e.g., be aware of your strengths and weaknesses and seek out opportunities to learn)
 - Communication (e.g., listen attentively, write clearly, and share thoughts in an organized way)
7. To what extent do you think skills in each of the following areas are **taught in your school?** (Scale: A lot, Quite a bit, Somewhat, Not at all)
- Critical Thinking (e.g., analyze information logically, identify and solve problems, and summarize and interpret data accurately)
 - Equity & Inclusion (e.g., adapt to diverse environments and seek cross-cultural interactions and experiences)
 - Leadership (e.g., plan, initiate, manage, complete, and evaluate projects; motivate and inspire others)
 - Professionalism (e.g., be on time, demonstrate dependability, and meet or exceed goals and expectations)
 - Teamwork (e.g., collaborate with others, build positive relationships, and provide empathy and help others)
8. To what extent do you think skills in each of the following areas are **taught in your school?** (Scale: A lot, Quite a bit, Somewhat, Not at all)
- Technology (e.g., identify appropriate technology, adapt to new technologies, troubleshoot problems, use AI and big data)
 - Learning Skills (e.g., set learning goals, evaluate your knowledge, and use learning strategies)
 - Math (e.g., use percentages to find discounts for products and identify mistakes in a spreadsheet with calculations)
 - Graphics (e.g., interpret trends and patterns in a graph and identify a graphic that accurately represents data)

- Documents (e.g., apply instructions from manuals in new situations and infer the meaning of phrases based on their context)
9. Which of the following skill areas will be **most important for you to do well in your future planned occupation**? Select all that apply.
- Integrity (e.g., tell the truth consistently, share your real feelings, and be fair towards others)
 - Resilience (e.g., manage stress effectively and identify and manage emotions)
 - Creativity (e.g., generate new ideas, adapt easily to new situations, and be open to new ideas)
 - Career & Self-Development (e.g., be aware of your strengths and weaknesses and seek out opportunities to learn)
 - Communication (e.g., listen attentively, write clearly, and share thoughts in an organized way)
 - Critical Thinking (e.g., analyze information logically, identify and solve problems, and summarize and interpret data accurately)
 - Equity & Inclusion (e.g., adapt to diverse environments and seek cross-cultural interactions and experiences)
 - Leadership (e.g., plan, initiate, manage, complete, and evaluate projects; motivate and inspire others)
 - Professionalism (e.g., be on time, demonstrate dependability, and meet or exceed goals and expectations)
 - Teamwork (e.g., collaborate with others, build positive relationships, and provide empathy and help others)
 - Technology (e.g., identify appropriate technology, adapt to new technologies, troubleshoot problems, use AI and big data)
 - Learning Skills (e.g., set learning goals, evaluate your knowledge, and use learning strategies)
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