SPECIAL REPORT

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FUTURE OF WORK

What Do Top U.S. Companies Think Schools Could Do Better? We Asked

Senior executives from Amazon, M&T Bank, Salesforce, and other companies share their thoughts

By Elizabeth Heubeck — May 03, 2022   🕐 12 min read

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Workers inherently know that problem-solving skills are critical for their success on the job. But rapid advances in technology, shifting economic challenges, and evolving knowledge about how people learn are adding new ideas and perspectives about where and how problem-solving skills are or should be acquired.

A quick review of K-12 curriculum trends throughout the last century reveals that problem-solving has periodically risen to the forefront of educational strategies. In 1896, the University of Chicago's Laboratory School introduced the concept of "learning through doing," in which students were presented with real-world situations to solve. The launch of the Soviet Union's Sputnik spacecraft in 1957 ignited concerns among U.S. leaders that the nation's education system was inferior to that of the USSR, as Russia was then known. Subsequently, there was a renewed push in the United States to adopt curricula emphasizing inquiry-based thinking.

Fast forward to the present, where a recent nationwide survey by Adobe, "Creative Problem Solving: Essential Skills Today's Students Need for Jobs in Tomorrow's Age of Automation," found most U.S. educators and policymakers believe students should learn "creative problem solving" in school, but generally don't.

To understand what business leaders are looking for when today's students become their workers, Education Week tapped senior executives from a collection of U.S. companies to answer these two questions: What problem-solving skills do you want to see from early-career job seekers that tend to be lacking? And what should K-12 schools do to help bridge those skill gaps?

Here's what they told us in their words (edited for brevity and clarity):

Southwest Airlines

Greg Muccio, senior director of talent acquisition

Problem solving requires teamwork, and the only way to learn teamwork is if you're on a team. Almost every opportunity in life, especially in the working world, requires working with others. By students involving

themselves in sports, projects, or school activities, they'll hone these skills.

Schools can also bridge this gap by providing real-time feedback to students. Encourage students with positive praise when you see them showing teamwork, and then reinforce it or coach them other times on how to be a better team player. Not every student is going to show teamwork or their problem-solving skills in the same way, so it's important to make the feedback relevant to them and their development.

Another key to problem solving is resiliency. It's rare that you will solve a problem on the first attempt. The more complex the problem, the longer and more attempts it will take to solve it. Building resilience is like building muscle. It takes work and repetition. Give students real-world problems to solve, allow them to fail, and then encourage them to get back up and try again.

Salesforce

Ron Smith, vice president of education initiatives

Problem solving is central to how individuals work with others in a group setting. We often assume everyone knows how to work in groups, but in today's technology-centric world, students are facing less opportunities to develop interpersonal communication skills. The ability to work with others to find solutions to a problem is a key strength both in the classroom and the workplace.

To build a pipeline of strong early-career job seekers, K-12 schools should put systems in place to promote collaborative learning and communication, which will help students develop the necessary interpersonal skills that will help them succeed in the workforce.

Amazon

Victor Reinoso, global director of Amazon's philanthropic education initiatives

Our basic theory is that computational thinking, problem solving, and creative skills are broadly applicable, whether students end up working directly in software development or not. We surveyed young people across the country with Gallup. Roughly two-thirds of students reported having an interest in computer science. Less than one-third have access to computer science courses. In that same study, students who strongly agreed that they have computer science role models are 10 times more likely to say they will pursue a computer science career than students who strongly disagree. For us, that demonstrates there's a gap in the K-12 education system around providing access to computer science education. This points to another opportunity in the K-12 space: creating touch points for students to meet professionals working in tech. It's easier to imagine being someone if you've met someone in that world. We recognize that schools have limited access to resources. A program we're working to expand, Meet an Amazonian, launched to create that initial exposure to professionals. We're trying to broaden people's imagination of what happens in tech, what roles exist in tech. We do more creative things than people imagine, and early exposure to the various roles available in tech is one way to create more opportunities for students.

> Global competition for a technologically literate and ready workforce continues to grow as the world becomes more reliant on STEM skills, deeming it essential that the U.S. aligns its K-12 core curriculum to the expectations of its 21st century workforce.

Tom Costabile, CEO/executive director of American Society of Mechanical Engineers

Adobe

Vaishali Sabhahit, director, global head of university talent

In the past two years alone, we've seen a profound shift to digital acceleration across work, education, and entertainment. In this ever-changing environment, those in the early stages of their careers need to seek an edge to distinguish themselves and set themselves up for long-term success. I'm a firm believer that while hard skills may get you in the door, it's the soft skills that will take you far. An example: Early-career professionals would be well suited if they're able to navigate changes and ambiguities in the workplace. Diving into a new challenge with enthusiasm and focus can get you far, and others will certainly notice and appreciate your can-do attitude.

One thing I'd like to see is for schools to incorporate more scenario planning into their curriculum. This will help students bolster their hard skills with key skill sets of applying concepts to real-world scenarios. Students who can stretch their imaginations to consider a wide range of possible outcomes are much better positioned to embrace new opportunities that may come their way, especially as they grow in their careers. Schools should also focus on guiding their students to be more thoughtful about the careers they want to pursue, and help them develop a natural curiosity about the markets and industries they'd like to work in.

Allstate

Francie Schnipke Richards, vice president of Allstate Social Responsibility and the Allstate Foundation and a former educator

Decades of research show the importance of social and emotional skills for youth, especially in building the workforce of the future, as indicated in a recent report by the World Economic Forum (WEF) 🗋 . The kinds of skills that SEL addresses—such as problem solving, collaboration, and appreciating diversity—are increasingly necessary for the labor market. [Many] children entering grade school will ultimately work in jobs that don't exist today, putting creativity, initiative, and adaptability at a premium. Another study 🗋 by the WEF shows that jobs are increasingly social-skills intensive, making SEL skills increasingly important for Gen Z's, our next generation of workers.

The evidence is clear that social and emotional learning and service-learning supports success in school, the future workplace, and civic life. In the workplace, deep listening, empathy, collaboration, creativity, influencing others, clear communications, and other social skills are equally or more important than technical skills.

But knowing the importance of these learning experiences isn't enough. We need to support schools with equitable access to SEL and service-learning programs and implementation support so that all youth can be empowered.

American Society of Mechanical Engineers (ASME)

Tom Costabile, CEO/executive director of ASME and former consultant with 3essential, LLC, and Carlan Advisors

Many of the executives I speak with express the importance of soft skills in young professional job seekers. These skills include leadership, communication and listening, being able to supervise and lead others while also working collaboratively in a team. Soft skills are an essential part of collaboration and can have a positive influence on furthering your career as an engineer.

ASME has long advocated for the advancement of science, technology, engineering, and mathematics (STEM) education to ensure our students are equipped with the skills and tools they need to succeed in today's in-demand STEM jobs. Global competition for a technologically literate and ready workforce continues to grow as the world becomes more reliant on STEM skills, deeming it essential that the U.S. aligns its K-12 core curriculum to the expectations of its 21st century workforce.

ASME champions equitable access to unique and impactful K-12 STEM education content and experiences that are intentionally designed to reach students chronically underrepresented in STEM. This is a critical lynchpin in ASME's overall DEI strategy to foster a more diverse and inclusive pipeline of students eager to pursue engineering.

ASME also encourages school districts to help strengthen K-12 STEM education by supporting efforts that aim to: increase the development of hands-on, open-ended problem-solving curricula and modules of engineering problems—grouped by discipline and level of difficulty and based on research—for the K-12 classroom; promote engineering habits of mind, including systems thinking, creativity, collaboration, communication, and attention to ethical considerations; fully incorporate the engineering design process into the next-generation science standards (NGSS) and other K-12 state and local standards; pursue the development of better assessment mechanisms aligned with state and local standards; and resist the tendency to "push back" standards when assessment results are less than satisfactory.

Among other recommendations, ASME encourages policymakers to foster partnerships among educational institutions, industry, and nonprofit organizations. The ASME INSPIRE program—a scalable STEM education program that delivers a mind-expanding learning experience primarily to middle and high school students who might otherwise never be exposed to the opportunities available in engineering—is currently offered to more than 750,000 students in all 50 states.

Discovery Education

Allison Grace, chief human resource officer

As a rapidly growing ed-tech company, Discovery Education is home to many young professionals new to the workforce. Those individuals are a very talented, dynamic group and a testament to the great work of their K-12 teachers and college professors. I don't perceive a lack of problem-solving skills among today's job seekers.

Rather, I'd suggest that K-12 schools continue their efforts to link what students are learning to their real-world applications beyond the classroom. When students understand how the knowledge they are amassing is applied in their everyday lives, they become more engaged in instruction, which then translates into deeper learning.

M&T Bank

Kelly Martin, head of M&T Bank's Tech Academy

We can't fully predict what problems will need to be addressed in the future, but technical and analytical skills will be critical to many job paths. We are witnessing a demand for technology workers like we've never seen before, and as a result, are facing a shortage in the industry. Taking those crucial first proactive steps, such as participating in STEM education and joining local partnerships, can align students professionally with this opportunity and accelerate their career path in a meaningful way, setting them up for a lifetime of success within an in-demand profession.

Paychex

Karen McClendon, chief human resource officer

There are a few areas I have found our less-experienced employees need to focus on. One involves being able to manage ambiguity. When you look particularly at what has happened in the last couple of years, with the pandemic, there is so much that is unknown. You can't tell people what tomorrow is going to be like. Employees need to ask themselves: How do I better manage my aptitude for risk, to make decisions without knowing all the details and facts, and to remain calm and focused? The ability to maneuver in an environment that requires change is an essential skill set.

Another area related to problem-solving skills is intellectual curiosity. Companies need people who are interested in creativity and innovation, who want to know about best practices, who are never satisfied, and who challenge the "status quo" behind the phrase: "We've always done it that way."

Part of intellectual curiosity involves understanding and appreciating the diversification that exists within an organization, which allows employees to have a broader perspective, and be more inclusive.

Relationship building, networking, and communicating with people are so important in the business world, regardless of whether you're working in person, hybrid, or remote. It's something that introverts, in particular, may need to strengthen.

What should K-12 schools do to help bridge those skill gaps? Something we could really do differently in the K-12 space is to focus on project learning that requires cross-functional work, so that students aren't just in a group that

they know and understand. This forces students to work on this relationship-building muscle, which involves understanding diversity of perspective, opinion, and experiences. I also recommend community involvement to help students build empathy, whereby they can meet people and celebrate the strength of our differences.

AllTrails

Doreen Ghafari, head of people and talent for Alltrails, whose app helps people discover and navigate trails

Asking questions, reflecting on a solution, and considering the bigger picture before jumping to any conclusions or action. Technology is changing faster than ever and there are often no "right ways" of doing things. There can be multiple ways of achieving the same results. In an age of information overload, it's important for young job seekers to research, critically think, and do their best to fundamentally understand the business challenges their function is looking to solve.

Rather than forcing one method of learning, schools should encourage students to problem solve and pave their own path to find the solution. Not only is the student more likely to grasp the concept with better ease, but it will help set them up for success and motivate them as they advance deeper into the curriculum.

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Elizabeth Heubeck is a contributor for EdWeek Top School Jobs.

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