



STATE OF THE FUTURE U.S. WORKFORCE:

Student Ability Report

A look at the potential impact on U.S. education and industry due to the misalignment between high school student ability for and interest in best-fit, in-demand postsecondary college and career opportunities



Executive summary

Economies worldwide face a widening gap that is more impactful than inflation or supply chain issues. One that results in lost productivity and may lead to as much as \$8.5 trillion in unrealized revenues.¹ One that's forecast to leave 85 million unfilled jobs by 2030.¹

The gap is the one between available skills and ready-to-work talent, and it is growing.

The challenge affects schools, industries, and policymakers

On one side of the skills gap is industry battling for a limited pipeline of skilled workers. Forty-nine percent of industry leaders say their top challenge is the limited supply of talent.²

Ironically, in May 2022, almost six million people in the U.S. were unemployed.³ They were available and willing to work but lacked skills for and/or interest in available jobs.

On the other side is an education system that, despite decades of study, the dedication of faculty and administrators, large-scale investment, and the best of intentions, has not fully solved the disconnect between what students study and what industry needs.

In the middle are students graduating from an educational system with more available pathways than ever before but less clarity about what the right approach for their future is. They face a number of fissures that lead them to question what is next, including:

- How are school and the classes I am taking relevant to my future?
- What should I do when I graduate?
- What options do I have if I do not go to college?
- Is college worth the time and investment?
- How do I communicate my skills to employers?

Perhaps most important is this question:

- **What is the right path for me?**

There are many approaches and programs that attempt to address these important questions, but little agreement on the right approach.

Solving the skills gap is not only possible, it is essential. Addressing the skills gap requires alignment among policymakers and industry and education leaders in a way that recognizes and supports each individual student's success. Now is the time. The stars are aligned for massive transformation in education and industry.

About the report

The State of the Future U.S. Workforce: Student Ability Report analyzes anonymized data from the YouScience Discovery aptitude-based career guidance assessments taken in U.S. high schools (grades 9 through 12) across all 50 states in 2021.

We outline our findings and suggest solutions that address the challenge in a holistic, practical way in this report.

Solving the skills gap is not only possible, it is essential. It requires aligning policy, industry, and education in a way that starts by creating individual success for students.

The skills gap starts in secondary school

Our analysis shows that students have the aptitudes to excel in in-demand jobs but lack interest and even the knowledge of possible careers. It also uncovers some concerning trends that can have a serious impact in the long term if not addressed in the short term.

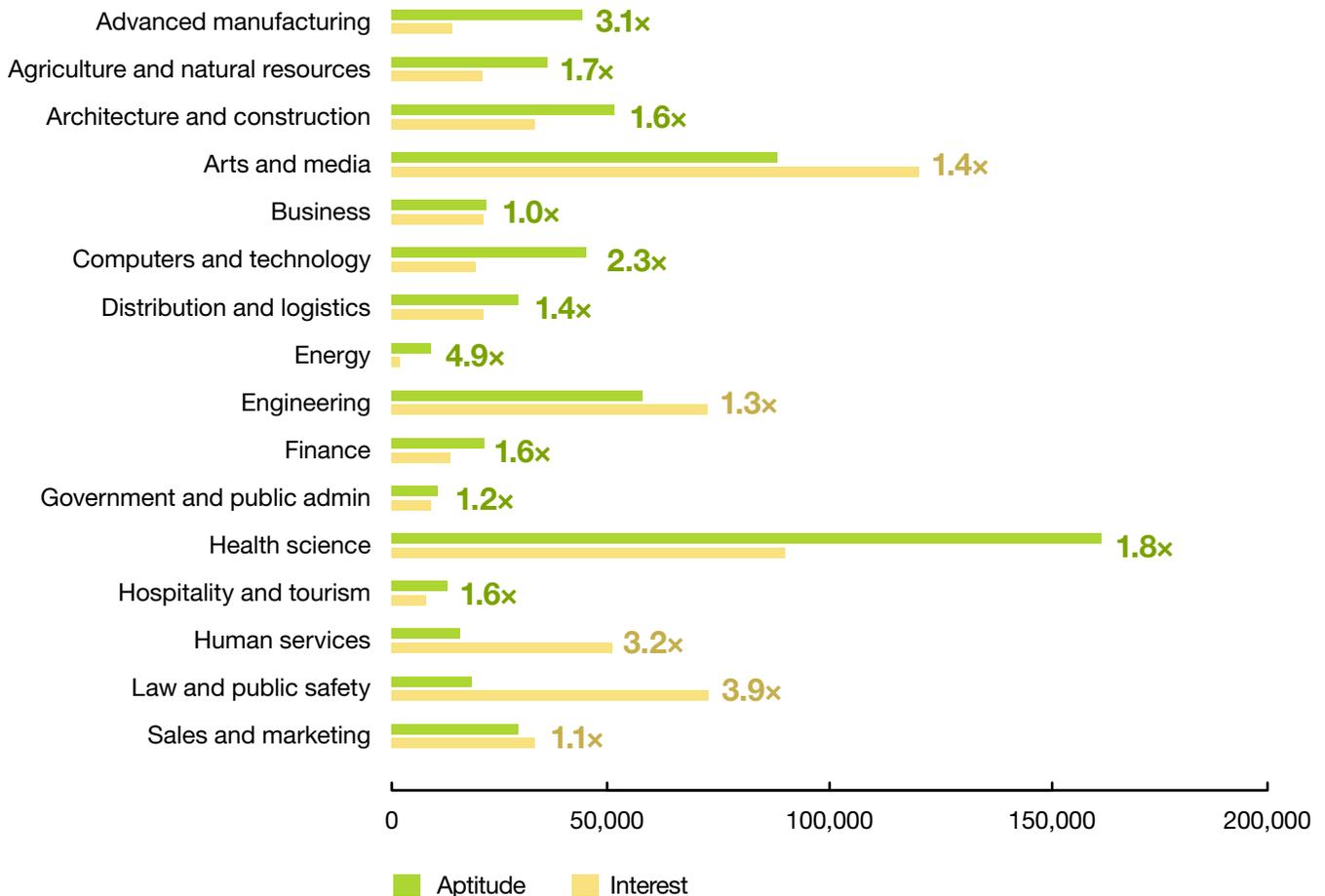
Based on our data, we see that student aptitude is higher than interest in key national career clusters where significant job growth is forecast. For example:

- Students have **more than 2x the aptitude for computer technology careers** than interest.
- Students have **more than 3x the aptitude for advanced manufacturing careers** than interest.
- Students have almost **2x the aptitude for health science careers** than interest.

The gap between aptitude and interest tells us that **what exists is less of a talent gap and more of an exposure gap**, which results in a skills gap and a need to help students become more self aware of their potential for in-demand careers. For example, many students who are good at math can only identify a handful of potential job options from among the thousands that exist.

Closing the exposure gap will help reduce or eliminate the skills gap and get more students ready for — and interested in — the in-demand jobs of today and tomorrow.

Students' aptitudes vs interests for key career clusters



The most-frequent aptitude and interest-based career cluster recommendations show that students' aptitudes and interests are misaligned for key career clusters. Data is taken from U.S. high school students results from the YouScience Discovery aptitude-based career guidance assessment for the 2021 calendar year.

How we can solve the skills gap

Guide students to minimize possible bias

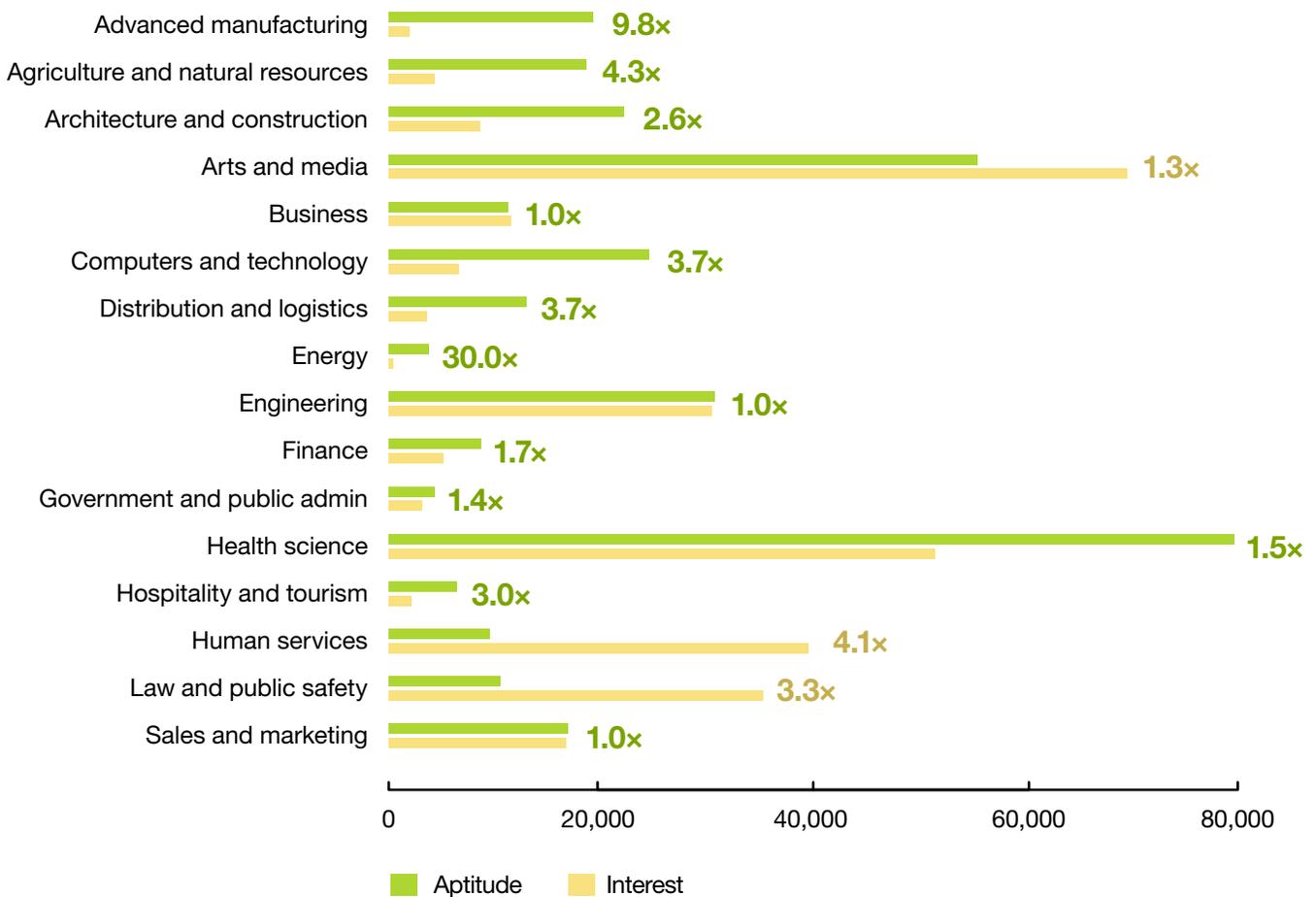
The exposure gap reflects biases that contribute to many students self-selecting out of careers that they have the ability to succeed in. For example, gender stereotypes play a strong role in both educational and career awareness and preparedness. Our analysis shows that biases still exist and need to be addressed in order to turn the corner on the exposure and skills gap challenges.

Consider the following:

- Female students have almost **4x the aptitude for computer technology careers** than interest.
- Female students have almost **10x the aptitude for advanced manufacturing careers** than interest while males have **2x the aptitude than interest**.
- Male students have **2x the aptitude for health science careers** than interest.

Data also shows that **female students have more aptitude than interest** for other in-demand career clusters, including architecture and construction, health science, and distribution and logistics among others.

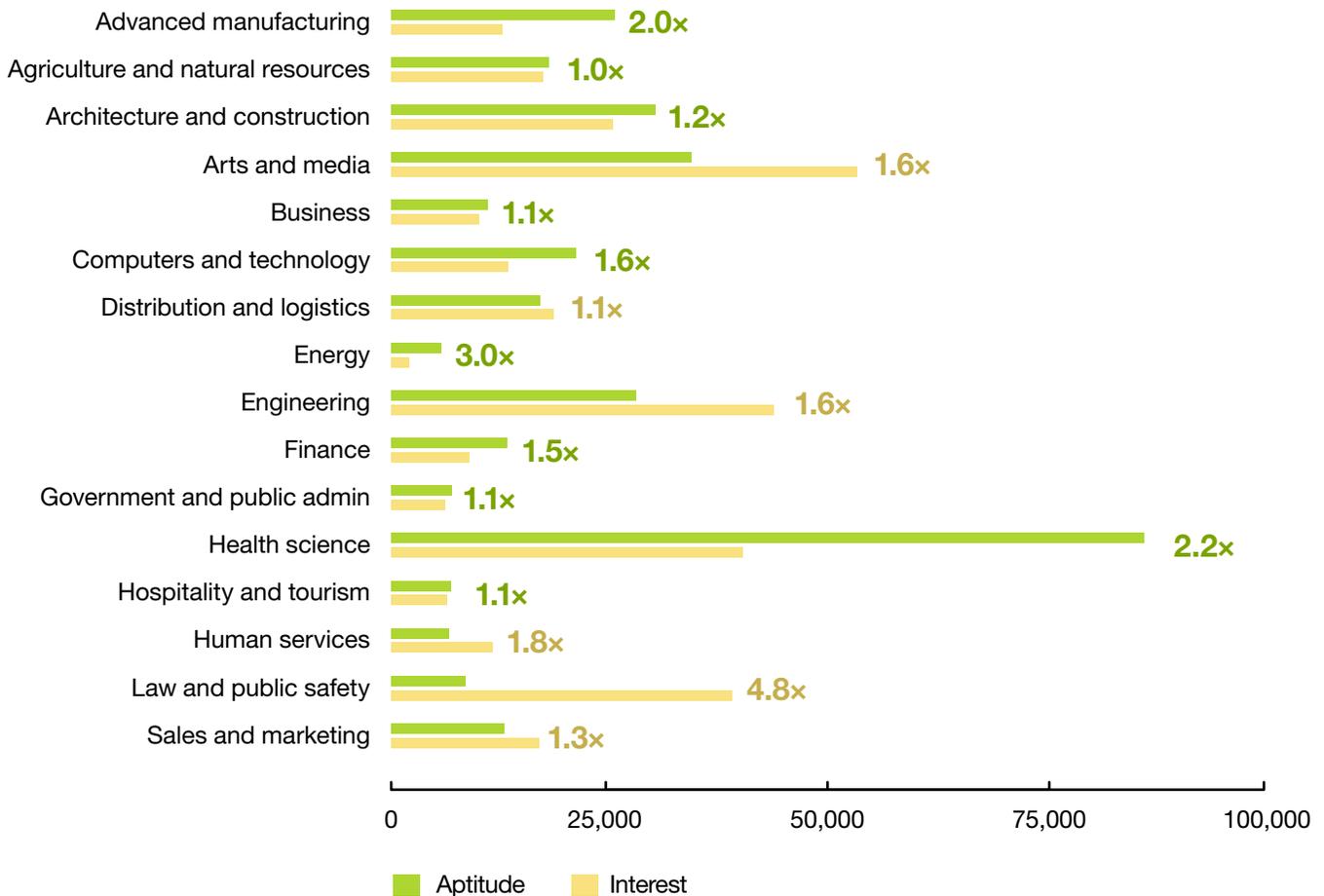
Aptitude vs interest across top career clusters for female students



The most-frequent aptitude and interest-based career cluster recommendations for female students' results from the YouScience Discovery aptitude-based career guidance assessment for the 2021 calendar year.

Our analysis shows that male students' aptitude, or natural talent, versus their interest, shows a similar gap between what they have an interest in and what they can do. For example, males show **more interest than aptitude** for careers in law and public safety. They also **have a high aptitude** for careers in health science, but lower interest — a likely outcome of societal biases.

Aptitude vs interest across top career clusters for male students



The most-frequent aptitude and interest-based career cluster recommendations for male students' results from the YouScience Discovery aptitude-based career guidance assessment for the 2021 calendar year.

Why aptitudes matter

Most secondary career guidance solutions rely solely on interest and personality surveys. Only YouScience Discovery combines psychometrically valid brain game-like exercises that uncover students' aptitudes with an interest inventory.

Analyzing the results of Discovery assessments supports that interest-only assessments reinforce biases and fail to give students an accurate picture of what they can do or will find satisfying.

An aptitude-based assessment coupled with career matching, however, lets students self-discover their talents, gain self awareness, and find career opportunities that align with those talents. It strips away the biases and exposes students to careers they did not know about, did not think they could do, or perhaps, had never considered. It shows them careers they are wired to do well at and will find satisfying because mastering the skills needed will be natural rather than stressful.

The path forward

Educators and administrators continually strengthen the investment and energy spent on work- and career-based learning initiatives for students. Their sole purpose for this investment is to prepare students for the next step in education and/or career.

Without alignment among policymakers, administrators, educators, and parents, those efforts are siloed and weakened. Without a framework supported by, and aligned across, policymakers, administrators, educators, and parents that helps students effectively prepare for life after graduation, students' success is a gamble, and the skills and exposure gaps remain.

To that end, we offer four insights along with actionable recommendations for policymakers, administrators, educators, and parents to pursue.

Insight

Help students find their “why.” When students discover their aptitudes, education becomes increasingly real and applicable. They can connect what they learn with an outcome. They can better plan their schooling to lean into their talents. They can find fulfillment in their careers because what they are doing is based on their natural abilities and not their weaknesses.

Close the exposure gap and reveal opportunities. As adults, we take for granted our understanding of the world, careers, and opportunities. Students in high school are learning what is possible — or haven't yet learned. One of the fundamental premises of education is to help all students expand their view of what is possible. Career and technical education (CTE) is ideal for exposing opportunities, but its isolation from core educational curricula creates a barrier for mainstream alignment.

Make education more relevant using career-connected learning. Students need exposure and hands-on experience to learn what they are capable of. When students participate in both classroom and work-related experiences, such as internships, apprenticeships, and CTE courses, they open their minds to new possibilities. More importantly, they gain confidence that they can do things they previously didn't think possible. They see added relevance and realize the full value of education.

Recommendation

Performance measures of aptitudes, such as YouScience Discovery, give both students and educators valuable insights and support for education and career learning. Aptitude-based career guidance is best started in middle school or within the first two years of high school, so students can use their results to work with educators to make individual graduation plans.

YouScience Discovery does more than surface aptitudes; it connects aptitudes to best-fit career options that expand a student's view of what is possible. This activates student engagement and creates opportunities to job shadow, explore short-term employment options, or attend job fairs and lectures. All these efforts help broaden students' perspectives on their career options.

CTE certifications, such as Precision Exams, are a powerful mechanism for helping students connect what they learn with real-world in-demand jobs. They also contribute to graduation rates and postsecondary earnings.⁴ Students can explore best-fit career options and see what feels right or not. They also gain valuable experience to make them stand out in the job market, get into entry-level jobs, and/or earn credits for college coursework.

Enable connections between education and industry. Schools that embrace local industries and invite them into the student learning experience expand students' opportunities. Students can use this connection to learn and acquire new skills that both prepare them for life beyond secondary education but also make postsecondary pursuits more targeted and meaningful.

Work-based learning and career-connected learning bring industry into the classroom in tangible, targeted ways. Apprenticeships, internships, work-based learning, and career-connected learning help students see and find their place in industry. When this happens, students can validate possible career options even further.

About YouScience

YouScience is the only provider of a fully integrated platform that delivers highly accurate, performance-based aptitude assessment, personalized career guidance, and industry-recognized certifications, empowering individuals in their educational and career pathways. Leveraging proven research and industry input, YouScience helps individuals identify their natural talents, validate their skills and knowledge, and get matched with real-world educational and career pathways in high-demand occupations. YouScience is the preferred choice of individuals, parents, educators, and counselors to guide and support educational and career pathways, currently serving more than 7,000 educational institutions and nearly one million users.

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Report findings are based on the most-frequent aptitude and interest-based career cluster recommendations made for 239,843 U.S. high school students (127,289 female students and 112,554 male students) from anonymized YouScience Discovery assessment results for the 2021 calendar year.

- 1 The \$8.5 Trillion Talent Shortage, Korn Ferry, <https://www.kornferry.com/insights/this-week-in-leadership/talent-crunch-future-of-work>
- 2 2020 Business Leaders Outlook, J.P. Morgan Chase, Outlook, Jan. 6, 2020, <https://commercial.jpmorganchase.com/pages/commercial-banking/executive-connect/business-leaders-outlook-2019>
- 3 News Release, Bureau of Labor Statistics, U.S. Department of Labor, Jun. 3, 2022, <https://www.bls.gov/news.release/pdf/empst.pdf>
- 4 Bridging the Skills Gap: Career and Technical Education in High School, U.S. Department of Education, Sept. 2019, <https://www2.ed.gov/datastory/cte/index.html>

