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Career-Readiness & Real-World Skills

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Do Students Have Passion for Today’s In-Demand Jobs? A New Analysis Says No

By Lauraine Langreo

Students have the talent to succeed in today’s in-demand jobs but often lack an interest in going into those fields, according to a new report that seeks to assess whether their skills are aligned with high-growth careers.

The report from YouScience, a for-profit company that provides aptitude-based assessments, comes as many industries in the United States grapple with labor shortages. Jobs in STEM fields are expected to grow twice as fast as those in non-STEM fields, but millions of positions in science, technology, engineering, and math careers are expected to go unfilled in the near future, according to the U.S. Bureau of Labor Statistics.

“This report [is] really coming out at the height of a skills gap,” said YouScience founder and CEO Edson Barton in an interview. “If we as a society don’t take a hold of that and really do something to fix that, then the problem ... is just going to get worse and worse and worse.”

Others who study career development among students agree that there are often disconnects between workforce skills and students’ ambitions. But they also caution against overemphasizing the results of aptitude tests and career interest surveys as gauges of student potential.

YouScience found that student aptitude is higher than interest in what the company calls “key national career clusters,” or industries where significant job growth is forecast. The report found that students have:

- Nearly 5 times the aptitude for energy careers than they do interest in those fields;
- More than 3 times the aptitude for advanced manufacturing careers than they have interest;
- Over 2 times the aptitude for computer technology careers than they have interest; and
- Almost 2 times the aptitude for health science careers than they do interest.

The report is based on an analysis of anonymized data from YouScience’s aptitude assessment taken by 239,843 U.S. high school students in 2021. The assessment uses brain games to measure students’ skills in areas such as numerical reasoning, sequential thought process, and idea generation.

At the end of the test, students get a chart that shows them what their dominant and nondominant aptitudes are.

The problem isn’t that the U.S. doesn’t have talented people to fill these roles, but rather students are not aware that these careers exist, the report contends.

“If we can show them that [they have the talent], then they naturally, by themselves, start to select going into those fields at much higher rates,” Barton said. “They just didn’t know that they could or that they should go into those fields.”

These results show that the U.S. is doing “a really poor job” of helping students “find and explore what they’re truly good at, and then helping them get into the pathway that’s meaningful to them,” he said.

While aptitude tests and career interest surveys are helpful in giving students an idea of the career opportunities available, it’s important to remember that the results are just “one piece of a very complicated collection of puzzle pieces that young people need access to,” said Kyle Hartung, associate vice president at nonprofit Jobs for the Future.

These tests are “effective” when they’re used as one way to help young people “understand who they are in relation to the type of career and professional life they’d like to have,” Hartung said.

“It’s dangerous when we overemphasize” the results because students are still developing cognitively and emotionally through their teen years, he added.

Kimberly Green, executive director of Advance CTE, a nonprofit that represents state career-technical education directors, said the results show that there is still a lot of work to be done in making sure students are aware of the array of fields that are available to them.

“We need to continue to do the work of strengthening our career advising and CTE systems to give students that real-world ex-

Without understanding what opportunities exist for them, young people often revert to the things that they know or are familiar with.”

KYLE HARTUNG
Associate Vice President, Jobs for the Future

Published July 29, 2022
Experience with the world of work and broaden their horizons,” Green said. “By doing that, we can hopefully close some of those skill gaps and further diversify our talent pipeline.”

**Start career exploration early**

To help close the gap between aptitude and career interests, YouScience recommends that policymakers, educators, and parents help students find their “why” so that their education will become more applicable, close the career exposure gap, and use career-connected learning.

Once students have an idea of their aptitudes and interests, experts say there should be a way for them to explore those options and make sense of their experiences. Career exploration could look like a rotation through different occupations in a specific industry, or project-based learning with industry partners or postsecondary institutions.

For Barton, starting these experiences in middle school or early in high school is ideal, so that students can find the career options that are a good fit for them early on and have time to explore those careers and pathways to those careers.

Others said they see value in students being exposed to an array of options relatively early.

“Without understanding what opportunities exist for them, young people often revert to the things that they know or are familiar with,” Hartung said. “So many young people, if you ask them what kind of careers there are in healthcare, they’ll say doctor, nurse, or EMT without even thinking that hospitals have a massive IT infrastructure, a massive financial infrastructure. All of these components are true across industries, as well.”

Any career exploration programs should also give students flexibility, he added. There should also be “on-ramps and off-ramps,” Hartung said, so students know they’re not “trapped” in one pathway.

“It’s super important for them to start exploring really early, honestly, but not to put the pressure on them that they have to have their final answer,” said Cindy Schluckebier, integration specialist at the DeBruce Foundation, which offers a free career exploration tool that ranks students’ agilities.

And career exploration isn’t just about finding the right fit for students.

“These experiences are as much about ruling things out as they are [about] figuring out what is the perfect alignment of where your interests and your aptitudes lie,” Green said, “and how you want to contribute to society.”
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— Dr Rudy Crew
“Necessary Pivots”

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— Ken from Delano

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— Wasatch High School Principal

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Once a month, students at Coxsackie-Athens High School near Albany, N.Y., can have a pizza lunch with local employers, including a national pharmaceutical company and an HVAC organization.

A high school near Detroit that offers students a choice of career specialties recently added a Geographic Information Systems option, so that students can better compete for jobs managing drones and self-driving cars.

A middle school in western Massachusetts requires all 7th graders to take a 45-day engineering design course, and all 8th graders to take a similar length "Computing for Innovation" course.

Those efforts are a part of a big national push to include much stronger workforce connections in K-12 by revamping curriculum and school culture to help students explore potential careers—including some that their teachers, principals, and district leaders can’t even imagine yet.

More than half of the 586 school and district leaders who responded to a survey in December by the EdWeek Research Center—51 percent—said that updating curriculum to get students ready for the jobs of the future is a top priority. And another sizeable chunk—39 percent—said their districts were paying at least some attention to this issue. Only 10 percent of respondents said that workforce preparation was getting only a “little” focus. Only two of the educators surveyed said their districts weren’t considering the issue at all.

“We realize that we need to make some changes,” said Grant Javersak, the principal of James Wood Middle School in Winchester, Va., near the Shenandoah mountains. “Our [students], when they graduate, are going to look for jobs that haven’t even [been created] yet, and that’s scary that we are not going to be preparing students for gainful employment if we don’t make changes to curriculum.”

Preparing students for the future of work may sound like a no-brainer. But there are challenges, educators say, and here’s a look at five big ones:

**Challenge 1: College-Ready Obsessions**

Parents and the community often expect schools to get their students ready for college—not the world of work. They mistakenly see career preparation in K-12, as well as career and technical education, as a second-tier option for students who are not college ready. In fact, 42 percent of educators surveyed cited the perception that schools are supposed to get students ready for college—not work—as one of the biggest barriers to offering curricula to address the skills students will need for the jobs of the future.

Another 31 percent pointed to the attitude that career-related curricula is for students who don’t plan to pursue a postsecondary education, a belief many educators say is misguided.

“In a perfect world, getting ready for postsecondary and career would be the same thing,” said William “Kit” Moran, the principal of Dexter High School near Ann Arbor, Mich. Students, he said, would use high school to explore potential pathways and then figure out where and whether college fits in their plans.

But in the affluent community where he works, the expectation is, “you are going to prepare our kids to go to a competitive university. There’s still this old-fashioned [idea] that you’re on a college-prep track or you’re not, which isn’t helpful to anybody. But we’re stuck there.”

Parents would rather see their child take an Advanced Placement class than spend a few hours a week in a research lab, exploring the world of work, he said.

Moran sees that attitude as shortsighted. Giving students some time to experience different potential career paths in high school might help save them from taking out tens of thousands of dollars in loans "to figure out what you’re going to do.”

**Challenge 2: Few Models, Limited Resources**

Nearly a third of educators say there are very few good examples for how to revamp curricula to help prepare students for the future of work.

Catasauqua High School in Northampton, Pa., near Philadelphia, is working to help...
teachers connect classroom content directly to the skills students will need in the workforce. Adam Schnug, the principal, is excited about the change, but says the school is doing most of the curricular redesign on its own.

“We’re trying to build a plane as we’re flying it,” he said. “There’s really not a ton out there” to help.

For many schools with limited resources, doing it mostly on their own can be especially difficult. More than a fifth of educators surveyed, 22 percent, said their schools lack the resources necessary to help students prepare for future jobs in meaningful ways, according to the EdWeek Research Center survey.

In Strasburg, Colo., an hour outside of Denver, Principal Sara Turrell of Hemphill Middle School, said it is tough for her relatively remote district to offer salaries that will attract educators who can teach skills her students need for future jobs. She only recently was able to get one of her math teachers to teach computer science class.

“I have a limited number of staff,” she said. “It’s very difficult to get people to want to work in a smaller rural community.”

Challenge 3: Standardized-Testing Pressures

Nearly a third of educators surveyed said they face pressures to tie curricula tightly to standardized tests, which could make it much harder to make time to prepare students with the soft skills they’ll need in the workplace: communication, collaboration, critical thinking, and creativity.

“There is a lot of pressure on kids to do well on standardized testing and so the first thing that suffers are all of these employability skills,” said Paul Newton, the principal of Westfield Middle School in Massachusetts.

In fact, he told faculty and parents in an assembly earlier this year that while state testing is important, “it’s much more important that we are teaching kids to be thinkers, promoting the skills they need to be successful,” once they leave high school. He wasn’t sure how those sentiments would be received, he said, but “the entire audience stood up and applauded.”

Challenge 4: Rapid Pace Of Technological Change

It’s tough to constantly adjust curricula to meet the latest technological advances. But many educators and experts say schools need to do their best to keep up.

“Our [students], when they graduate, are going to look for jobs that haven’t even [been created] yet.”

GRANT JAVERSAK
Middle School Principal,
Winchester, VA

Forty percent of educators surveyed said their districts made “significant” changes to the curricula to address the technological skills students will need for the jobs of the future. And just over half, 54 percent, said their districts had made at least “some changes” in specific subject areas due to technological advances, although not across the board.

In a series of interviews with survey participants, the strategy most often cited to keep pace with technology was to create 1-to-1 computing programs, as well as asking students to hand in assignments electronically.

But some educators don’t think those are the best ways to prepare students for the technological future.

“I don’t think there’s any way you can do that,” said Rita Platt, the principal of two elementary schools in St. Croix Falls, Wis. “In the time I’ve been alive, there would have been no way to predict what was coming,” she said.

It’s more important, she said, to make sure students master skills they are sure to need no matter how technology evolves, including goal setting and critical thinking.

Despite those barriers, districts report making progress in trying to make connections among facility with technology, critical thinking skills, and career opportunities.

Just last school year, the 2,200-student Saddle Mountain Unified school district near Phoenix began offering students the chance to become certified medical assistants before graduating from high school. And the district recently added a Mandarin course, given the dominant role China is likely to play in the global economy and the technology industry for years to come.

“Our belief is if kids understand the culture and a little bit of the language it will open a lot of doors,” said Paul Tighe, the district’s superintendent.

Challenge 5: Creating Meaningful Internships

One thing educators wish they could offer more of: Internships.

Just 15 percent of those surveyed said that internships were required in their districts or that the majority of students do them. Another 44 percent say their schools offer internships for credit, but most students don’t take advantage of those opportunities. And more than a quarter say their schools don’t offer any sort of internship for credit.

Educators say their schools just don’t have the staffing capabilities to supervise meaningful internships. And educators in remote areas say there just aren’t a lot of possibilities nearby.

“We are a pretty small rural district. We don’t have a lot of opportunity or a lot of businesses close to the school for them to mentor or job shadow or get that experience,” said Gail Ellis, the technology director for the 700-student Spokane school district in southwest Missouri. Many of the companies her students might want to work with are a 90- to 30-minute drive away. “It kind of limits what they can do,” she said.

But that lack of internships is a missed opportunity for students. Work-based learning experiences can help students figure not just what careers they might like, but which ones aren’t for them, educators say.

Andrew McDaniel, the principal of Southwood Jr./Sr. High School in northern Indiana recalled one student who wanted to enter the health-care field. She spent some time shadowing nurses and other professionals and realized pretty quickly it wasn’t for her.

So the school connected her with another work-based learning experience, at a local real estate office. “She loved it,” McDaniel said.

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SIGN UP
Youth Apprenticeships Are Growing, But Disparities Remain. How Can Districts Help?

By Caitlynn Peetz

Despite an increase in the number of youth apprentices over the past decade, disparities remain in who’s accessing the programs.

A recent report from the nonprofit Jobs for the Future, which supports high-quality pathways from secondary education to work, found that between 2010 and 2020, the number of new youth apprentices (people ages 16-24) per year grew from 18,877 to 40,293, representing a 113 percent increase, compared to a 70 percent increase in the number of apprentices of all ages.

But the progress in the number of available apprenticeships—programs registered with the U.S. Department of Labor that give participants paid, on-the-job training that often lead directly to a job upon completion—is overshadowed by sustained disparities among participants and their outcomes including wages the Jobs of the Future report says.

Over the past decade, 63 percent of youth apprentices identified as white. Black and Hispanic youth were less likely than their white peers to participate in apprenticeship programs, and, when they did participate, they exited with generally lower hourly wages, the report said. Women accounted for only 7 percent of all youth apprentices.

Lisette Nieves, a professor of administration, leadership, and technology at New York University who has researched and written about youth apprenticeships, talked with Education Week about these disparities, and how districts can support and improve youth apprenticeship pipelines.

What are youth apprenticeships, and how do they differ from internships?

Youth apprenticeships combine classroom instruction with paid work experience through a specialized program. Through apprenticeship programs, students can obtain professional certification in industries like health care, manufacturing, and information technology. Youth internships are often unpaid and don’t lead to certifications, while apprenticeships are more successful in transitioning students directly from school to work, Nieves said.

Apprenticeships can span multiple years and have a structured training plan with clear objectives, while internships are more short-term and don’t need to have measurable outcomes.

What are schools’ roles in supporting apprenticeship programs?

Because youth apprenticeships are usually done while students continue their class work, schools have to work closely with employers to develop programs that are useful and workable for everyone, Nieves said.

To create a useful program, it’s important that district leaders and apprenticeship program leaders work together to outline their expectations about objectives and how to reach them. Scheduling is easier if everyone is “breaking down silos” that can exist between education and career institutions, Nieves said.

Sometimes, students in apprenticeship programs need modified schedules to accommodate their working hours, are dual-enrolled with a college that offers a more specific course, or can be enrolled in a district’s career academy.

What can districts do to offset the disparities that exist and expand access, particularly to STEM opportunities?

Encouraging students, particularly girls and underrepresented groups, to test out STEM and career programs early on can spark an interest they were unaware of before, Nieves said.

Districts should be intentional about inviting and encouraging a diverse group of students from different backgrounds to participate so “we’re not structurally setting up a system, or reproducing an existing system that only recognizes certain apprenticeships for very privileged students,” Nieves said.

She added that districts should make sure somebody on staff knows what opportunities are available, serves as a liaison between employers, and shares information on the opportunities with all students and families.

“There needs to be intentionality about who’s participating and why they’re participating because we have a history of steering students to different paths that has not been equitable,” she said.

With everything else going on, why should districts care about youth apprenticeships?

Apprenticeship programs can help future workers get training and experience that helps them earn higher wages, Nieves said.

According to the Jobs for the Future report, the average exit wage for youth apprentices of all genders and races was $31, compared to about $12 for all other youth. The differences were most pronounced for Black and Hispanic youth. For Black youth who participated in an apprenticeship program, the average hourly wage was $23, compared to $12.06 for those
who did not. For Hispanic youth, those who completed apprenticeship programs earned about $32 per hour, compared to $12.29 for those who didn’t participate.

But for some students, the benefits are more immediate, Nieves said.

For some, hands-on and more-engaging opportunities are what keep them engaged with school at all. So, apprenticeship programs can help keep their interest and give them something to look forward to, while also setting them up for success in their future careers.

“My fear is that, in the conversations about learning loss, muting what I think was progress in recent years in opening up a conversation around project-based learning and apprenticeships,” Nieves said. “So, how do we think about a formal way of doing hands-on training that can be considered an incentive and motivation to continue to be persistent in school? I think this is one way.”

**How can districts work to dispel lingering stigma that career-technical education pathways are only for students who struggle in school?**

For years, the measure of students’ success was whether they went to college after high school graduation. There was a national push for “college for all” that has shifted in recent years to preparing students for college or careers, recognizing that postsecondary education directly after high school isn’t the best fit for everyone.

In the past, there was a stigma that career-based programs were best for students who did not perform well academically.

As the mindset shifts, schools should double down on messaging that explains to both students and their families that career programs are available and their potential benefits.

“What we need to do is really accept that apprenticeships make a closer link between young people and how they’re thinking about future choices by providing students with hands-on opportunities that can incentivize and spark and inspire choices,” Nieves said.
Aptitude Tests: Are They Effective In Opening Students’ Minds to More Career Paths?

By Alyson Klein

Boys grow up to be engineers and computer scientists. Girls become nurses and teachers. That seems like an antiquated notion in a world where many students are encouraged to explore a wide range of careers. But the stereotypes persist.

Aptitude tests—which seek to measure students’ potential in a particular field—may be one way to help students from pigeonholing themselves into career paths early on, a study recently published in Cambridge University Press found.

Aptitude tests that evaluate students’ strengths, as well as examining their passions and personalities, are gaining favor in school career counseling programs.

To understand how these tools may nudge a particular student toward a field they may not have considered—or even heard of—researchers at the University of Missouri conducted an independent review. The study compared 7,222 high school students’ natural aptitudes with their self-reported interests in four areas: manufacturing, computer technology, construction, and health care.

For healthcare, the study looked at both a student’s capacity and interest in direct patient care jobs (such as being a doctor or nurse) and more technical jobs in the healthcare industry (think X-ray technician.) The study included 3,619 females and 3,603 males.

The researchers used both aptitude and interest tests created by YouScience, one of a handful of interest and/or aptitude tests school districts are using to help guide students’ career exploration. (At the researchers’ request, YouScience funded a stipend for a research assistant to help with the project.)

Just asking kids what their interests are and matching that with a particular set of careers can be helpful, the researchers say. But giving students an aptitude test that measures their potential in an array of fields might give them a nudge to consider jobs that they could excel at, but aren’t as familiar with, or didn’t think they could be good at.

“If you just look at people’s interest scores, they fall into areas which I call what they are exposed to, what they can see based on their life experiences. Many young people are exposed to very little,” said Richard Feller, a professor emeritus at Colorado State University who worked with the Missouri researchers on the study. Students’ different life experiences create an “exposure” gap, he said, that aptitude tests can help bridge.

This is especially true when it comes to women and STEM fields, the study found. Just 12 percent of women are interested in careers related to information technology. But aptitude tests show that just as many women as men have the capability to excel in that field.

The study found that more than four times as many girls were found to have potential in manufacturing, more than seven times more in construction and technical health care fields, and two times more in computer technology than an interest inventory alone would show. What’s more, males were more than 1.6 times more likely to show promise in patient care positions.

“It opens up all kinds of opportunities for students who have been less fortunate, who have been stereotyped, come from areas of little enrichment, or [have] maybe faced gender issues,” Feller said. “We’ve got great potential that we’re [not] tapping into.”
The most powerful learning solution for future readiness: an evergreen strategy to learning.

Preparing Students for the Future

Schools around the world share a simple goal: to prepare their students for the future. For the first Puritan schools in the 17th century, this meant a focus on Latin, Greek, and religious studies to prepare students for entry into Harvard College. It was not until the late 1800s when educational psychologists like Jean Piaget and curriculum thinkers like Samuel King and Horace Mann initiated the push towards student-centered approaches and active learning models; still, standardization of curricula and student evaluation through tests like the SAT became more and more prevalent into and throughout the 1900s. Physical education laws enacted in 1915 were meant to ensure the next generation’s men were prepared for battle, while the 1957 launch of SPUTNIK prompted lawmakers and educators alike to place greater emphasis on math and sciences. As the twentieth century came to a close, schools increasingly emphasized standardized testing and college-preparatory curricula. Whatever the era, schools have responded to the economic and political pressures of the nation in designing and redesigning their curricula.

Despite persistent messaging on the importance of a college degree, many American students struggle to achieve even a high school diploma, with the United States boasting one of the highest high school dropout rates in the world.

Students who do make it to college frequently find themselves academically unprepared, with almost half requiring remedial courses. Almost half of those who enroll in college leave before achieving a degree (US DOE, n.d.). The overarching vision of schools to prepare students for the future remains, but the question of how to achieve this is murkier than ever. With an increasingly diverse population in a rapidly changing world, schools must be more adaptable than ever to meet the needs of their student populations and adequately prepare them to venture into the workforce and the world. The jobs of today will no longer exist in ten years, and many of the jobs of the near future haven’t even been created yet. Curricula that are reactive to workforce trends will leave students scrambling to catch up upon graduation. Rather than planning for the future of the generations before them, students must be encouraged to imagine, believe in, and create the future they envision.
The Find Your Grind Logic Model

This Logic Model is rooted in several key beliefs about youth, human development, and career preparation. We know the majority of young people feel unprepared for their futures and lack the critical skills they need to transition to the workforce (MMR Research Associates, 2018). The role schools play in preparing students for an uncertain future cannot be understated. Today’s young people need opportunities to develop transferable skills that will aid in both their career growth and personal development. Opportunities to discover and describe their own skills, talents, and values are empowering to such students and central to finding their place in the world. The process of discovering, developing, and reflecting on these assets is ongoing, complex, and rooted in developmental and reflective progressive learning strategies that emphasize long-term rather than immediate results. External factors such as school culture, resources, curriculum, individual characteristics, and elements of the larger context also influence this progression in both individuals and groups. Social Cognitive Career Theory provides a basis for promoting this type of self-exploration and career readiness by focusing on gains in self-efficacy, outcome expectations, and actionable goals. Five key areas are emphasized in this model to ensure whole student development and preparation for the future: self-discovery, occupational awareness, self-efficacy, social capital, and aspirations.

Classes utilizing the Find Your Grind Platform for short-term outcomes focus on growing their knowledge and awareness of who they are and what their possibilities for the future might be. Students are encouraged to develop a mindset for success, learn about their own strengths, be inspired by mentors, and imagine their ideal futures. As they invest and reinvest in their own strengths and talents, students further develop their self-belief and begin taking action in pursuit of their goals (medium-term). They may begin testing out the fit of their desired career by engaging in volunteer work, internships, or independent practice that aligns with the steps in their action plans. During this time, students continue to be inspired by their own progress and the vicarious experiences of mentors.

“As they invest and reinvest in their own strengths and talents, students further develop their self-belief and begin taking action in pursuit of their goals.”
Throughout history, schools have been tasked with preparing their students for the future. With career outlooks becoming less predictable than ever, schools must implement programming that proactively addresses career exploration and personal development while emphasizing adaptability and transferable skills. Social Cognitive Career Theory (SCCT) considers the complex relationships among self-efficacy (beliefs about ability), outcome expectations (beliefs about consequences of an action), and goal-setting (decision about taking an action), and considers external school and sociocultural factors such as gender, race, ethnicity, socioeconomic status, sexuality, and (dis)ability to be integral to this process. SCCT serves as the foundation for the Find Your Grind Logic Model. In the long-term, students develop greater self-efficacy, optimism for their futures, and adaptable skills that can serve them in a variety of future pathways. Throughout the myriad changes of adolescence and emerging adulthood, students learn to maintain an open mind and core sense of self as they prove through their own expert performance outcomes that they are ready for the future they have imagined.

Conclusion

Throughout history, schools have been tasked with preparing their students for the future. With career outlooks becoming less predictable than ever, schools must implement programming that proactively addresses career exploration and personal development while emphasizing adaptability and transferable skills. Social Cognitive Career Theory (SCCT) considers the complex relationships among self-efficacy (beliefs about ability), outcome expectations (beliefs about consequences of an action), and goal-setting (decision about taking an action), and considers external school and sociocultural factors such as gender, race, ethnicity, socioeconomic status, sexuality, and (dis)ability to be integral to this process. SCCT serves as the foundation for the Find Your Grind Logic Model.

“Our purpose is to develop more future ready learners. We measure learner future readiness across four dimensions of awareness (self, career, social, and action), before, during, and at the end of their learning experience.”

Visit FindYourGrind.com to read the Theory of Change in its entirety.
While jobs returned at high rates in 2021, most of that growth was experienced in metropolitan areas. Unfortunately, rural America in April 2021 had essentially the same number of jobs as in 2010, and that’s bad news for the nearly 1 in 5 students in the United States who attend a rural school and will thus be much more likely to miss out on high-quality, work-based learning opportunities.

Aside from fewer industry partners to team up with, rural districts face a slew of challenges in providing work-based experiences for students. The smaller industries or industrial communities typically found in rural areas mean that employer partners require disparate skill sets, making it difficult to standardize on a curriculum. The distances between school and work and home can create transportation headaches for individuals and especially at scale.

These opportunities mean access to better jobs for students, which in turn means economic security and prosperity for students and their families. For communities, these opportunities mean that policy and business leaders are able to plan for and recover from economic transitions by supporting workforce-development activities that prepare eligible participants for good jobs in high-demand occupations aligned with state, regional, or community economic-development strategy.

With all that and more on the line, of course rural schools want to partner with local business leaders to prepare students to productively join the workforce in their local communities, despite the challenges. Here’s how they can do it.

Clearly Articulate Your Vision

It is incredibly important that school leadership have clear goals about the purpose of work-based learning opportunities to improve students’ short- and long-term success. It was my hope right from the very beginning that we could create an opportunity to change the lives and educational trajectories of students. We knew that we were creating an educational experience that had to be meaningful for students who were not always engaged in typical classroom activities. But we never believed that these students weren’t capable of achieving great things. Leaders should be intentional to create programs that not only ensure students are employable, but that they will be good humans who will be successful in a global economy.

Get the Lay of the Land

To truly create meaningful pathways to careers, school leaders need to understand what local industries are growing and which industries provide salaries and benefits that will ensure students can build stability and security in their careers. Additionally, it is helpful to review Bureau of Labor data to understand long-term growth potential in these careers. From there, it is helpful to meet with each of those key industry leaders in the community to better understand what skills are required for employment and start to map which skills are transferable among different industries. In rural communities, “industry” is often quite varied. School leaders really need to become fluent and flexible in trying to stitch together core skill sets into a high-quality curriculum that will allow students to have the greatest opportunity to find meaningful employment across as many industries, and organizations within those industries, as possible.

Bring Partners Together

Before you get started, you’ll need to bring all your partners from industry, higher ed., and economic development together in one room. Everyone needs to commit to the vision as well as the time required.

A great place to look for partners is to find organizations already associated with career-tech programs in schools. Many states require that industry partners serve on advisory boards, so digging into those can turn up a lot of leads on potential partners for your program.

Another good starting place is to expand the relationships or programs you’ve already built. Perhaps your school has an engineering program, for example, where students work on engines for large machinery. School leaders could expand that program to deliver a mechanical engineering certificate to students who complete the program.

If there are no relationships with business leaders already established, refer back to your local industry map. Identify unifying skills across two or three primary industries and then reach
out to local representatives of those industries. Tell them what you’re trying to do and directly ask them for their input and expertise in training your students for future employment.

**Co-Create the Curriculum**

The curriculum is not meant to be orientation or training for a job. The curriculum should reflect what employers need, the skills students will need to be successful whether they join the workforce or go to college, and what credentials are necessary for both groups. From there, high-quality, highly engaging learning experiences can be built.

Among the partners, district leaders are the closest to the students, so their role in co-creation is to ensure that students will be engaged and that they can master skills that align with high school graduation requirements. Higher education partners should advise how those skills can stack and help students progress toward degree or certificate requirements. Industry partners can provide invaluable insights into how those skills are used in real-world situations, so that the program can be infused with meaningful and engaging project-based-learning opportunities.

**Make Sure Staff Are Dedicated and Enthusiastic**

Set expectations with your industry partners about the style of teaching needed to create meaningful learning experiences for students. Be ready to guide students and their mentors through project-based-learning experiences and make sure you’re flexible enough to turn your business partners’ challenges into learning opportunities.

For example, on one of our employer-driven projects, a manufacturer was operating in a foreign country without ready access to water. In addition to learning about the mechanics of the industry, our students also gained experience in solving complex environmental challenges.

Rural districts certainly face additional challenges in providing high-quality, work-based learning opportunities, but they tend to be the exact inverse of the challenges their local businesses face in finding high-quality employees. In the end, the solutions are to be found in partnering with them and building community together.

Charles V. Khoury serves as the district superintendent of Ulster BOCES in New York state.
The High School Network Providing Students With On-the-Job Training

By Rick Hess

The Cristo Rey Network has been globally recognized for its work on high school education, receiving a World Innovation Summit for Education (WISE) Award and the CLASSY Award for Educational Advancement. It was one of eight organizations selected to present at the United States Department of Education’s Rethink K-12 Education Summit. This network of Roman Catholic high schools, spanning 24 states, has drawn particular notice for its work-study program. Given pressing concerns about workforce readiness and educational access, I thought it timely to ask network President Elizabeth Goettl about this innovative work-study approach.

Rick: How did Cristo Rey get started?

Elizabeth: Twenty-five years ago, one school, Cristo Rey Jesuit High School, was founded by the Jesuits in the Pilsen neighborhood of Chicago. About five years into operation, the Bill & Melinda Gates Foundation and the Cassin Educational Initiative Foundation visited the school, witnessed its promise for every student to access an excellent college-preparatory education, and supported its replication.

Rick: Who goes to a Cristo Rey school?

Elizabeth: The Cristo Rey Network is a national network of 38 Catholic high schools in 24 states, focused on college preparation and career readiness. We serve over 12,000 students annually, exclusively enrolled from families in the lowest-income quartile. Each school is locally owned and operated but supported by our national office. Besides providing our students with a college-preparatory education, we also equip them for the workforce by providing four years of professional work experience through our Corporate Work Study Program.

Rick: Can you tell us a bit about the Cristo Rey Network?

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Rick: What does work-study look like in practice?

Elizabeth: The Corporate Work Study Program enables students to gain four years of professional work experience as part of their education. Every school has a separately incorporated work-study program, with a full team to develop, place, and manage the program and the business relationships. Each student works, one day each week, for all four years of high school, in an entry-level position in a professional setting—at hospitals, financial institutions, law and engineering firms, and so on. Through the work-study program, students develop the competence, confidence, and aspiration to pursue their dream of college completion and professional opportunity. Students are able to form a professional network of mentors from their workplace supervisors and colleagues, one that remains with our students beyond high school.

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The school’s work-study program team pairs each student worker with a job that suits their current capabilities and interests. Depending on the business partner’s needs and the student’s job performance and areas of interest, our young professionals may work with the same business partner for all four years, or they may work with several partners over their high school experience.

**Rick:** How has the work-study program evolved?

**Elizabeth:** The work-study program was initially founded as a revenue generator to replace what would otherwise be expensive private school tuition so that low-income students could earn a portion of the cost of their private, Catholic education through their employment in the Corporate Work Study Program. The program has evolved into an integrated and essential element of our unique educational model. This integration of classroom learning and work-based learning provides a relevant blend of college-preparatory, technical, and human skills.

**Rick:** How has the pandemic impacted the program?

**Elizabeth:** Pre-COVID, Cristo Rey students collectively earned $80 million toward the cost of their own education, working with 3,500 corporate partners through the Corporate Work Study Program. Due to pandemic conditions, many students are not deployed in a job placement onsite or remotely, resulting in a decline of Corporate Work Study Program earnings. Like many businesses, our Corporate Work Study Program has pivoted to expand technical-skills training for our student workers and to incorporate a remote work program.

**Rick:** Does any other school or network employ a similar model?

**Elizabeth:** Cristo Rey is the only network of high schools that does this at scale. Organizations like KIPP, YES Prep Public Schools, and Mastery Charter Schools also seek to provide high-quality educational services with a to-and-through college pathway for underrepresented, minority youth. The key differentiator between Cristo Rey and these organizations is our schools’ distinctive integration of a rigorous college-preparatory academic curriculum with our Corporate Work Study Program, offering not only an educational environment that equips students with skills to excel in their undergraduate and postgraduate lives but also a sustainable revenue model that does not rely solely on tuition, traditional fundraising, or government funding.

**Rick:** Do the profits from the work-study program completely cover tuition?

**Elizabeth:** Since our mission is to provide excellent career-focused, college-preparatory education to young people who otherwise could not likely access such an education, the work-study program provides the opportunity for students to earn their education through working, while at the same time developing soft and hard skills and social capital. Every family does contribute to their child’s education, on average $100 a month.

**Rick:** What can you tell us about your students’ outcomes?

**Elizabeth:** While our work is far from complete, we’re pleased to share that our key accomplishment is the postsecondary success of our students. Our students are enrolling in college at rates higher than even the highest-income quartile in the U.S. Thirty-four percent of our students are completing a four-year college—a rate more than two times higher than their demographic peer—and current college-persistence data for our class of 2017 projects a bachelor’s degree completion at a rate three times higher than their demographic peers. While our aspirational goal is that 70 percent of Cristo Rey graduates complete four-year degrees, we are making strong progress toward students earning college degrees at national rates comparable to students from families in the highest-income quartile.

**Rick:** What’s the one thing that people get wrong when they think about work-study in high school?

**Elizabeth:** People assume our students are “just interns.” Our students perform essential functions at their workplaces—providing real value for their employers. They do everything from highly detailed work like reconciling financial documents for errors to creative work supporting presentation design and much more. Students certainly learn and grow as a result of their experiences, and employers benefit in a tangible way, making a substantial impact on students. It’s a win-win for both our partners and our students.

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* Rick Hess is a resident scholar at the American Enterprise Institute and the director of the think tank’s Education Policy Studies.
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