What If We Measured Learning Through Skills Gained, Not Time Spent in the Classroom?

Influential institutions throw their weight behind bringing competency-based education to high school and college.

By Rebecca Koenig Apr 18, 2023

For more than 100 years, high schools and colleges have relied on the same stalwart tool to measure teaching and learning: the clock. That's because earning credit toward a diploma or degree typically requires students to spend a minimum number of hours receiving instruction in the classroom.

Now, the institution that developed the time-based standard more than a century ago that is used throughout education is calling for the creation of a different way to quantify academic progress. This week, the Carnegie Foundation for the Advancement of Teaching — the folks who brought us the Carnegie Unit, the basic segment of time measurement in many degree programs, in 1906 — announced its intentions to change that currency of learning from "seat time" to "skills."

To do that, the organization plans to work with the Educational Testing Service (ETS) — the folks behind standardized tests including the GRE and the Praxis — to create new tools designed to assess what students are able to do, not how much time they spent studying to do it.

The goal is to help more young people "lead purposeful lives" by shifting toward competency-based education, says Timothy Knowles, president of the Carnegie Foundation.

In an interview with EdSurge, Knowles said that emphasizing educational outcomes more than processes would allow schools and colleges to embrace nuances about learning that the steady tick, tick, tick of a clock cannot. Like the reality that it takes different students different amounts of time to acquire skills. And the fact that students learn valuable lessons in the many hours they spend outside of the classroom, too, before school, after school, on the weekends and in the summer.

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"If you actually believe that premise — that learning is happening everywhere and not just in six-hour time increments for nine months of the year — then you need to build tools that build trust that the learning that is happening outside of school time is real," Knowles says. "It wouldn't be enough to just say, 'Oh look, these clever scholars have told us we need to learn in different venues and places, so a third of your time is going to be spent learning independently, doing internships and apprenticeships.' That would be a very risky proposition."

The announcement from the Carnegie Foundation and ETS is part of a broader movement in education arguing that a focus on skills, rather than proxies such as credentials or time spent in a classroom, can create more opportunity for more people to succeed in school, work and life. It also comes at a moment when digital technology has prompted many people to question longstanding practices about when, where and how learning and work should get done.

In higher education, the proposition of valuing skills but not necessarily degrees has gained support among influential leaders from the White Houseto the C-suite of major employers. At the K-12 level, there's been a push to create more flexibility in the school day for "immersive experiences," like internships and hands-on projects, from players such as XQ Institute, the nonprofit supported by Emerson Collective that since 2015 has poured millions of dollars into efforts across the country to "rethink high school." XQ Institute, which is partnering with the Carnegie Foundation and whose CEO sits on the foundation's board, recently notched a victory in Rhode Island by eliminating school seat time requirements.

But neither the endorsement of powerful entities nor the enactment of new education policies assures that the push to create a skills-based education system will run like, er, clockwork. There are challenges as basic as defining what, exactly, counts as a "skill." Skeptics aren't convinced that the movement's methods will match its stated goals. And even proponents of competency-based education say it can be daunting to do the work of unwinding academic systems from the mechanisms of time.

Embracing Flexibility?

Picture a high school student who balances his studies with a variety of other responsibilities and activities. Maybe he walks his younger siblings to their elementary

school each morning, demonstrating a knack for caregiving. Maybe he works at a part-time job when the school day ends, showing his diligence and drive. And on Saturdays, maybe he participates in a spoken word club for teenagers, honing his creativity.

These strengths aren't recorded in any gradebook or assessed by any standardized test, and so they remain largely invisible in today's educational system, Knowles says. The leader of the Carnegie Foundation wants to change that: to help young people "capture knowledge and skills that are developed outside of the classroom and outside of the schoolhouse," as he puts it.

That's one reason why the foundation has been pondering whether and how to revise its time-based learning standard for a few years now. Carnegie Units, seat time and credit hours are taken quite literally throughout education, in ways that can seem almost comical. For example, the University of Delaware recently announced plans to extend classes by five minutes to comply with federal requirements built around credit hours.

In a statement provided to EdSurge, XQ Institute called for education to move beyond this type of "rigid system." In a world without seat time requirements in high school, the nonprofit says, a teen's school day would take place partly in a classroom learning with teachers and peers, but it could also involve doing "independent work driven by their interests and passions, internships, community projects, or simply the time many young people need to meet family and other out-of-school demands."

Yet there is a limit to the level of flexibility that is possible and desirable when it comes to a skills-focused approach to learning, says Michael Bettersworth, a vice chancellor at Texas State Technical College and CEO at SkillsEngine, a tool that aims to reshape credential programs to ensure that they teach students skills that employers are seeking.

Texas State Technical College, which prioritizes training programs that set students up for well-paying careers, is in the process of shifting its programsto a competency-based model, meaning one based on students proving they have a set of skills, regardless of how much time they've spent getting to that level of proficiency. Leaders at the institution have found that its students do best learning together in cohorts and through lab-based courses, rather than "off on their own, learning independently, them and a screen," Bettersworth explains.

To that point, Knowles says that pushing to make the school day more flexible is not necessarily synonymous with reducing the amount of time young people spend together, or with swapping in-person learning experiences out for digital ones.

"I haven't met a parent that wants their child to be socialized by a laptop, or an AI symbiote," he says. "There is value in peer groups, in learning to collaborate at school."

Nor is the Carnegie Foundation advocating for policy changes that undermine teaching students core academic skills, Knowles adds.

“We are still very much of the view that young people need disciplinary knowledge,” he says. “They need to learn algebra and need to be excellent at reading comprehension.”

Putting Skills-Based Education Into Practice

Naming increased school-day flexibility and better skills measurement as priorities may be stepping stones along the path toward competency-based education. But actually implementing this style of instruction and assessment on a wide scale requires significant time and effort.

Colleges that are trying it have lessons to share. Leaders at Texas State Technical College, which has hired dozens of instructional designers to support its shift toward competency-based education, have discovered that most of the existing higher ed infrastructure works against them, Bettersworth says. Federal financial aid policies and learning management systems, for instance, are designed around semesters — which is to say, academic calendars, or, in other words, time.

The work of dismantling and rebuilding all of those structures feels almost Sisyphean, Bettersworth says.

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“All these little barriers add up,” he explains. “It’s not one big boulder; it’s a bunch of little boulders you’re pushing up the hill.”

On top of developing infrastructure to support competency-based education, there’s still another barrier: figuring out how to measure whether students are acquiring skills. Assessments designed to do this can be highly applied, like a driving test that puts someone out on the road to see how well they maneuver a car. They can also be more hypothetical, like the situational judgment test that medical schools use to assess behavioral skills that doctors need, like teamwork, resilience and cultural competency.

At the high school level, XQ Institute says it is developing the XQ Student Performance Framework, which identifies desired outcomes for students when it comes to academic content, cognitive skills and social-emotional competencies. The organization says it is producing and testing project-based learning experiences that will give students credits as well as certified badges that break courses into smaller components and recognize the skills they’ve gained.

To do the research required to develop new skills-assessment tools, leaders at the Carnegie Foundation and ETS say that they’re not overly focused on the time the work may take. According to Amit Sevak, CEO of ETS, they’re thinking about what they can accomplish together in a decade, not a year.

Skepticism About Skills and Sorting

Concerns about shifting to a skills-based approach in education aren't limited to practicalities. Some educators and education experts have philosophical objections to the idea, or wonder whether the concept is motivated more by the possibility of profits than the best interests of students.

In an essay published earlier this month in The Chronicle of Higher Education, history professor François Furstenberg argues that companies promising to "deliver a 'competency-based, life-skills-based achievement record'" do so primarily in order to sell their technology. The "problem" that these companies are trying to solve, he writes, "isn't that our system is failing to develop the right skills; it's that the system doesn't provide the right information to employers." Perhaps the movement to adopt a skills-based approach is an attempt to force education systems to "label and sort their graduates into preferred, maximally efficient categories for placement," he argues, shifting the cost and effort of finding qualified workers away from the companies that stand to benefit and onto schools and colleges.

Yet if the primary aim of skills-based education is indeed to help companies with hiring, it's not necessarily working on a wide scale so far. The drive to develop badges and certifications that more precisely align with specific skills has exploded into more than a million kinds of credentials in the U.S., yet research shows that many company hiring systems are not equipped to process this type (and amount) of information, nor are hiring managers convinced that they have value.

There is a clear business case for how skills-based training could help companies, Sevak says. But he adds that his organization and the Carnegie Foundation are not interested only in measuring technical skills that employers might prize. He says they also want to emphasize behavioral and affective skills, like emotional intelligence, empathy and collaboration.

Sevak is especially interested in civic reasoning, which he describes as "the ability to actually, in a civil way, have a discussion around a particular topic with individuals that have very different views on that topic," and which he adds is essential to creating stable communities and thriving citizens.

"If we had that," he asks, "wouldn't we be living in a very different America?"

Helping institutions more easily sort students does seem to be at least part of the equation, though. Knowles says that one problem with existing competency-based K-12 models that try to measure student skills through projects or portfolios of schoolwork is that they don't offer much "legibility" to college admissions offices that are trying to make fast decisions about which students to admit.

"The portfolio that emerges can be so robust that no admissions officer could make head or tail of it because the admissions officer has seven minutes," Knowles says. "In that sorting, we need better data on the table about who young people are. We think that will give more young people more opportunities."

College admissions officers should take a more holistic view of students' skills, agrees Harry Feder, executive director of the National Center for Fair & Open Testing, a nonprofit that advocates against reliance on standardized tests in education. But in order to do that, he says, "they need to make time" to more carefully evaluate how students demonstrate their learning, rather than looking for a new "fill-in-the-bubble" assessment that claims to be competency-based.

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"The system wants to do things on the cheap instead of building capacity," Feder says. "How do you scale all this? There's no easy answer. To try to replace one large standardized test with another that measures something different, I don't think is the answer."

He points out that the announcement from the Carnegie Foundation and ETS comes at a time when more and more colleges are moving away from requiring students to take admissions exams.

"I think the testing industry is very nervous," he says. With more people "thinking that traditional standardized tests are outmoded, the testing industry is finding it difficult, if not impossible, to develop instruments to sell across the board."

As did leaders at the Carnegie Foundation and ETS, Feder mentions that plenty of students are not doing well academically after the pandemic. But, Feder points out, investing resources in *measuring* skills is not the same thing as investing resources in *teaching* skills.

"What we need to do is invest in the capacity of schools on the ground to educate kids, and not keep lobbing products at them," he says. "We don't need new scales for the pig — we need food for the pig."

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