

What Will High Schoolers Be Learning in 2033? See the Predictions

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Technological advances—especially artificial intelligence like ChatGPT—are poised to bring big changes to K-12 education and the jobs that people do.

To explore how these advances will affect schools, we asked 5 experts who follow the impact of technology on education and the workforce to predict what classes they believe high school students will be required to take a decade from now.

Some of the skills these experts believe students will need are relatively new or not widely taught in schools, while others are already mainstays in schools.

Peter Stone, computer science professor at the University of Texas and chair of the One Hundred Year Study on Artificial Intelligence:

In terms of new courses, I think it would be very valuable for all K-12 students to have a course in artificial intelligence, both from a technical perspective—meaning what are the tools that are out there, how do they work, what can they do and what they can't do—and also from the philosophical and ethical perspective. And maybe one course can mix the two of those. It would be a fantastic development if we could make sure that all students coming up through our education system were AI literate when they enter the workforce.

What should students do to prepare themselves for jobs in robotics or to be graduate students in robotics? I say you have to do well in your math and science courses, but you also need to be very focused on learning how to write as well. Science is about communication. Scientific discoveries have no impact if they're not communicated effectively. I'm always encouraging my students to focus as much on language and writing as they do on the STEM side of things.

Nancye Blair Black, AI exploration project lead for the International Society for Technology in Education:

Students do need to understand in K-12 how more advanced technologies work. A basic understanding not just about how AI works, how deep learning and models like ChatGPT work, but also things like robotics. And part of this really is understanding how it is changing culture. So, for each of these new technologies, understanding the technical side but also understanding the societal impact. For example, how does AI influence perception? How does it affect access to information? How does it perpetuate misinformation and

disinformation? What does it mean to have data privacy in the age where you drive down the street and every other house has an AI-powered camera recording everything going on and capturing your face?

An emphasis on psychology and the humanities is the partner piece to this. It's one thing to have AI as a co-creating partner in art, but if all art is made by AI and is only based on what it has been trained on in the past, we're not hearing the stories of the modern child, of the modern parent, of the modern teacher. We need to keep the humanities at the forefront.

Here's the one aspect that crosses over both: Most K-12 students never have a psychology class. But psychology is at the heart of how many AI tools are being designed. They're using that psychology to keep you watching on YouTube. People need to understand human psychology and how their own mind works and understand how these tools are being used to optimize for good but also to exploit users for profit.

Amber Oliver, managing director for the Robin Hood Learning + Technology Fund, a joint nonprofit venture focused on improving technology use in high-poverty schools:

I would probably say it would be some kind of foundational programming language. The same way that you will always need to know how to read and write, I think we're all going to need to have a foundational understanding of how to program. So that as we ask these generative AI tools to do it, we can go in with the same discerning lens that we have as proficient readers and writers. So, like media literacy, we need computing literacy too in the same way.

Michael Horn, co-founder of the Clayton Christensen Institute, a research group focused on disruptive innovation:

Given the fluid nature of the future of work and the need for students to engage increasingly in lifelong learning, most important will be that students move beyond taking discreet courses and are instead able to get credit as they demonstrate mastery of different competencies, regardless of when and where the learning takes place. Most important will be that students master critical habits of success—self-regulation, executive function skills, growth mindset, agency, self-direction, curiosity, metacognition—such that they are able to continually learn new knowledge and skills as the world continues to change rapidly. Mastering computational thinking will also be a requisite competency that students will need to learn and demonstrate in the different domains and bodies of knowledge—from mathematics to history and civics—that they study.

Kyle Hartung, associate vice president, Jobs for the Future:

In an economy being transformed by technology that we cannot even predict in two, much less 10, years, it is clear even now that our education systems must move much faster to connect young people to the labor market so that what they learn does not become obsolete by the time they're "ready" to enter the workforce and that they become skilled and adaptable lifelong learners while working and earning. We would advocate for a series of course experiences that blur the lines between secondary, postsecondary education and training, and careers, that are awarded credit based on the development and demonstration of competencies, the data for which are owned by learners themselves through, for example, digital learning and employment records (LERs).

The early part of the course series would be structured to provide iterative opportunities for learners to identify and explore academic and technical subjects of interest to them, learn about career opportunities that are related to those subjects, and via direct participation in the workplace—learn about the world of work through increasingly complex and rigorous experiences that is at times directed and supported by others (e.g., teachers, mentors, supervisors) while at others entirely self-directed.

The latter part of the course series would present learners with the opportunity to engage in work-based courses that use the workplace as a "learning lab" where students apply their classroom learning in courses that are co-taught by employers and educators. Students in work-based courses earn high school and college credit simultaneously, gain workplace skills, practice adapting their learning to meet new challenges—including a rapidly evolving labor market—and culminate in certificates and credentials that signal readiness to obtain good jobs with career ladders.