The evolution of technology in K–12 classrooms: 1659 to today

Educational technology isn't new, but meaningfully integrating tech in a modern learning environment can be a significant challenge for educators today.

In the 21st century, it can feel like advanced technology is changing the K–12 classroom in ways we've never seen before. But the truth is, technology and education have a long history of evolving together to dramatically change how students learn.

With more innovations surely headed our way, why not look back at how we got to where we are today, while looking forward to how educators can continue to integrate new technologies into their learning?

What Technology Is Used in Today's K–12 Classrooms?
Technology has come so far that modern classrooms are more technologically advanced than many science labs were two decades ago. Students have access to digital textbooks, personal devices, collaborative cloud-based tools, and interactive whiteboards. Emerging technologies now being introduced to K–12 classrooms include voice assistants, virtual reality devices and 3D printers.

Perhaps the most important thing about ed tech in K–12 isn't what the technology is, but how it's used.

How to Integrate Technology into K–12 Classrooms
The first step to integrating technology into the K–12 classroom is figuring out which solution to integrate, given the large variety of tools available to educators. That variety comes with benefits — like the ability to align tech with district objectives and grade level — but also brings challenges.

"It's difficult to know how to choose the appropriate digital tool or resource," says Judi Harris, professor and Pavey Family Chair in Educational

Technology at the William & Mary School of Education. "Teachers need some familiarity with the tools so that they understand the potential advantages and disadvantages."

K–12 IT leaders should also be careful not to focus too much on technology implementation at the expense of curriculum-based learning needs. "What districts need to ask themselves is not only whether they're going to adopt a technology, but how they're going to adopt it," says Royce Kimmons, associate professor of instructional psychology and technology at Brigham Young University.

In other words, while emerging technologies may be exciting, acquiring them without proper consideration of their role in improving classroom learning will likely result in mixed student outcomes. For effective integration, educators should ask themselves, in what ways would the tech increase or support a student's productivity and learning outcomes? How will it improve engagement? Integrating ed tech also requires some practical know-how. "Teachers need to be

comfortable and confident with the tools they ask students to use," says Harris.

Professional development for new technologies is crucial, as are supportive IT teams, tech providers with generous onboarding programs and technology integration specialists. Harris also points to initiatives like YES: Youth and Educators Succeeding, a nonprofit organization that prepares students to act as resident experts and classroom IT support.

But as educational technology is rolled out and integrated, it's important to keep academic goals in sight. "We should never stop focusing on how to best understand and help the learner to achieve those learning objectives," says Harris. That should continue to be the case as the technology timeline unfolds, something Harris has witnessed firsthand during her four decades in the field. "It's been an incredible thing to watch and to participate in," she notes. "The great majority of teachers are extremely eager to learn and to do anything that will help their students learn better."

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GIT thought provoking corner

"Everything about your life, about your body, grows! Your cells regenerate; your hair, your nails, everything grows for your entire life. And your soul needs exploration and growth. And the only way you'll get it is by forcing yourself to be uncomfortable. Forcing yourself to get outside, out of your head. .... Change and growth is so painful. But it's so necessary for us to evolve."

– *Mel Robbins*

Quick and to the point Career Advice

Question: *"Andrei, could you shed some light on working with recruiters? Who do they actually work for? How should I go about talking money? …. Thank you!"*
– *Joseph Lowowski, Jr.*

Answer: Joseph, know this much: recruiters work for hiring managers and the companies hiring, not the candidates! It's up to you to stay in communication and to nurture the relationship as much as them. You might feel pressure to take a job at all costs because the recruiter has spent so much time and energy shepherding you through the process, but it's important to remember that your interests are aligned with theirs ONLY when you have an offer in hand.

The best recruiters will always be upfront about how they'll make money from working with you. Their compensation is paid by the hiring company, and is usually a percentage of your total salary and any signing bonuses. There is no cost to you. They should also be transparent about the hiring process as it differs for each of their clients.

Also, don't be shy in your job search - talking about money with a recruiter is an essential thing! Expect recruiters to ask about your salary requirements and other benefits you would need to make a move. In fact, the recruiter will be less likely to negotiate for you if they don't know what your salary expectations are because they are missing key information on what you are looking for in your next job.

When discussing compensation with a recruiter, it's important that both parties walk away from the conversation feeling like they've had their needs met. Ask for more details on benefit packages, including vacation time, sick days, life insurance policies - anything related to how much time off work you'll have during year one, etc. Always ask about the job seekers' benefits before you agree to interview.

I hope this helped you out. You got this, and best of luck!

- *Andrei*

Technology careers are showing up everywhere!

Technology has infiltrated every aspect of our lives from business, government, and even our personal lives. It has the power to solve problems, increase efficiency, facilitate communication, and generally make life better. Hence, the importance of the fourth industrial revolution cannot be realized without technology—and the people behind these technologies.

If you are looking to pursue a career in tech, you could end up at the cutting edge of the latest developments, such as joining a brilliant team in Silicon Valley. On the other hand, you could be in a role that requires technical skills to keep different types of technology working, such as systems, hardware, or a combination of both.

Careers in technology are available in various areas, including software engineering, web development, network engineering, data science, and IT support. Depending on your skills and interests, you could also find jobs in virtual reality, artificial intelligence, robotics, and more.

For sure, technology careers offer job opportunities. Consider an Institute of Business Value (2020) survey reporting that 60% of companies are fast-tracking their digital transformation. The same thing can be said of the public sector and non-profit organizations.

Answering the question, "Is technology a good career path?," GIT wanted to discuss further the value of technology. We are always available to help those considering technology careers to envision their futures in this exciting and purpose-driven field. Moreover, we will equip you with information regarding the necessary skills, salary, career progression, and alternative tech career paths that you can pursue.

VETERANS, GET READY TO POWER YOUR TECH FUTURE AT GLOBAL IT

Global Information Technology (Global IT) is approved by the Department of Veteran Affairs to receive Veterans benefits. We accept Chapter 33 Post 9/11 GI Bill®, Chapter 30 Montgomery GI Bill® for Active Duty, Ch 31 Vocational Rehabilitation and Employment (VR&E), and VRRAP. Whether you are serving or have already served, Global Information Technology is here to work with you to start your IT career. These benefits may cover up to 100% of tuition and fees and housing allowance, courseware, and other training related costs as well.

The Department of Veterans Affairs (VA) is accepting new training program enrollments for veterans wishing to use their GI Bill benefits. These training programs help veterans get the technology skills they need to join some of the fastest-growing industries in the United States. Global Information Technology (Global IT) is approved by the Department of Veteran Affairs to receive benefits under the GI Bill - Chapter 31 and Post-911 programs. Participating veterans will receive high-tech training, tuition, and housing allowance assistance).

For more information about your specific benefits in regards to your service, call 248-557-2480 to set up an appointment with one of our School Certified Officers (SCO, career advisors) or complete the inquiry form at https://www.globalitech.com/va-p

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Fun & Interesting Facts about Technology

Did you know? ....

➢ **Every iPhone advertisement has the time set to 9:41. This is the time that Steve Jobs announced the very first iPhone in 2007.**

➢ **Every second, around 6,000 tweets are tweeted on Twitter, which corresponds to over 350,000 tweets sent per minute, 500 million tweets per day and around 200 billion tweets per year.**

➢ **The name Google was created accidentally, it was originally supposed to be named 'Googol'. (Googol is the digit 1 followed by 100 zeroes). The founders checked to see if that domain name was taken, but accidentally searched for 'google.com' instead of 'googol.com'. They liked that name even better and registered the domain name on September 15, 1997.**

September 2024 Career Services Workshops: GIT's Lunch and Learn Events

Message from Jennifer Bowden, GITs Career Services Manager

Hello Global IT community! GIT's workshops and 'Lunch and Learn' events are short sessions with the information you need to get a jump-start on your job search. Our upcoming workshops here at GIT include:

September 11, 12 p.m. ET – **Lunch and Learn: Getting Results from Your Resume** – Adding keywords to your resume is an essential part of catching an employer's attention and getting results from your resume. This short workshop will discuss how to identify those keywords and customize your resume for a job.

September 17, 5 p.m. ET – **Creating a LinkedIn Profile** - LinkedIn is a powerful tool for promoting yourself and making professional connections. Learn how to create a profile that complements your resume and helps you get noticed.

September 23, 5 p.m. ET – **AI for Job Seekers** – AI is everywhere lately. How can it help you in the job search? Join us to learn more about how AI can assist with resume writing, interview preparation, and more.

To register for workshops, visit our website at https://www.global-itech.com/free-seminars/ or email placement.services@global-itech.com.

Four new startups join the Detroit Smart Parking Lab

The Detroit Smart Parking Lab, a mobility incubator, has welcomed four new startups, officials have announced.

These startups, supported by more than $250,000 in grants from the Michigan Mobility Funding Platform, will spend the next six months testing and demonstrating autonomous and electric vehicle charging technology.

The four companies selected were a good fit for the incubator's recently formed Autonomous Movement Initiative because they focus on areas including smart parking technology, electric vehicle charging infrastructure and first and last-mile logistics, said Kevin Mull, senior urban strategy and innovation director for Bedrock.

"The four companies that applied, they had the best combination of the autonomous movement of their product, along with addressing one of those focus areas," Mull said.

Mull said they receive applications from more than 20 applications from companies internationally. The four selected companies are: Italy-based ALBA Robot tests and demonstrates how self-driving personal mobility vehicle services can benefit people with disabilities through on-demand AV transportation to and from facilities including airports, hospitals and other community places.

AuTowed LLC, a joint venture between an Indiana group and a Michigan-based partner, is developing an autonomous prototype to simplify and address the challenges of cargo transportation by hitching, unhitching and parking cargo trailers.

Novi-based ION Dynamics focuses on on-demand EV charging. The company demonstrates how its autonomous charging bot can reduce EV charging installation costs by more than 50% compared to traditional fixed
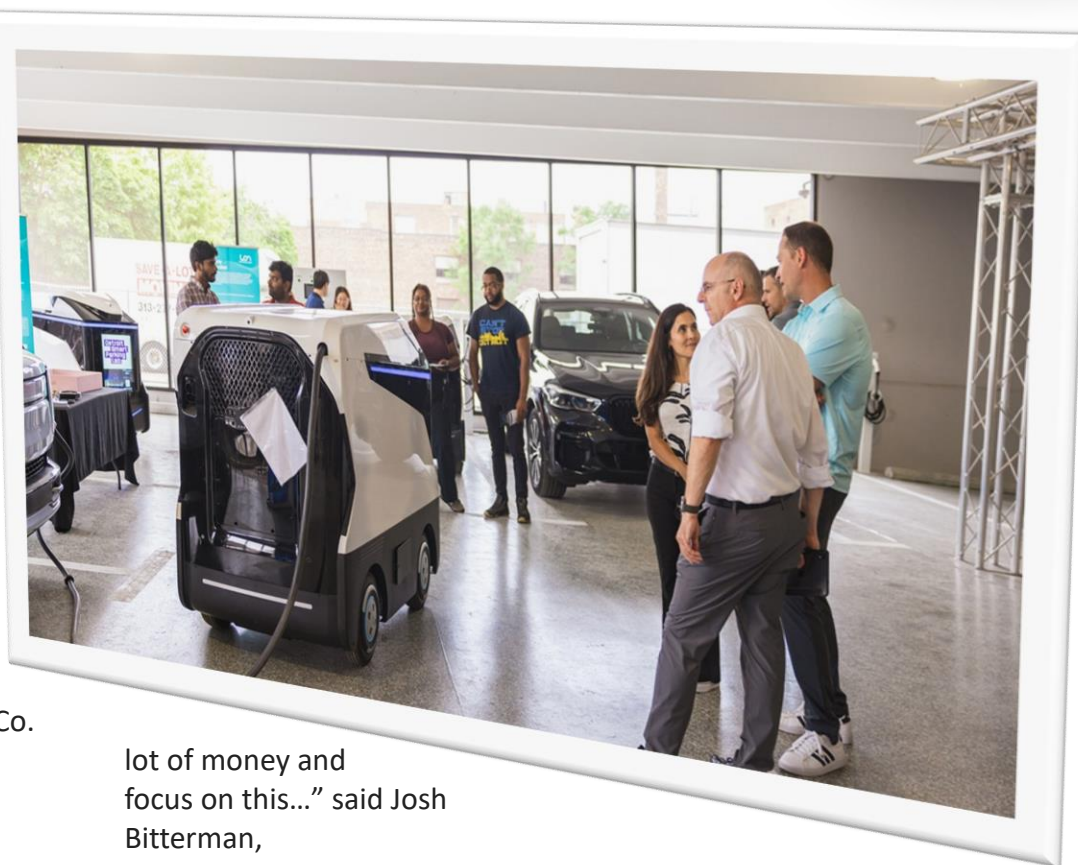
charging stations.

California-based Joule Labs will test and prepare its autonomous charging system for commercialization while establishing a permanent presence in Michigan. The company's goal is to partner with other Detroit energy and commercial real estate companies to expand automated charging services stations throughout the state.

Bedrock, Bosch, Ford Motor Co. and the State of Michigan launched DSPL in 2021. It's operated by NextEnergy and Park Rite from the first floor of The Assembly, 1702 W. Fort St.

DSPL officials say the newest group of startups will build on the success of its previous 20 companies that have worked on autonomous parking, EV charging and mobility infrastructure technologies. "Detroit is a very special place to us and to see all of the technological innovation and almost having Detroit emerge as a modern tech hub, with leadership from companies like Bedrock and others, putting a

lot of money and focus on this…" said Josh Bitterman,

head of Business Development for ION Dynamics. "It's a great place, obviously, for us to showcase our solution to folks in business, folks in government with this growing need for this type of infrastructure." Bitterman said he is among a team of four planning to planning to launch an autonomous driving robot in the next six months to a year. The mobile robot has a large capacity battery.

"It creates a tremendous amount of flexibility, not only for the end user, but really for the property or business owner, in the sense that they're not having to marry a significant chunk of their real estate strictly to EV charging," he said. "We're able to deliver charging services wherever it's needed, whenever it's needed on demand."