Report

on

Tech Students in Digital World

By Mr. Rajendra Awasthi

HG16

Submitted by

Name: SHIVAM

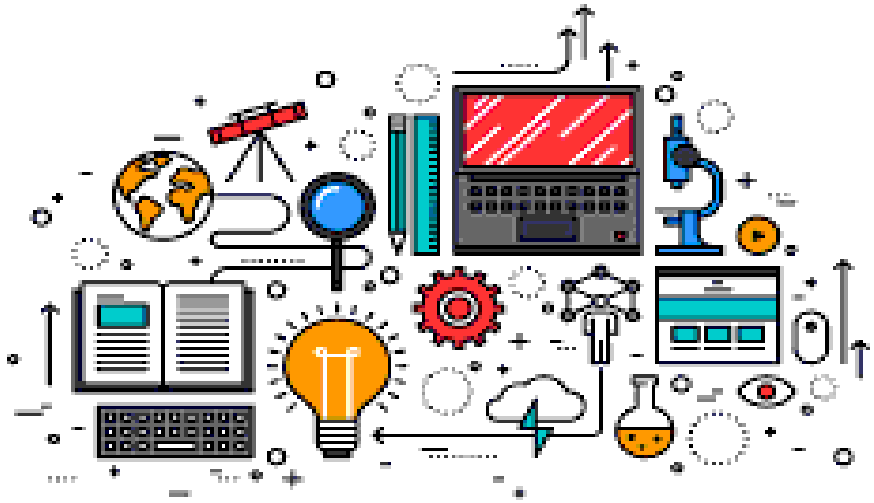
POONIA

Roll No: 2110991309

Batch 2021

Session 2021-22

CHITKARA UNIVERSITY



Technology has seeped into every part of our lives. It has created entire industries and improved the efficiency of pre-existing professions. Manufacturing jobs are increasingly automated. Medical devices and technology are saving more lives. More people are leaving the office in favor of remote or freelancing work. Technology is here, and it isn't going anywhere. In truth, it will only advance, further changing the structure of our work and lives. This begs the question: how does technology prepare students for the future?

Technology is often seen as a part of the adult world. When technology is in the hands of children, the association is often social media or gaming. But now, more than ever, children need technology to assist their education. We say "need" because as valuable as textbooks and traditional learning are, they don't do enough. In a world that relies on technology, analog learning alone cannot prepare students for what they will face as adults, no matter their profession.

It's difficult to imagine the leap. Just two decades ago, computers in school were only found in computer labs. Now they are in every classroom. The value was slowly recognized, and even today, we cannot grasp what will come tomorrow. With that in mind, let's take a look at how technology prepares students for the future.

Benefits of Technology in the Classroom

We already know that it's possible to become addicted to our phones, no matter our age. We know the harmful effects of social media and cyberbullying. With the amount of technology around us, concern about the use of it in the classroom is only natural. The trepidation is also greater for adults who did not see the rise of computers and phones in schools. Those that learned solely from lecture and textbook may have difficulty accepting tech in the classroom. We often hold onto what worked in the past, without considering the future.

The argument is this: in the past, there was no other option. Then, we did not understand different styles of learning as well as we do today. In the past, we couldn't see the future. But here it is. Today, technology is increasingly used for educational purposes. With balance, there are several benefits to using technology in the classroom:

Gamifying lessons – Static lessons are less likely to engage students. Using games, especially for younger students, helps to keep them engaged.

Self-directed learning – Students are now learning at their own speed. If they need to study one subject longer, they can. If they're ready to move on, they're able to.

Collaboration – Both teachers and students can work with others around the world.

Differentiated instruction – Not every student can learn from lectures or reading. Some concepts are difficult to grasp without interaction. Technology allows students to learn in a variety of ways and find what best suits their needs.

Distance learning – Recent events have led to the need for technology to supplement virtual instruction in the absence of in-person, in-school learning.

The future of technology in the classroom isn't easy to envision. But today, it is about increasing learning potential. It's about preparing students for their technological future. Creativity, problem-solving, collaboration, and creative thinking are all necessary skills for the future. Technology is just one part of that equation.

How Does Technology Help Students?

Asking "How does technology help students?" is like asking "Does school prepare you for life?" or "Does college prepare students for the workforce?" Education, no matter what form it takes, capitalizes on a

child's natural need to develop skills. At a young age, our brains are developing thousands of connections that help to inform our world. These connections relate to our ability to solve problems, communicate, and collaborate. Obtaining these skills is necessary for use over the course of our lives. Technology is just one tool to help students acquire these skills and more. Preparing students for the future isn't easy. It takes balance and proper utilization. But when tech is balanced with other forms of learning, it prepares students by:

Teaching New Technology Skills

Technology is constantly advancing. This gives rise to new jobs and industries, such as coding and artificial intelligence. Technology provides a makers education in AI, IT, design, and many STEM fields. It does this through specialized programs that allow students to explore these interests. Several schools are now teaching coding to students as young as age 8. Schools are also offering courses in AI. MIT created an App Inventor to help students learn how to develop new apps with coding. They also developed Shadowspect, which allows students to learn geometry with 3D puzzles. All of this is beneficial because it's estimated that AI will replace 40 percent of jobs in the future. Rather than being fully replaced, these students will be the problem-solvers and designers. Or, they'll create their own AI.

Entrepreneurial Courses & Skills

Technology gives students the chance to learn subjects outside the classroom as well. It allows for enhanced understanding of the subjects they are already learning. For instance, if they are taking a business course, they may create a mockup of their own new business. They'll learn to create websites, manage accounts, and maintain a social media presence that leads to sales. Students of today need to know how to leverage technology for their future. Thinking like entrepreneurs helps them maintain advanced careers in the future. They become the innovators, inventors, and the business owners. Because companies are using more technology with fewer employees, these skills are essential. But what options currently exist? There are sources like Stukent, which simulates business operation, marketing, and networking. There is also Ever-Fi, which exposes students to STEM careers and business planning. And there are several other programs like them.

- ## Career Learning

Students today are better equipped to learn and explore future career options. But that's not what we're talking about here. Instead, we're talking about the installation of learning as a skill for life. Using technology to engage students also helps them to embrace learning. It may even inspire them to enjoy learning and encourage them to explore topics that interest them.

- ## Teaching Workplace Skills

Active learning is the most effective tool in preparing students for the workplace. Active learning involves activities such as reading, writing, discussion, and projects. Project-based learning also achieves "cognitive activation." This is a focus on how they reached their answer rather than the answer itself. Technology is another tool in active learning and cognitive activation via personalized learning. Each student has their own unique way of learning.

- ## Teamwork

Technology helps to tap into students' individual learning styles. Tech can also encourage teamwork by working on team or class projects. By working together, they must share, listen, support, and help each other.

- ## Critical Thinking

Technology connects students to tools and resources. But they must sort through and understand these resources and tools. This helps them develop the habits of working through tasks in different manners. They're better equipped to find alternate solutions and ways of doing things.

- ## Learning Responsibility

Much of the technology allotted to students is school-owned, so they must know how to take care of the devices. They may be handed a code of conduct and a list of consequences for losing their device. If caught misusing the device, they may also face consequences. The use of technology in schools also provides the opportunity to learn about ethics. Learning digital citizenship is now an important part of education that will give them the tools and understanding needed for life and work online.

- ## Adaptation

The adult world is fast-paced. Technology is rapidly changing. Information is rapidly streaming. Awareness of the different technologies and how to use them is essential. When students are comfortable with learning new technologies, they are better at adapting to technological change.

- ## Collaboration

There are so many professions that require collaboration, whether it be on a small scale or large. This could mean communicating with a local team of five or small teams across the globe. Either way, technology promotes collaboration and creative thinking.

For instance, students in a Spanish class are able to talk with students in Spain or Latin America. They can ask each other questions on forums or over video chat. They can share interests and learn about each other's cultures. They'll learn about life beyond their home and become more empathetic. Possibly, they'll even become more curious.

Empathy & Positive Change

Collaboration can also lead to empathy and positive change in students and communities. The previous example of students talking with classrooms in other countries is an excellent illustration.

The class may learn that the local area has issues with clean water. Maybe the difficulty is that students struggle to get to school due to a lack of transportation. Students might then come up with solutions. With tech, they are able to speak to the students, local government, businesses, community centers, and others. They can work as a team in the class or with those in the country they're learning about. They're learning to solve problems in a comprehensive way. They're also able to get real, present information about the lives of others. This kind of collaboration is something that couldn't occur without technology.

How will technology change education in the future? We can't know for certain. But as you can see, technology prepares students for the future in comprehensive ways. This improvement comes with a caveat, however. With greater use of technology comes greater exposure to threats. Students face cyberbullying, hackers, predators, and disturbing online content. To protect them, you need a comprehensive solution.

Future of technology in education: examples & possibilities

- Social media in education – allow learners and educators to post thoughts, ideas, and comments in an interactive learning environment. Also, students can follow influencers and learn from their posts.

- Ipads & computers – technology helps students be more responsible. Owning their own device or borrowing the school's devices gives students the opportunity to improve their decision-making skills as well as taking ownership of a valuable and often times expensive device.

- Better Simulations and Models – digital simulations and models can help teachers explain concepts that are too big or too small or processes that happen too quickly or too slowly to demonstrate in a physical classroom. Other simulations the organization is developing include a software that allows students to experiment with virtual greenhouses in order to understand evolution, a software that helps students understand the physics of energy efficiency by designing a model house, and simulations of how electrons interact with matter.

- Global Learning – at sites like Glovico.org, students can set up language lessons with a native speaker who lives in another country and attend the lessons via Skype, hangouts, etc. Learning from a native speaker, learning through social interaction, and being exposed to another culture's perspective are all incredible educational advantages. Also, podcasts are another popular learning method, with hundreds of free educational programs now available online.

- More efficient assessment – teachers can collect real-time assessment data from their students. When the teacher gives out an assignment, she or he can watch how far along students are, how much time each one spends on each question, and whether their answers are correct. With this information, a teacher can decide what concepts students are struggling with and can pull up examples of students' work on a projector for discussion.

- E-books – a digital textbook is a PDF on a tablet that students can carry around and now there is no need to carry five textbooks anymore. It's all digital. What used to take hours in the library to find, now students find instantaneously.

- Epistemic Games – commercial game-like simulations that put students in roles like city planner, journalist, or engineer and ask them to solve real-world problems. In one game, students are high-powered negotiators who need to decide the fate of a real medical controversy. In another, they must become graphical artists in order to create an exhibit of mathematical art in a particular style, etc. Creative professionals learn innovative thinking through training that is very different from traditional academic classrooms because innovative thinking means more than just knowing the right answers on a test. It also means having real-world skills, high standards and professional values, and a particular way of thinking about problems and justifying solutions. Epistemic games are about learning these fundamental ways of thinking for the digital age using trechnology.

- Students database and results tracking – teachers are able to track individual progress, and are encouraged to identify learning objectives and differentiate instruction based on the needs of

their students. Also, “My dog ate my homework” just won’t work it anymore, everything is saved on cloud. Other than that, student are able to check their grades immediately in the digital diary. Basically, students will each have a digital portfolio where they store all of their projects, assessments, notes.

- Interactive textbooks & case studies – the way that we think of textbooks is completely changing. It is no longer limited to merely text and pictures. Today’s textbooks often have web-based sites that include assessments, animations, additional materials, videos, and other materials to support the learning of new content. Normally students have questions after reading a material and they can answer them in an interactive way.

- Digitalization of everything – students don’t need pass notes in class anymore. And have their room full of notebooks, books and papers. Now everything is available online.

- Extended classroom communities – technology facilitates to extend classroom community by using web-based platforms like Edmodo or others. Teachers and students can use this platform to discuss homework, post assignments, and interact with peers as they work on projects.

- Flexibility and online learning – it is now easy for anyone to learn at their own pace, rather than being forced to adhere to strict timelines. I think, that the future of technology in education is about making it possible for people to learn from any place in the world. Online learning means that people can learn at varying pace, depending on their ability and the amount of time that they are willing to devote to their learning effort. Given learning materials are delivered to learners online, learners can schedule their learning timetables as they wish and submit homework and exams online.

- Making learning fun again – Teachers can now use videos, animations and other forms of content to enhance the process of learning. Nowadays, with the help of technology, it is now common for learners and teachers to use games as a way of enhancing the process of learning and teaching. As a result of the use of various forms of content, learning and teaching are now fun and more meaningful than the way it was in the past.

- Cost Reduction – technology has contributed to significant reductions in the costs of accessing education. Everything is available online now.

- Improved student-teacher Interaction – more and more teachers are now using technology to keep in touch with their students, for example e-mails and services like dropbox that allows you to upload and share content with a large number of people.

- Video Games – simulating real life problems, video games can bring about behavioral changes in the students by making them more goal-oriented. Gaming models not only provide a wide range of information but also initiate students to be problem-solvers.

- Lifelong Learning – the future of technology in education is also about revolutionizing education by normalizing lifelong learning. Online learning is a great way to facilitate today’s knowledge-

driven society and the ongoing demands for continuous professional development. The nature of employment has changed, and keeping one job for life is no longer expected. As a result of globalization, educational institutions around the world are now integrating technologies into all elements of their courses. Online education has become part of mainstream teaching and learning, since students now have access to a wide range of increasingly impressive online resources.

Virtual reality is a hot topic in education. With brands such as Oculus, Samsung and Google innovative learning resources are now available, capable of immersing students in their chosen subject.

Classes available online + live streaming – schools can create private channels and upload classes video on youtube, so that students who are sick, can watch it from home and ask questions in real time.

Differentiate assignments to fit student's personal learning style – they is no need to assign a project like "write a book report using MS Word" or "create a slideshow in PowerPoint". Now, students receive the "book report" assignment and make their own determination how best to communicate their thoughts, be it audio, visual, written, musical, video, artistically. As long as they fulfill the requirements of the project, the delivery format will be up to them. Like this students can find their passion, develop their strengths and polish their skills that they will need for their future.

Nowadays, students become more and more involved in forming their own education. In 10 years, students will incorporate so much independence into their learning process, that mentoring will become fundamental to student success. And teachers will form a central point in the jungle of information that students will be paving their way through. I really believe that the future of technology in education is about adapting to the fast-changing world, giving students an opportunity to choose their own way of learning, combining theory and practice, always taking into account the current demand of the market.

Conclusion

Technology has and will play a vital role in transforming education sector and taking it to next level. Technologies like video conferencing are being rapidly adopted by educational institutions globally for conducting online classes, online training, conducting online lectures etc. Tools like webex, R-HUB HD video conferencing servers etc. are widely used by educational institutions worldwide for the same.

CHITKARA
UNIVERSITY