

Effect of Technology in Education : Pros and Cons

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Abstract:

Technologies have become commonplace entities in all aspects of life. Across the past twenty years the use of technology has fundamentally changed the practices and procedures of nearly all forms of endeavor within business and governance. Education is a very socially oriented activity and quality education has traditionally been associated with strong teachers having high degrees of personal contact with learners. The use of technology in education lends itself to more student-centered learning settings. But with the world moving rapidly into digital media and information, the role of technology in education is becoming more and more important and this importance will continue to grow and develop in the 21st century. Technology could provide a high end environment and an interactive learning experience. There are numerous means in which teachers could use technology in their classroom. Every method is providing myriads of benefits which could be imparted to students. Technology in education is playing a crucial role in enhancing the skills and knowledge of the people across the Globe. In this paper, a Pros and cons of using technology in education was provided. Effective use of technology is needed and students must be aware about the efficient use of technology and its pros and cons. Now a day's technology became an inevitable component of human being.

We live in a dynamic world surrounded by almost endless amounts of information. Riding the coattails of information is all of the technology we have at our fingertips. For as prevalent as technology is now, is it replacing real lasting education? Does technology have a place in our classrooms?

I think any level-headed educator would agree that children must be able to use technology to be competitive in the workplace after graduation. With all the trends and advancements in technology no one can argue that we will go backwards from here. I don't foresee technology replacing passionate teachers educating their students. I simply see it as an important tool to help the education process and prepare students for the future.

Technology is everywhere, entwined in almost every part of our lives. It affects how we shop, socialize, connect, play, and most importantly learn. With their great and increasing presence in our lives it only makes sense to have mobile technology in the classroom. Yet there are some schools that are delaying this imminent future of using technology in the classroom as the valuable learning tool it is.

Here is a list of ten reasons your school should implement technology in the classroom.

- 1) If used correctly, will help prepare students for their future careers, which will inevitably include the use of wireless technology.
- 2) Integrating technology into the classroom is definitely a great way to reach diversity in learning styles.
- 3) It gives students the chance to interact with their classmates more by encouraging collaboration.
- 4) Technology helps the teachers prepare students for the real world environment. As our nation becomes increasingly more technology-dependent, it becomes even more necessary that to be successful citizens, students must learn to be tech-savvy.
- 5) Integrating technology in education everyday helps students stay engaged. Today's students love technology so they are sure to be interested in learning if they can use the tools they love.
- 6) With technology, the classroom is a happier place. Students are excited about being able to use technology and therefore are more apt to learn.
- 7) When mobile technology is readily available in the classroom, students are able to access the most up-to-date information quicker and easier than ever before.
- 8) The traditional passive learning mold is broken. With technology in the classroom the teacher becomes the encourager, adviser, and coach.

9) Students become more responsible. Technology helps students take more control over their own learning. They learn how to make their own decisions and actually think for themselves.

10) Student can have access to digital textbooks that are constantly updated and often more vivid, helpful, creative, and a lot cheaper than those old heavy books.

Educational technology, sometimes termed EdTech, aims to improve educational performance by creating, using and managing technological resources in the classroom. Educational technology is often associated with, and encompasses, instructional theory and learning theory. Instructional technology is a growing field of study which uses technology as a means to solve educational challenges, both in the classroom and in distance learning environments. While instructional technology covers the processes and systems of learning and instruction, educational technology includes other systems used in the process of developing human capability. Educational technology includes, but is not limited to, software and hardware, as well as wikis and blogs, and class websites.

In recent years, the emergence of multiple mobile and ubiquitous technologies has given new motivation to finding innovative ways to implement education technology in order to encourage students now growing up in a digital age to actively participate in learning. EdTech broadens individualized instruction and promotes the development of personalized learning plans through computer and online programs. Students are encouraged to use multimedia components and to incorporate the knowledge they gained in creative ways, which allows some students to individually progress from using low ordered skills gained from drill and practice activities, to higher level thinking through applying concepts creatively and creating simulations. In some cases, the ability to make educational technology individualized may aid in targeting and accommodating different learning styles and levels. Incorporating educational technology into learning can be accomplished for both the classroom and online education programs. Research from the Alberta Initiative for School Improvement has indicated that inquiry and project-based approaches, combined with a focus on curriculum, effectively supports the infusion of educational technologies into the learning and teaching process. For example, in recent years, teachers have used wikis, blogs, podcasts, and websites to disseminate educational content, monitor students' progress, foster interactive and collaborative student activity, and streamline assignments in order to enhance school curriculum and boost student performance. In addition to classroom enhancement, learning technologies also play a major role in full-time distance teaching. While most quality offers still rely on paper, videos and occasional CBT/CBL materials, there is increased use of e-tutoring through forums, instant messaging, and video-conferencing. Courses centered on smaller groups frequently use blended or hybrid designs that mix presence courses with distance activities and use various pedagogical styles. Educational technology has also revolutionized the accessibility of educational content outside of institutional affiliation. In recent years, Open Course Ware (OCW), an academic initiative that gives the public access to much of the same course materials used in undergraduate and graduate programs at institutions of higher education, has greatly improved the quality of educational material available for free on the Internet. As of 2008, there were close to 150 collegiate institutions that had operational Open Course Ware programs, or were in the process of planning such programs. These institutions include Harvard, Princeton, Stanford, University of Pennsylvania, and University of Michigan. Such programs are an example of how technology can allow more people to have access to information and resources that have originally only been accessible to students at prestigious universities.

Educational technology is vital in teaching "today's" student. These generations of students are labeled "digital natives" because they are the first to grow up with a variety of digital resources. Some of these resources include second generation internet applications labeled web 2.0 tools. These tools allow students to collaborate and share user-created content online. Some of these examples include social networking, blogging, wikis, and forums. Exposing students to these resources make their learning engaging and relevant which can make a difference in their learning and a teacher's pedagogy. This also prepares students for a future workforce that will be reliant on technology.

Objectives of Educational Technology are as follows:

1. To determine the goals and formulate the objectives in behavioral terms.
2. To analyze the characteristics of learner.
3. To organize the content in logical or psychological sequence.
4. To mediate between content and resources of presentation.
5. To provide the feedback among other components for the modification of learners.
6. To evaluate the learners performance in terms of achieving educational objectives.

Applications of Educational Technology are as follows:

1. Educational technology improves the teaching-learning process and makes it more effective and process oriented as well.
2. Electronic and mechanical gadget which a common man possesses can be used for educational requirements.
3. Educational technology has not only maintained the standard of education but also improved the ways of teaching by giving teaching aids and programmed instructional material etc.

4. Television, radio, V.C.R. and computers can enrich as well as effect very much the education. Television, radio, tape-recorder and programmed instruction can also do wonders in the field of distance and correspondence education.
5. Mechanism of feedback devices for modification of teaching-learning behavior can produce effective teachers in training schools.
6. New innovation of system analysis in the field of educational technology can help in solving educational administrative problems.
7. Structure as well as nature of teaching can be developed and enriched with the help of educational technology. It innovates new teaching models through which we can achieve the objectives of education.
8. Scientific foundation of education which is the main force of development of the theories of teaching and instruction is providing by educational technology.
9. Educational technology provides practice and strategies for reducing individual differences or strategies and practices which help teachers to teach according to individual differences of the learners.

Technological advancements have made the world a great and convenient place to live in. There is no denying of how they make lives better and easier, especially in the fields of science, medicine and education. But, like most things, technology also has its drawbacks. In fact, some of the more recent inventions are now being categorized as lazy aids, and are considered major contributors of obesity and a generally unhealthy population.

Can the same thing be said for technology used in the classroom? Tools, such as computers, mobile devices and the internet, are now integrated into the educational system. While they are beneficial in certain academic aspects, they also have negative implications.

Pros of Technology in Education [Advantages]

1. Promotes independent learning in students

The internet is a treasure trove of information. Practically anything you need to know can be found online. Although there is a question of the credibility of the source and the data provided, it can still serve as an educational resource for students. Even without assistance from parents and teachers, students can just look up their lessons online.

Unlike regular textbooks, electronic books and web-based content are updated in real time, feeding students with the most current information they can get their hands on, helping them become more knowledgeable even outside the classroom setting.

2. Prepares students for the future

From the way technological advancements are going, it is obvious that the future will be digital and technology-focused. If students are well-versed on using technology to collaborate and communicate as early as now, they will not have trouble fitting in, competing and finding jobs in the future. Being familiar with using at least one form of technology at an early age will help them become comfortable using it, and eventually develop other skills necessary to handle other innovative devices and processes.

3. Has the potential to lower textbook and tuition prices

With resources more accessible and in great abundance, the cost of textbooks is likely to decrease. It is also possible that students may no longer need to buy a textbook, if it is converted into digital format. The actual books can stay in the classroom, while the content is saved on a student's computer.

Tuition will also decrease when learning is done online, rather than inside the classroom. By taking out the factors that contribute to a higher tuition fee, such as utility bills and transportation allowance of teachers, the overall cost of education will be lower.

4. Allows teachers to create an exciting way to educate students

Gone are the days when the only tools for teaching are limited to books, a blackboard or whiteboard, and a chalk or markers. With technology integrated to education, teachers can now incorporate images, videos and other graphics when delivering lessons. Specific websites, apps and programs will also enable teachers to vary how they provide instructions. This creates an exciting learning environment and promotes interest in education in general.

Other tools available for teachers include Smart Boards (interactive whiteboards), email, Skype, and PowerPoint.

5. Encourages development of new teaching methods

Rather than spend an hour or so talking while the students listen, or have them read an entire chapter in silence, teachers and professors now have the option to use advanced teaching methods, such as podcasts, blogs and social media. When working with a particular group or one-on-one, teachers can take advantage of web conferencing technologies other online communication tools.

Technology also presents universal tools that enable teachers to educate all types of students, including those who are struggling or have special needs. These include voice recognition, text-to-speech converter, translator, volume control and other assistive technologies.

6. Independent learning for students

Teachers could assign the task for students in the group and encourage them to complete in a single group by using the technology and check out on the academic queries if arises. It's quite easy to connect students with the help of technology. Naturally, you could find many of students who are shy and don't feel comfortable in sharing their views, but when once they have to complete the task in a group, they would prefer to open up with each other. There are few tools like Piazza, which could be used for achieving such goals of making shy candidates share their view points. The group which is created could be divided into small sections with around 4-5 candidates. They have the quick accessibility and are well-equipped with the knowledge and skills of operating the technology for their benefit.

7. Visual illustrations- make learning easier

In case if the classroom is equipped with technology and every individual has his own system with them, the lessons could be showcased in the visual format. It allows you to experiment more in the pedagogy. Whether it's going to be dramatic change which could include teaching with the flipped classroom, or by just adopting a specific tool for focusing on team or the project. If you are well versed with the technology, then you would be able to build the credibility with students and even with the fellow colleagues.

8. Effective means of learning

Technology in your classroom is designed for making the learning easy and bit quicker. Its efficiency allows the candidates to grasp the concepts in the shorter span of time and inevitably allows them to learn much more than expected, when technology would not have been used. It not only enhances the caliber of the candidates but also provides deeper insight to the instructors across.

9. Life skills via technology

Using technology in classroom could prepare your students for their deep rooted future with enhanced technologies hitting into the market. The vital skills like as focusing on creating presentation, maintaining proper etiquette, writing emails etc. which could be inculcated in the classroom.

10. Creativity is enhanced and focused upon

All the candidates don't believe in going through the text books, due to which they are not efficient or quick learners. There are few students who do require the creativity for stimulating their potential learning. The best thing about the technology in classroom is that it is able to help those students who are interested in learning things in creative and innovative manner.

Cons of Technology in Education [Disadvantages]

1. Results in a lack of interest in studying

Because everything is now accessible online or through data saved in a computer or mobile devices, students are likely to develop poor studying habits and a lazy attitude towards education. Some of them may even think they can skip school because they can find answers and lessons online.

This can also lead to students forgetting the basics of studying. They would rather rely on computers and the internet, instead of their books and the input from their teachers. Most of them will misspell words because they often use spell checkers. Rather than solve mathematical equations the traditional way, they would seek assistance from computers or look for the answers directly through search engines. When it is time to take the tests in the classroom and without any form of technology, students are likely to fail.

2. Makes students vulnerable to potential pitfalls

While computers prove to be an invaluable educational tool, it can also be a source of problems. This is especially true for students who lack the skills needed to maximize a device's functionalities. Technical problems and computer malfunctions can cause loss of assignments and other materials, resulting in high levels of stress that students would rather not experience. Difference in internet speeds and a device's capabilities can also lead to certain difficulties that will de-motivate students. Add to this other things that they will discover online, which are completely unrelated to school and education, and they will be distracted to no end.

3. Negative views on technology

Consumerism has taught us that technologies, from computers to mobile devices, are widely viewed as tools to entertain rather than educate. Textbooks, on the other hand, are seen as tools for learning. So, between a tablet and a textbook, students are likely to gravitate towards learning when reading a book, while they are likely to use a tablet to play games or spend time on social media.

4. Raise instructional challenges

For professors and teachers to stay abreast with technology, they may need to be retrained. Those who have been teaching all their lives using traditional methods may not be very susceptible to the changes being applied. They may even see it as a threat to their job security and shun technology altogether. In fact, a majority of teachers believe that constant use of digital technology is affecting a student's attention span and his ability to persevere when a challenging task is thrown his way. Although such belief is subjective, scholars, experts and teachers all agree that technology has changed the way students learn.

5. Can diminish overall value of in-person education

Although research on online learning did not establish a direct link to how personal interaction affects a student's performance, data gathered did show that those who enrolled in online courses have higher chances of failing, dropping out of classes, and are less likely to benefit from them. This may have something to do with the fact that lessons delivered online or through digital resources lack the face-to-face interaction between teacher and student that provides a more personal experience.

6. Technology could be distraction

The technology could be a distraction, majorly when the candidates are using for the personal reasons while class is going on. The only means how it could be managed is by settling down with the specific set of rules and regulations for classrooms. Failure to comply with the terms, students would be at great risk of learning and losing his system.

7. Disconnection with Social Media

Quite of people are skeptical of the technology and what it is doing to student's ability of verbally communicating. In case if you are creating assignments in the class which are using both technology tools and oral presentations, it would enhance the caliber of candidate to be dynamic and to check out that how they interact and learn with others.

8. Online security and Safety

One of the major concerns is with regards to security and safety of students as they should not be able to access the unsuitable materials. It is due to the security that most of the search engines are providing facilities of filter for removing unwanted content on the site.

9. Forgetting the basic ways of studying

The candidates are no longer going to rely on books which are shared by their seniors for them to study. They are inclined to enhance their knowledge the use of the technology. Even the simple problems and homework assigned to them are answered with the help of the technology and don't use their mind at all.

10. Decade of change in the classroom

Its last decade when the ample of changes with respect to classroom with technology has taken place. Such kind of infusion of technology goes much beyond that of computers. Technological devices and internet has changed the means of learning which are taking place. Traditional methods of education are no longer the norm and now technology is root for almost all the lessons taught or methods of education.

Conclusion

Integrating technology in education has its advantages and disadvantages, but proper implementation might help keep the drawbacks to a minimum. Better planning is necessary. Technology in education is playing the crucial role in the habits of study and skills of the children. But one will have to ensure that they are accessing the right information from Internet.

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