

## **Influence of Technology in Higher Education Institutions**

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### **Abstract**

*Technology now is a basic human need which is always a driving force to bring change. It does not have an end as it keeps on growing day by day. The modern world has been filled with technology and science which makes the life of human easier and simple. The role of technology is necessary for learning and teaching purposes especially for developing countries like India. With introduction of new technology comes the introduction to deep ideas, availability of resources. The institution can have competition with the top universities or institutions of the world and would generate more enthusiasm among the students as well as help a country to develop faster with the students who are nurtured with the technology. Use of technology by teachers would also help teachers to make teaching learning process faster and effective. Even the institutions will get benefited as the assessment process will become more simplified.*

**Keywords:** *Technology, Teaching, Learning, Assistance, Simplified*

### **1. Introduction**

The role of technology in educating students has proved to be vital with the rate of development in today's world. Implementing and creating a better use of technology and its development in the education system has gained popularity among the students. Students enjoy a class that makes them tease their brains technology. Technology in classroom allows learning seamlessly within an hour or so and this makes it easier for students to perform well in exams without any need of studying daily at home thereby facilitating student growth extensively.

The student population wantthemselves to date with the current developments and the usage of current technologies and future development. Basically the thing is that the teachers should be up to date for them to reciprocate the knowledge/ teaching to the students using technology. Learning, this is the process that makes every person to understand the functioning of anything clearly. So, there are many new and advanced technologies that make the process of learning entertaining and feasible.

One of the major technology used by the student in the day to day life is mobile communication Technology devices like cell phones, personal digital assistant (Brock, T. P., & Smith, S. R. 2007) which helps them in communication, calculation, Internet surfing, entertainment and educational assistantance. Technology has helped in the development of many smart mobile applications for education and research purposes which provide students with study materials, test papers, online classes, research papers etc. There are also many smart devices like smart watches, wrist wearable devices ,smart shoes which can calculate heartbeat, blood pressure, highest speed, stamina, calories burned which in turn helps students playing sports to increase their personal best and to stay fit and healthy.

### **2. Technology in Classroom**

Learning can be more interesting by making the students to use the resources such as internet and develop themselves. The students can be encouraged to create blog or vlog about any new ideas they have come across that have made the class more interesting. Even with all

the technology development of the students they tend to get bored and sometimes doze off, for this smart glass which help them to stay attentive in class must be encouraged. Smart glasses can be used to improve learning.

These glasses will be connected to the internet whenever it is on. With this, the user can access any amount of information on the go. These glasses can project live classes. Technological development, such as video conference classes, usage of digital devices such as tablets, pads, etc. have become a tool to make classes more interesting, innovative and interactive.

The inclusion of technology in the mode or platform of learning might spice things up. Reference materials have been transformed from monochrome textbooks to coloured ones with pictures to videos (Chang, Y., et.al. 2007) or audio books. Additional learning software could revolutionize classroom education. This Software listen lectures and gives us additional information about the topic which we would listen or read after the class.

This could even record classes and help students listen and recap lectures whenever and how many times we want. These technologies also improve the level of learning and performance, coming with Virtual Reality, This technology helps every student or learner to visualize what he or she wants to learn and become good at some particular thing, we humans remember things more after seeing that particularly than just hearing about that so, visualization is better than listening about anything or about something.

There comes the next technology that is in use Central Hologram Teaching (Awad, A. H., &Kharbat, F. F. 2018), this means that there will be a hologram projection in the middle of the class that makes every person in that class to have a clear cut vision of what is being taught in class .The latest technology has visualization ,then comes the most adorable and considerable Artificial Intelligence(Aryan Sandilya Mishra et.al.2020)into play, this technology makes a beneficial work for learner ,this works in school or college or university, this helps in making a perfect review on everyone in the class after every single and can give a full statistical report about the performance of that particular learner ,if he or she takes up an online course this helps the learner to improve his or her performance levels and correct their mistakes . So, keeping apart everything some may not be able to understand a particular language when any speech or lecture is delivered in that state, then there is advancement for that problem too, there are much language conversion software so that the people can listen to that speech in the language they want to listen.

And so, places in this modern world are also having the implementation of Augmented Reality (Dunleavy, M., & Dede, C. 2014). this is also a type of visualization process that helps with development of personal practical knowledge, and there are still many technologies in advancements that can make the way of learning much good and way full of entertaining.

The usage of digital pads in examination has a lot of advantages, it can tell teachers not only whether the student got a question right, but also how much time was spent on the question. This allows them to get a clearer picture of the student. Majority of students have a phone they can bring it everywhere which can have digital course material. These technologies made the learning more informative.

Virtual field trips, virtual labs, electronic textbooks, and the thousands of free online resources help students a lot. One of them is using 3D projection system to demonstrate an experiment or an event that happened in history. This makes learning more interesting as we can visualize more into the depth of the subject.

Virtual Assistant (Goel, A. K., &Polepeddi, L. 2016).could also be used which can deliver information in real-time about any topic and help in better understanding. The internet Wikipedia and Google are some of the best platforms for learning or searching better ways of solving a task and the whole process make it interesting for us.

### **3. Simplification of Resources**

The next big leap is to use augmented reality or virtual reality to provide a simulation of the real-time environment of the topics to be taught. If a student misses a class, he or she might have a

hologram visualization of the class to catch up with the flow of the class. The biggest lagging of the current education system is that most students don't know where to apply or use the concepts they studied. Therefore, the gap between theoretical concepts and industry real-time applications must be bridged by providing a cloud for each concept which contains all the resources for a student to start from scratch to research-level studies with proper learning paths and communities of people who already knew those concepts to guide someone who is a newbie. Different apps under mobile technology help students for example cam-scanner to work as a scanner to scan their documents and to complete the process of converting images to pdf.

QR codes and Google forms can be used frequently in classrooms (Lai, H. C., et.al. 2013). For students technology is the saviour from all the assignments, it has become really easy for today's generation to complete their homework. All the information is easily accessed by the students online from different websites, it's no more necessary to search for books from library. Also helps in individual learning there also lies an instant access to anything that you want to know there are many surveys that were held on this issue and a survey organized by EDUCAUSE (Oblinger, D. G. 2005). found that, above 75% students are satisfied with blended online or premise learning this technology also helps students to collaborate with other colleges and can be benefited this also makes students to learn anything practical and there will be many other resources that helps to access and understand those additional information and will be helpful to teachers to an extent, and this makes students to listen to it very enthusiastically. Through technology students are able to access online courses and tests which help them to compete not only with the students of their class but also around the world. We have apps like YouTube and Coursera which teaches us particular topics that we need with interactive video and interactive practice sessions. It helps students to learn that particular subject more effectively.

#### **4. Off the Class Interaction**

Technology has reduced the distance between two people living countries apart each other after the development of communication technologies. Development of web applications has brought the world into one's hand. Students can now attend the class no matter where he is present with the help of smart glasses. The virtual assistant has started becoming popular nowadays. Digital assignments are one more technology that can be incorporated into classes. Using this, the student can submit the assignment no matter where he/she is. They just require a good internet connection. This also makes the teacher's job easier as the teacher does not have to collect assignments directly from the students as all the assignments will be collected in the online site and he/she can correct the assignment from there. Online exams and online quizzes can also be incorporated (Dobson, J. L. 2008). They also have many advantages. There will be no need for papers for these exams. Because of this, we can save trees. It also makes the correction process easier for teachers. Online video or content services like big blue button allow teachers from some other place to take live online classes for the students. This makes the job of teachers and students much easier.

There are numerous courses available online to learn different subjects from their videos. Students are able to present their ideas In front of his fellow mates using this technology, they are able to find new ways to be consistent in race using this technology they can share their ideas, views etc... using online blogs (Churchill, D. 2009). that where everyone browses and examples for such blogs are quora, LinkedIn etc. These are type of networking blogs that are used to share their personal view or ideas for works and it will be like students collaborating together by getting their ideas into spotlight and they also gain some ideas. Students can lose their track on time and also sit hours together browsing on internet and wasting their time not only that but also it effects them a lot and many privacy issues arise as they use these social media accounts, you can't trust technology to save private property etc...

Technology has revolutionized education. Students today sitting in class can visualise the topic being taught using virtual reality. Chatbot's (Clarizia, F., et.al.2018) can be interesting integration in the education system, it has been seen that due to time constraints syllabus are taught at a faster pace , Having realistic examples can really boost students confidence and their

understanding of the topic. Technology advancements can help students to get access to real world problems and they can try to solve them.

## 5. Eminence of Technology

Technology has showed many improvements in various fields and the major of those are education. In education, technology has helped disabled people to gain more knowledge by improving their style of learning, with the help of technological communication between students and even teachers, has increased. If the student has any doubt in his/her subject, he can contact the teacher through mail, call etc. In the fourth Industrial Revolution, technologies like Artificial Intelligence, Cloud Architecture, Internet of Things, Quantum Computing, etc., has made a very high impact in various fields like agriculture, healthcare, education, etc., Entrepreneurs and businessmen across the globe are using the tools of technology extensively to innovate new solutions, automate the existing manual processes, provide better and efficient alternate solutions to the existing ones. Nowadays, students use pdfs or e-books which are more easily downloadable and eco-friendly than traditional hard-copies or paper books. Any doubt or query of a student can be instantly solved through internet search engines such as Google, Bing, etc., Education has become more accessible as even a rural student from any corner of the world can watch a MOOC in an online platform and gain knowledge from various resources. Even the attendance procedures in institutions nowadays use biometric fingerprint or face recognition. Starting from alarms, notes, calculations to books, social meetings, etc., and all these tools have been replaced as applications of the most powerful tool of technology- The Smartphone.

One major advantage of technology in education systems is that it can be used as a tool to verify the correctness of the information provided to the learners and as a detector of flaws or plagiarism in the works of researchers. At times, there may be huge crowd in the classroom which then becomes difficult for a teacher to address a student individually. This problem could be solved by using smart table or tablets in which live lectures can be made available to students and a teacher can now interact with students personally and individually. Technology saves our time, energy and improves our knowledge. It brings a better outcome to our project or any work. Operating systems like Microsoft Word, Linux, and Unix etc. Our computers or laptops help us a lot to store our assignments and presents the data in different suitable formats like MS Word, Power Point Presentation etc. MS Excel for example helps teachers to store marks of students, Google forms help teachers to conduct online exams and produce result immediately.

More conceptual knowledge is gained by students which helps them to study in depth. Technology leads to a no stress education and students can do multiple works in no time. School students can compete with graduated adults in different fields, and that has become possible with the help of the Internet. Google has become the universal key to unanswered questions. Considering this development, information is easily accessible through a few touches and swipes made on a human palm-sized device. Online courses are available in every domain of education, including complicated areas like Robotics and the Internet of Things (IoT)

Technology can collaborate with students in the same classroom; same school and even with other classrooms around the world. The major advantages engage students and active learners. Encourage individual learner's growth facilities, peer collaboration and prepare students for the real world. For students studying in educational institutions, they can get cleared of their doubts not only from teachers but also from free educational video class sites and changes in internet, for example Khan Academy. Digital portfolio can take place of the simple resume and CV because it saves all the data in it and can be edited whenever some new work is done by the individual. Even in institutions like VIT, Manipal paperless exams have been carried out, using digipad, all thanks to technology. In this way many technologies are being used by student. Not everything in education is quantifiable. Students should be thought about the technology enhancement because the future is completely dependent on the digital life so to compete with the future the students should be aware of the digital enhancements. Technology improves Knowledge retention, students who are engaged and interested in things they are studying are expected to have a better knowledge Retention encourages collaboration, For instance,

working on different projects by collaborating with others on forums or by sharing documents in their virtual learning environment.

## 6. Technological Pedagogy is Vital

Entertainment is equally important to students for the mental relaxation, there are apps which provide the youngsters with songs, videos, news and other informative content whenever they require. Moreover, many universities have implemented digital examination, which makes error correction made by the students easy to rectify. Further online tutors, and education services have made the life of students very flexible and easy. There are also many technologies used in the everyday lives for example, amazon's Alexa is a type of Google assistant (López, G., et.al. 2017) where it reacts on what data is shared and provides the information about it. New Software's introduced will reduce the language problems in lectures, speeches etc, by converting the spoken language to the comfortable language of the student. Introducing new technologies can also change the education system in India from giving preference to marks to more preference to innovative ideas. It also helps to publish the results faster. Online applications in different institutions have also been a great help to students. They don't need to travel to the institution or write letters to them directly. Technology has enhanced the interaction of students and teachers. Helps the professors to gauge the knowledge of the student and modify the teaching process if necessary. The professor can teach and understand a real-world scenario. 3-D printing (Moorefield-Lang, H. 2014). is used to create structures of some machine parts or buildings which can be used for learning and it is very helpful for students studying Mechanical and Civil Engineering. In schools and universities smart class technologies have been installed which educates the students using visuals for a better understanding and for better memory. There are many other smart Internet connected devices which converts the speech into written digital texts and also speaks out the written text which helps the students in examination, it saves the students time in making notes and makes education way more easier. Interacting online with others is a different experience than when you collaborate over the Internet with someone. Being behind a screen provides you with a layer of anonymity that you don't receive with a face-to-face conversation. . It helps students to learn at their own pace and time. It is also great for teachers because it enables them to give time to the students individually who might be struggling with their studies.

## 7. Confrontations Faced

Everything has a threshold in our universe. Even technology has limitations. It has led to new problems in the educational field due to its growth. The limitations include vulnerability due to data-theft, teacher-student relationship and a lack of proper boundaries on what a student can be exposed to learn . The most important limitation to the use of technology is that there are tons of information available to the student. There is a high chance of the students to get exposed to bad stuff like terrorism, trafficking, etc ., Hence there is a need of proper boundary and a learning path to a student which is not provided by technology . Due to presence of unlimited resources in the internet, it does not let the students to think by themselves. It leads to plagiarism. It has also led to many more unfair practices in schools and colleges. Devices like calculators and software like MATLAB (Tan, F. L., &Fok, S. C. 2009). makes students lazy and makes it difficult to solve simple problems by themselves quickly. Due to rapid development of technology, it is very difficult for faculty to update the syllabus and match the pace of technology. To understand latest technology, we need many more new concepts which are really complex in nature. Social media and other video games are making students more addicted that they are using phones and laptops for the same purpose instead of studying in classroom as well. These are distracting students very much and effecting their physical and mental behavior (Wood, E., et.al.2005). Due to usage of screens in class, the blue light is disturbing the students' circadian cycle and causing insomnia. This leads to drowsiness of students in class. Technology must be regulated properly by teachers

and students. They have to use it extensively but by the end of the day it should lead to development of the student and society.

Digital distractions have influenced students' learning. Students spend most of their time playing games or spending time on social media which affects their academics. Students instead of completing assignments on their own, they tend to copy it from the internet which affects them in the long run. Technology in classroom can create medical problems for students. Continuous heavy computer usage is very dangerous and most of the students tend to do it. They spend most of the time in front of a phone, tablet, and television and this can contribute to eye health issues as well. Technology may replace teachers, technology makes the teacher an observer. Students can lose their track on time and can't trust technology to save private property etc. They get influenced by the gadgets and they even have the mind set to improve it or to invent one. Due to over usage of gadgets, the amount of power will be reduced, so people start carrying their charged power banks wherever they go.

Cheating has always existed, yet technology has made it even easier in some ways students can copy and paste each other's work into their own assignments, they can even search on the internet for the answers without trying on their own. There is less human interaction as the student use the technology more thus they sit like robots. Unequal access to the technology as all the students cannot afford technology gadgets. For this criteria the students will suffer for the technological development of their belonging students are other private institutions.

There is no doubt that technologies can enhance work, improve our retention skill, speed but up to a certain limit after that we have put individual efforts to make that work complete. For example, if some student is using 60% of technologies to keep an update on the information and what's going around the world but the rest 40% should be fill with the discussion and our own thinking which can help in creating our own ideas (Price, L., & Kirkwood, A. 2014).. The use of online portals and resources is limited to our connectivity to the server and loss of internet connectivity can disturb our routine. Further several time the server may go down due to overload or vulnerability to hackers.

## 8. Conclusion

"Just Think" is a type of software which can bring about a sea change in the field of education. This technology lets you think an answer which will automatically recognize and convert into text instead of manually writing. This could save lot of paper and time. We could also build a new type of software which could listen lectures and notes important words and gives you meanings of them instantly to your mobile phones during class. This could clear most of students doubts.

Students stay engaged due to integrated technologies. For higher studies they need laptops, various modern machines to implement their ideas, do research work for a better future. Technology is all about improving lifestyle and education is the base of all mankind. As we improve the quality of education, our life would automatically be improved. So learning has to be made more informative and interesting. Education Computers and the internet have transformed education process to increase due to the technology. Most of the people that Educational technology can help are teachers and students. It provides such as organization, efficiency, collaboration Communication, extra help virtual experiences and so much more. Nowadays, in most of the countries like Japan, China, etc. technologies are used in teaching and learning to make the learning more interesting and informative. Technology improves one's retention rate. Students believe that technology helps them retain information in a better and a smarter way. With so much information available out there, it sometimes becomes difficult for students to differentiate between reliable and irrelevant resources, and one wrong step can lead someone in the wrong direction. Thus it is must for Students to get a lot of exposure in their respective domains. Therefore, usage of technology is an essential factor in an educational field.

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