



IAO

WHITE PAPER

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**EDUCATIONAL
TECHNOLOGY
IN SCHOOLS**

Table of Contents

1 Executive Summary

2 Educational Technology in Schools

Overview

7 New Technology Trends Emerging In Schools

Personalized Learning

Blended Learning

Flipped Learning

Gamification

Digital Textbooks

Social Media

Mobile Devices for Schoolwork

4 Benefits of Technology in the Classroom

Learning Becomes Fun

Students Learn At Their Own Pace

Better Retention Rate

Prepare for the Future

Students Become Confident

Teacher-Student Relationship Becomes Stronger

Access to Update Knowledge

10 Conclusion

Executive Summary

Our world has transformed into the world of technology. Each and every individual some way or the other has become addicted to technology whether at work, during travel, at home, or anywhere. When technology has spread its roots everywhere, why would it leave the most important aspect of life, Education.

Technology has had a great impact on education. With the passage of time and regular advancements, technology has covered education completely with its effects and benefits. This is the reason more and more schools around the globe have adopted educational technology in their classrooms. This extensive use of technology has changed the teaching and learning process wholly. The teachers learn new and advance methodologies and ways of teaching students, of each level, caliber, set of mind, understanding ability, etc. Similarly, the students too, get to learn new things more practically.

In this white paper we focus on the need of educational technology in schools. We have always wanted our readers to get connected with the modern educational needs and requirements. We have discussed in detail about the major technology trends in education and the benefits of technology to schools, its faculty and specially students. As, students have been the core existence of IAQ, therefore, we strive to work to provide maximum support to them with our publications.



Educational Technology in Schools - Overview

Educational Technology are two major terms: Education and Technology. It is very important for everyone to look at these terms separately at prior, in order to understand the real meaning of educational technology.

What is Education?

Education is a process of learning and acquiring knowledge.

What is Technology?

Technology is the branch of knowledge dealing with the application of scientific learning for practical purposes.

What is Educational Technology?

Educational Technology is the development, application and evaluation of systems. It assists the teaching-learning process and improves the tools and techniques used during learning.

Educational Technology in Schools

Education is not the same these days. Old and traditional ways of education have been replaced or taken over by new methods. This is the result of the growing technology that has taken the level of education to new platforms. Textbooks in schools have been replaced with tablets and teacher resources have been taken over by modern teaching aids. 75 % of the educators believe that technology has a positive impact on education. The educators have recognized the importance of technology that has made the students to be more involved in learning and classroom lectures. On the next page you will find the results of a survey, based on a study of how students value technology and how they believe it helps them achieve their academic goals and prepare them for their future endeavors.



Facts and Figures

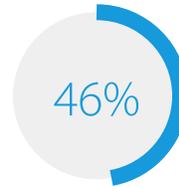
According to different studies and surveys the following stats and figures have been collected. These stats present the reviews of students regarding educational technology.



say technology helps them be more effective and efficient students



say technology makes students feel better prepared for classes



of the students think technology reduces stress



students say technology increases confidence

Many students that faculty use technology in meaningful and engaging ways

Percentage of students who say most or all of their instructors do these things:

61%

Use technology during class to make connections to the learning material

57%

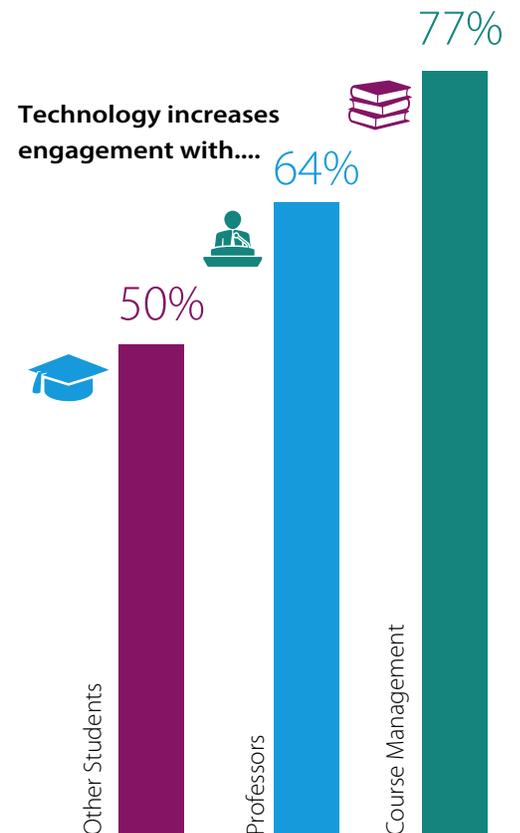
Encourage the use of online collaborative tools

49%

Encourage the use of technology for creative or critical thinking tasks

34%

Encourage the use of student devices during class to deepen learning



New Technology Trends Emerging In Schools

Technology was and is everywhere in education, but as more innovations and inventions are being created, new trends have started emerging in most of the schools across the world. School administrations and faculty have known it well that by integrating technology in school and classrooms gave rise to the students' abilities to think creative and out of the box, to be good decision makers, to do stuff independently and create what their minds imagine. Schools look forward to adapt these new trends of Ed-Tech to prepare the students for the technological future. Following you will read about the new technology trends emerging in schools:

Personalized Learning:

Several educationists in the Ed-Tech field see new technologies as intense instruments to help schools cater the concerns of the diverse student populations. The main thought behind is that advanced digital gadgets, software, and learning phases offer a broad array of opportunities modifying each individual student's academic strengths and weaknesses, interests and motivations, personal preferences, and optimum pace of learning. A few renowned group of organizations including the Bill & Melinda Gates Foundation, the Michael and Susan Dell Foundation, and EDUCAUSE have constructed a definition of "personalized learning" based on four pillars:

- Each student should have a "learner profile" that indicates his or her strengths, weaknesses, preferences, and goals;
- Each student should follow an individualized learning track that encourages him or her to set and manage personal academic goals;
- Students should follow a "competency-based progression" that focuses on their ability to demonstrate mastery of a topic, rather than seat time; and,
- Students' learning environments should be supple and organized in ways that support their individual goals.

Blended Learning:

Blended learning in its simplest form can be defined as the mixture or blend of traditional based learning with technology based learning. The trend of blended learning is been incorporated in many schools in which they mix the online educational world with physical classroom setting. The idea is to make students independent learners and to work on those parts they lack. The students get a room to open



themselves to new ideas, critical thinking and help them learn on their own. Independent learning makes the students' minds work more and produce good results. Along with online education, teachers also conduct regular content classes to prepare students have full command on the particular subject they study. By integrating blended learning in classrooms teachers can give more time to each student individually.

Flipped Learning:

Flipped learning is from of blended learning. Defining Flipped Learning in common language would be "students doing school work at home and homework at school." The thought behind this trend to make students learn independently rather than learning directly from the teacher. It is the approach in which teachers are allowed to implement a methodology, or various methodologies to engage students in active learning. The teachers follow the following four pillars in order to implement Flip Learning in their classrooms.

- Flexible Environment

Teachers provide a flexible environment to the students i.e. they let students choose the method and place of study. A variety of teaching methodologies, learning modules, and interesting content is adapted by the teacher in helping students learn. Students feel more comfortable to learn in an environment created by themselves.

- Learning Culture

Flipped Learning does not encourage traditional learning in which the teacher lectures the class inspite caring if the students are interested or even paying attention. To the contrary, flipped learning involves more of learner-centered approach in which students are given the opportunity to explore the topics in much depth.

- Intentional Content

Flipped Learning is based on student-centered learning. Teachers think about how the flipped modules can be used to develop conceptual understanding among students. The use of Intentional Content let the teachers promote student-centered learning in the class, focusing on the active learning of the students. The content chosen is relevant to students' age group, their understanding level and meets their academic needs.

- Professional Educator

Professional Educators play an important role in Flipped classroom. They keenly observe their students' work, evaluate it and provide feedback there and then so that the students learn from their mistakes. Professional Educators also take feedback from other mentors to improve their instruction and bring new ways to get students engagement in learning.

Gamification:

Games. Who doesn't like them? Whether small children, adults or even aged people love playing games. Game refresh your mind and make you feel active throughout. This trend is also used in education. It may not be a new one, yet very useful and effective. Students enjoy more when teachers used gaming modes to teach them. The love to solve the challenges at each level and feel proficient when they are rewarded for the win. This makes learning a positive experience, one that you won't have to force students to enjoy.



Digital Textbooks:

Textbooks are being replaced with digital textbooks and e-books. Digital textbooks are recommended more than textbooks. Textbooks do not provide updated content as it takes 7 years for a new edition to come, whereas, digital textbooks provide up-to-date information anywhere, anytime. Digital books seem to be cheaper than textbooks. Students do not have to carry heavy books to school when they can easily carry a tablet that holds a huge library in it.



Social Media:

When it comes to Social Media, everyone has the addiction. Teachers are fearful to use social media as a medium of imparting knowledge. But this is only one-sided view of the situation. Social Media also plays a vital role in developing students' interest in education. It is the most common medium of communication which can also be a great source of learning too. Social media can be used in a variety of ways to make learning effective. Students form groups on social channels and work on projects and assignments together. Peer learning is enhanced and students' communication skills are also developed. The best thing about social media is that a medium is used which students understand and enjoy, making it easier to get everyone involved.

Mobile Devices for Schoolwork:

Schools have allowed students to bring their mobile devices for schoolwork. Students use their mobile devices for various tasks in school. They download apps to schedule their homework for the week. Students use translate apps during language classes. Students stay in contact with their peers in group tasks and get answers to questions just on one click.

Benefits Of Educational Technology

Technology in the classroom can help in many ways – it can make a lesson more fun and interactive, and it can prove to students that what they are learning is applicable in the real world. Besides, some students may even learn better using technology as opposed to traditional methods. Below stated are some of the most intense benefits technology offers in the field of education.

Learning Becomes Fun:

The children of the present era are fond of digital IT devices. According to Cognitive Theory of Jean Piaget, kids learn more during their Concrete Operational Stage as they start building their fundamentals of logic and learn more through experimentation. Therefore, the teachers need to make learning more fun rather than boring. The use of modern aids in the classroom will get more attention of the students and will make learning fun for them increasing their ability to grasp and understand more effectively.

Students Learn At Their Own Pace:

Every child differs from the other as they are not born with the same set of mind, level of understanding and the ability to learn quickly. Previously students have been struggling to maintain their pace among their class. The teachers too couldn't focus on each child individually. This led to the failure of weaker students in academics, thus, making them a victim of low self-esteem.

The introduction of educational technology was like a dream come true. With the implementation of technology students are able to learn at their own pace and understand better. Teachers now can attend every student individually who struggle in learning or adapting knowledge.

Better Retention Rate

As quoted above, Jean Piaget in his theory brings the complete outcome of a child's learning at each stage. Different studies and research has proved that the students retain more when they are taught with the use of new and modern aids of teaching. The students this way can remember more and give remarkable results during their assessments.

Prepare for the Future:

Majority of the students believe that technology keeps them updated and helps them resolve complex problem. Technology is a guide and prepares the students for a digital future. As the world is producing more and more in advance technology inventions, it is necessary for our children today to be aware of every aspect which will definitely help them secure their future.

Students Become Confident:

Initially, students faced problems to present themselves in the class or they felt uneasy to answer any question. The integration of technology has built confidence in students. The students now take more control over their own learning. They learn how to make their own decisions and actually think for themselves.

Teacher-Student Relationship Becomes Stronger:

You must be wondering that how can the relationship between the students and their teachers get stronger with technology. Technology occupies a very crucial place within the lives of the students and the teachers as well. Wherever the students are, they are connected to technology some way or the other. E.g. during school hours and even at home they are engaged with the IT devices such as, tablets, laptops or mobile devices. Many schools are offering online libraries of school resources that students can access from home, which makes studying and researching much easier. Moreover, parents and teachers can stay in close contact with email, for the exchange of important messages, instead of relying on the children.

The teachers can get in contact with their students anytime. Most of the teachers post homework and important notices on school website. The teacher also provide feedback individually to the students on their assessments. By integrating technology teachers have built strong bonds with their students.

Access to Update Knowledge:

Students feel burdened to carry heavy textbooks. But with the use of technology students can have access to digital textbooks that are constantly updated and often more intense, helpful, creative, and a lot cheaper than those old heavy books.



Conclusion

Technology changes by the minute, and as educators we need to keep up with the times in order to best prepare our students for this ever-changing world that we live in. While we just read how incorporating technology into the classroom has its benefits, it's important to note that traditional learning processes are just as essential. Pull out time to learn about each component of Ed-Tech that you think is beneficial to incorporate into your schools and classrooms. When you do, you will find that technology can have a profound impact on your students' learning.



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