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Exploring the new trends in Educational technology: Stakeholder's perspective

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Abstract

The digital transformation trends have also heavily impacted the education industry. They have affected how the teachers teach and students learn in classrooms. Further, their use has been accelerated by the pandemic. Many schools and teachers turned to technology to help the students continue their learning. Schools, colleges, and universities are changing their traditional methods of teaching with new trends in education technology. Technology-enabled learning and smart boards are slowly replacing the traditional blackboards, chalks, and textbooks. In this paper the researcher will be exploring the latest trend in educational technology and how it is affecting the different stakeholders such as students and teachers.

Key Word: Educational Technology, Digitalisation, Big Data, Machine Learning

Big Data, Machine Learning, and the Internet of Things (IoT) were the biggest educational technology trends of 2019. However, distance learning has become the one trend that rules them all. The COVID-19 pandemic has drastically changed the way we teach and learn. Students now have to get used to distance learning via digital platforms due to social distancing. Even though some schools are reopening, this trend may continue further. The latest Educational Technology trends in 2020, are being revolutionized with a strong focus on connectivity, versatility, and student-cantered learning. In this research paper we will be looking at the latest top 10 trends in educational technology.

What Is Educational Technology And Why Should It Matter?

Many people can recognize that Educational Technology is devoting technology to promote education. It's true, but not sufficient. The Association for Educational Communications and Technology (AECT) has defined Educational Technology as "facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources." On the other hand, educators who actually use Educational Technology have a much simpler definition of the term. They say that it is a concept of transforming traditional book teaching and learning to digital form. For them, the main difference lies in the way knowledge is delivered (thanks to technology innovation) to make teaching more effective. According to Johnson (2003), the computer and technology, if used correctly, has the ability to "invoke dream in the minds of visionary educators who saw endless potential for altering traditional notions of teaching and learning" (p. 2).

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New trends in education technology can make learning effortless and captivating. They can help to provide a rich learning experience to the students and learners. The learning occurs in real-time with interactive games, AR/VR experiences, high-impact graphics, and feature-rich animations. Artificial Intelligence (AI)

Why does Educational Technology matter ?

Use of the internet and computers in today's schools is as common as using textbooks to study. These devices paired with ed tech can enhance students' performance. Technology can assist educators in determining the needs and requirements of every student and creating personalized solutions to enhance their performance. Technology like auto-grading can lessen the burden of educators and allow them to enhance the learning experience for students.

Technology is already part of many student's daily lives, so there is an opportunity to use that technology to further their education. The modern learner doesn't want to be told, they want to experience. Ed tech allows educators to connect with young minds and interactively educate them. Altogether, the current trends in educational technology help teachers keep up with the needs of modern students. Research has shown that students fi nd traditional learning boring, ineffective and dull (Chetty, 2017; Dicheva et al., 2015). As a result, many students remain unmotivated and disengaged (Lee & Hammer, 2011).

1. E-Learning

When schools around the world were shut down due to the spread of COVID-19, distance learning was the only available mode of learning. That resulted in a rising demand for e-learning platforms, and overnight this tech became one of the biggest educational trends. E-learning platforms let you deliver educational content through phones, laptops and computers.

E-learning has opened a door of opportunity for educators to teach students without the boundaries of a classroom. Many educators also use animations, podcasts and videos to make the e-learning experience more fun and interactive for the learners. From customized learning environments to being cost-effective, e-learning has many advantages, and this is why we will see this trend grow in the future.

2. Video-Assisted Learning

Another trend that has been beneficial amid the pandemic is video-assisted learning. This is somewhat similar to e-learning, where videos and other visual modes are used. However, instead of a real-time class, these are lecture videos that can be watched at any time.

Although this medium was used before mass e-learning was needed, it was updated to suit modern needs because of the pandemic. It is not the same as "movie day," where teachers play movies for students about the topic they're learning. It is a much more subtle medium that has been instrumental in distance learning.

According to a paper published in Scientific & Academic Publishing, video presentations are highly effective for students' learning. Video-assisted learning enriches the lessons and directly influences the performance of students.

3. Blockchain Technology

Blockchain is a way to structure data. A blockchain collects information in small blocks, and when these blocks are filled, they are chained to previously filled blocks of data, forming a chain of data known as the blockchain. Blockchain technology has a big role to play in the education sector, especially in data storage.

This trend has transformed record-keeping for student credentials and certificates, and it eliminates the need to verify degrees and other academic papers. Blockchain ensures transparent ledgers for academic qualifications, reducing the cases of fraud at workplaces.

Blockchain ensures honesty and transparency in academic qualifications. Once information is recorded in a school's online ledgers, it is not easy to change — you will be required to get permission from network users to modify the information. This can tackle issues like fraud and keep the data secure. Blockchain technology can also address issues like plagiarism by storing all data on a blockchain platform, which makes it almost impossible to modify any data without permission. In this way, blockchain is laying the foundation for a transparent and better future.

4. Growing Big Data

After the trend of distance learning is adopted by various educational institutions after the pandemic, we will see bigger sets of data than ever. Since many schools are operating remotely or have the capacity to do so, educational institutions have a unique opportunity to collect student data, like how they respond and their engagement levels. This data can be used to improve the student learning experience. Losing important information in the flood of this data is understandable. This is where big data comes in.

Special techniques need to be applied to identify beneficial knowledge hidden within the collected data. This data can demonstrate the results of adopted techniques and allow educators

to alter their curriculum and measure students' performance. Educational techniques and methods can be measured against students' performance, empowering teachers to see which methods are most effective.

5. Artificial Intelligence

According to a market report, the global AI in the education market is projected to reach $3.68 billion by 2023. One of the main applications of using AI in education technology is the automation of activities like grading. AI can grade multiple choice questions and fill in the blanks without the assistance of an educator. It frees up time for teachers and enables them to focus on other more important tasks.

Another issue AI solves is the need for individualized attention in an overcrowded classroom. AI can fill this gap by providing personalized tutoring to the students in need. AI programs can also create individualized learning tracks for every student and allow them to learn at their pace. This way, children can explore their lessons at a comfortable speed and reduce the frustration that comes with traditional teaching methods.

6. Learning Analytics

Researching, tracking progress and analyzing data have all been used to improve the learning process. Learning analytics is built on those pillars, but it also offers new opportunities once the data is captured.

Learning analytics uses computational analysis techniques from data science and AI to improve the quality of learning and teaching. Learning analytics programs help educators measure students' growth and make predictions of academic success. It also identifies the students who are at risk of falling or dropping out. Learning analytics programs evaluate the overall competency skills and offer insights to educators that allow them to focus on other areas apart from academics, like coordination, communication, critical thinking and more.

When educators receive this analysis, they get an idea of what students enjoy the most. It provides them an opportunity to increase engagement in the classroom and identify any blocks students might be experiencing. These analytics empower educators to develop a teaching pattern that benefits the students and helps them reach their full potential.

7. Gamification

Educators are always looking for ways to provide knowledge through fun activities, and gamification can be the answer. Gamification is the process of taking something that is not

a game and applying game-like mechanics to increase student engagement. This emerging trend is getting popular in primary education. Students can learn and practice important lessons under the pretense of gaming activities.

Gamification improves student engagement and allows them to learn without feeling bored. Gamification has several benefits, including aiding in the cognitive development of kids. Gamification can also create a positive environment in the classroom and help students collaborate.

8. Immersive Learning With VR and AR

Augmented reality and virtual reality (VR) can help the classroom become more interactive and immersive. Students today want to learn via experience, and immersive learning is the perfect solution. Immersive learning is a style that helps students learn by engaging their senses. Whereas VR provides a constructed reality, AR gives a better and enhanced view of the image.

Immersive learning allows students to view environments and provide a fun learning experience. Some concepts can be better explained through this technology, making it easier for students to grasp these concepts. Participating in experiments and experiencing real historical sites can make this information more memorable, and it can directly influence student performance in the class.

9. STEAM

STEAM is an improvement on its predecessor, STEM. This new acronym stands for science, technology, engineering, art and math. STEM has been around since the early 21st century, and it was a set of skills educators encouraged youth to develop. Art is the new element in this equation that promotes creativity.

Since STEM occupations grow at a fast rate, people working with STEM-related degrees had higher incomes. STEM workers played a critical role in the stabilization of the economy, but it's no longer enough to provide a balanced education. The incorporation of arts and humanities programs teaches personal expression, empathy and provides purpose to students. The introduction of arts has increased creativity and encouraged students to try new things. Adding arts to STEM is a movement that may entice other students to consider a STEM job.

10. Augmented Reality (AR) and Virtual Reality (VR)

AR enhances real-life experiences by using images, videos, or interactive data. You can experience AR with portable devices like mobile phones or smart glasses. VR creates an immersive 3D experience, which is completely artificial. It makes users feel that the virtual world is real. Users experience natural sounds and rich visuals in a digital world. For a virtual reality experience, you need to use VR headsets.

Students can benefit from VR's ability to make theoretical concepts into actual experiences. For example, with VR gadgets, biology students can travel inside the human body. Such an immersive learning experience can provide the students with a deeper understanding of how the heart functions or how the circulatory system works in our body. In another example, trainee healthcare professionals can learn how laparoscopy surgery is performed, using VR gadgets.

11.Gamification

Gamification is one of the most innovative trends in educational technology. It has become an increasingly essential part of education in the last few years. The gamification approach uses different strategies, varied activities, badges, and rewards to promote student or learner engagement. Gamifcation has been used in various disciplines and felds, especially within the science, technology, engineering, and mathematics (STEM) disciplines. Te purpose of gamifcation is to engage users and solve problems (Ionica & Leba, 2015).

The approach makes use of the various gamification elements and characteristics of gaming culture in designing the courses. It helps the students to become active and motivated learners. Learners play educational games to learn various academic skills and earn points or rewards for completing the assigned tasks. They compete with peers towards specific objectives or goals. The challenges and rewards help the learners to remain motivated in the process of learning. The game-based approach helps to make the content more fun and interesting for learners. Earning badges, coins, rewards, etc., makes the learners pay more attention to what is being taught to them.

12. Artificial intelligence (AI) in education

The use of artificial intelligence (AI) in education has transformed the quality of content delivery. AI is also booming as one of the new trends in education technology. AI can provide great insights into student's learning and performance. AI can help the teachers to automate some activities in education, like assessment and grading. With AI, it has become easy for teachers to give grading to the students based on their performance in the assessment questions.

There are a few AI systems that monitor student's progress and alert teachers when there might be an issue with student's performance. Thus, AI-driven programs could benefit both learners and educators by providing helpful feedback.

13. Virtual Learning (ILT Over Web)

Virtual Learning is a way of learning a subject or providing training with the use of web-conferencing tools. Virtual learning offers convenience and flexibility to learners. It allows for live online interaction between the instructor and learners, which is very similar to the traditional classroom experience. Thus, it offers a combination of online learning and in-person instruction. The live online teaching or training can be supplemented by self-paced

online learning tools and additional study materials. It provides learners with a more comprehensive understanding of course content.

This approach helps you to create more effective, flexible, and learner-centered teaching. Learner engagement will be more, and learners can gain more while participating in online assignments. The virtual learning approach helps the instructors to think about the best way to teach learners and then use the appropriate technology to achieve their goals. Virtual learning is one of the cost-effective ways of delivering content or training. This model is widely used by schools and colleges, universities, vocational training institutes, corporate training, etc.

Conclusion

Accessibility and access to learning opportunities continue to improve from a geographic perspective, thanks to new trends in education technology. New learning opportunities allow students to learn from anywhere and help students secure the best possible education and training.

References

I. Chetty, J. (2017). Combatting the war against machines: an innovative hands-on approach to coding. In M. S. Khine (Ed.), Robotics in STEM education: redesigning the learning experience (pp. 59–83). Springer International Publishing.
II. Dichev, C., & Dicheva, D. (2017). Gamifying education: what is known, what is believed and what remains uncertain: a critical review. International Journal of Educational Technology in Higher Education, 14(1), 1–36. https://doi.org/10.1186/ s41239-017-0042-5
III. Johnson, D. & Maddux, C. (2003). Technology in education: A twenty-year retrospective. Computers in the Schools, 20(1/2), 1-186.
IV. Ionica, A. C., & Leba, M. (2015). Gamifcation & research—partnership for innovation. Procedia Economics and Finance, 23, 671–676. https://doi.org/10.1016/S2212-5671(15)00455-4
V. Lee, J. J., & Hammer, J. (2011). Gamifcation in education: what, how, why bother? Academic Exchange Quarterly, 15(2), 146–151
VI. https://elearningindustry.com/top-educational-technology-trends-2020-2021