The Role of EdTech in Enhancing Learners' Motivation

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Abstract: Today, technology is influencing the education sector all around the world in extraordinary manners. Technology can help students in increasing their engagement and allow them to learn and retain more information. At the same time, educational technology (EdTech) can also work as the main force to enhance the motivation of students to perform better. The factors related to EdTech, like user-friendliness, psychological satisfaction, and curiosity of users for new learning tools, contribute efficiently to enhancing the motivation of students in the long run. This study investigates the positive role of EdTech on student learning and explores the ways technology can be used to enhance the motivation of learners. Useful recommendations have been offered that will help future researchers and EdTech developers to work on tools and applications that will play important roles in enhancing the learners' motivation. In addition, it will analyse how enhanced motivation will have positive impacts to ensure the success of learners in their academic and professional life in future. In the posts COVID-19 pandemic situation, technology will play a more important role to increase the motivation level of the students so that they can excel in their life.

Keywords: Education Technology, Innovation, Motivation, Technology.

1.   Introduction

Digital technology has been functioning as a catalyst for learners' engagement and change in 21st-century education (Muhammad et al., 2019). Together with the recent advancements in ICT, different kinds of laptops, tablets, smartphones, and other digital devices are being used extensively as learning tools by students. They use these gadgets for different purposes, like accessing course materials, submitting class assignments, reading articles related to coursework, communicating with the instructor and other students, and more. The educators are also offering various types of deeper learning opportunities in classrooms equipped with the latest technology, which can enhance the creativity and engagement of the students with the added benefits of making them passionate and enthusiastic in their learning process (Bester, 2013). In these ways, Education Technology (EdTech) has positively changed the entire teaching and learning system.

2.   Methods

The researcher conducted a comprehensive literature review of several research papers published in reputed journals and conference proceedings in the last ten years that emphasised the issues related to EdTech and motivation. All of the research papers selected for this review article are peer-reviewed. The researcher summarised the results accordingly after carefully analysing the findings. In order to find relevant articles, different search terms were used, like motivation and EdTech, Education Technology, Technology, Motivation, and Motivation for Students. Research databases like Google Scholar and Mendeley were used for finding the relevant articles.

3. Results and Discussion

3.1 A Brief Overview of Motivation and EdTech

According to Shaheen et al. (2013), a combination of forces that arouses, continues, and directs a particular type of behaviour is often called motivation. It is an indispensable factor that inspires individuals to give their best performance and assists in achieving their goals (Vincent & Kumar, 2019). Specifically for learners, motivation is a persuasive feeling that always offers positivism to them to accomplish an activity or a task to the end and become successful no matter how tough and complicated it is (Gopalan et al., 2017).

As mentioned by Ross et al. (2010), Educational technology (EdTech) is related to the use of technology in the process of analysing, developing, designing, implementing, evaluating the instructional environment and learning materials in order to improve the process of teaching and learning. The devices or applications related to EdTech include the computer, various software applications, artificial intelligence, camcorders, LCD projectors, digital cameras, scanners, the internet, satellite, interactive TV, audio/video conferencing, and so on (Kurt, 2015). EdTech can help affirm and advance the relationships between educators and learners, introduce new approaches to learning and collaboration, and assist in meeting the demands of all the students.

3.2 How Technology Can Enhance Learners' Motivation

Technology yield positive results consistently regarding students' motivation, attention, persistence, and attitude toward learning. As argued by Shin (2012), when students work on challenging tasks using technology, their motivation to compete against and improve their own previous scores increases. Different types of computer games provide various options that students can choose based on their individual requirements. This can promote positive attitudes toward motivation and learning. For instance, as argued by King and South (2016), games like the 'Social Express' have been found as effective in enhancing self-awareness, self-motivation, cooperation and problem-solving abilities.

Again, students exposed to technology have considerably greater attention and motivation than those not exposed to technology (Bester et al., 2013). By implementing technology, a more interactive learning environment can be created, enabling learners to use multi-modalities (Bester et al., 2013). This improves their concentration and motivation for performing better. Moreover, where teachers become successful in capturing the learners' attention using technology, an optimal learning situation is created. The students also become more motivated to focus on the learning tasks, which increases the prospect of higher achievement (Bester et al., 2013).

Besides, as highlighted by Gustad (2014), when simulating activities are connected with reading texts, students are more engaged. Teachers always prioritize high level of engagement, and technology can substantially help them achieve this (Gustad, 2014). In addition, technology lets students collaborate easily with each other and gain a deeper understanding of topics that interest them. Moreover, submitting assignments as podcasts or videos, blogs, and different kinds of infographics can work as the motivating factors for them and enhance their engagement (Gustad, 2014). The results of a survey involving 95 students of an urban charter school revealed that 77% of them feel motivated through the specific use of technology in the classroom (Francis, 2017).

Educational Technology is also implemented in Problem Based Learning (PBL) system. In fact, technology and PBL fit together seamlessly. Learners are positively

motivated through PBL as they face real-world scenarios. They also get the opportunity to become better prepared for the dynamic world in which they live by using technology as a tool. It also helps them solve real-life problems (Yardimci et al., 2017).

Furthermore, as opined by Oudeyer et al. (2016), different education apps on smartphones, tablets, and computers are helpful for children as these improve their engagement in learning. Though, care should be given to prevent using education technology as a babysitter to capture the attention of children for the purpose of passing the time. Hence, to ensure that effective learning is generated, it is necessary to consider each learner's situation and adapt their capabilities to the use of technology (Yanguas, 2020). The parents also appreciate these approaches, as they can save their time and effort to teach their beloved kids with higher efficiency (Yanguas, 2020). For example, an educational app called *Todayit* lets learners keep track of their studies. Also, as argued by Pilcher (2018), this app provides a series of analytics and useful feedback. Hence, students can plan their studies better and keep themselves motivated to achieve their goals. Other game-based apps, such as *VocabTrainer*, can motivate learners and meet their language learning requirements by combining collaborative and individual learning tasks seamlessly (Berns et al., 2016).

It has also been found that when any technology becomes more user-friendly than the conventional method, like by saving time or reducing cognitive stress, it enhances the students' motivation (Chan et al., 2016). As contended by Chan et al. (2016), PATH (a computer program) leads to the highest intrinsic motivation, increasing the system's acceptance to use when individuals perceive that its usefulness is higher. Therefore, many people claim that technology is the language of this era, so certainly it should be used by the young generation in an extensive manner (Chan et al., 2016).

3.3   Future Trends and Recommendations

In recent years, a fundamental and rapid shift in educational practices has been observed. This will inevitably shape future trends. In fact, widespread adoption of technologies like Machine Learning, Artificial Intelligence (AI), learning analytics, software tools, and different social media applications are frequently being used by pupils and educators, and this trend will continue. According to Jones (2020), applications driven by AI in education are being developed for future platforms, though these are still in their infancy. For future students, endless learning materials will be available, which will also be used to enhance their motivation considerably. It is highly recommended that more tools and applications based on AI need to be developed that will play important roles in enhancing the students' motivation.

Chatbots are quickly becoming a fundamental tool for next-generation education. These chatbots provide a wide range of benefits, including spaced interval learning, self-paced learning, immediate feedback, and are designed to simplify the interaction between technology and the students (Jones, 2020). An innovative tool like this helps teachers adopt novel strategies for more engaged learning, and at the same time reduces their workload (Jones, 2020). Higher demand for video-based learning will come from students soon, even though most institutions are already incorporating video into their curricula in some way. Thus, the application developers and researchers need to step forward and try their best to develop new tools and technology that will meet future needs and contribute towards boosting the motivation of learners in the future.

At present, due to the pandemic, teachers are taking classes online, and hence different methods will be followed by them to motivate their pupils to do better in future. For

communication, both students and teachers will use various communication software tools like Google Meet, Zoom, Slack, and See Saw in an enhanced manner. In addition, new institutions will start offering online learning environments that the students will welcome, as they will be able to choose courses that interest them and take those courses at their convenience. Online platforms like these will also allow them to learn independently to satisfy their curiosity and gain new skills. As opined by Hartnett et al. (2011), online learners are intrinsically motivated, on the whole, and so it is expected that the online learning environments will enhance the motivation of the students in the future. Hence, adequate steps need to be taken for making these tools more user-friendly and interactive so that the requirements of future learners can be met.

4.   Conclusion

The use of EdTech is considerably increasing in this era of technological revolution and well appreciated by both the teachers and the learners. Also, the application of EdTech is no longer considered only for fascination and curiosity. Instead, it has become an integral component of the educational system. From the above discussion, it is evident that EdTech enhances students' motivation and leads to higher academic achievements. In the future, new and innovative tools and technology will be used to make the learning process more enjoyable and interesting, and at the same time increase the motivation of the students further, which will also lead to better performance.

5.   References

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