Review of the Literature

Technology and Student Learning

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Review of the Literature

In the recent past, technology has been a marvel in almost every day-to-day human activity across the globe. Among the major contributions of technology in human life is making difficult tasks seem more efficient and easy, requiring less human energy and effort. The education sector is the most recent beneficiary of technological advancements that have revolutionized the system from the traditional system across the globe. In particular, knowledge dissemination has been made easier since technology enables instant knowledge sharing through effective communication to many students and the active provision of learning materials that are accessible at any time. Incorporating technology in the education system is seen to do away with some of the traditional learning systems to increase learning effectiveness. Technology has particularly enabled a good portion of learning institutions to opt for online learning, unlike traditional classroom learning environments. The use of technology in education has received great attention as it is replacing some aspects of standard course delivery. Many scholars and proponents of the idea have contributed to the existing literature on the subject.

Positive Contributions of Technology in Learning

The recent use of technology in learning is directly associated with a student's motivation and academic performance. Al-Bataineh et al. (2016) deduced in their study that the incorporation of technology in learning purposes among learning institutions truly impacts a student's academic performance. The scholars established that most students are often motivated to be in school when technological tools are used in the teaching process. The study was carried out to ascertain the impacts of one-to-one (1:1) technology using participants from fourth grade in Title 1 elementary institutions in Central Illinois. Technology positively impacts student learning since most of them love interacting with technologies used rather than the normal

traditional classroom environment. Schindler et al. (2017) substantiate the explications, pointing out that computer-based technology positively influences student engagement, resulting in outstanding academic achievement. The authors used five technological elements to establish a conclusion (digital games, web-conferencing, social networking, wikis, and blogs). It was shown that learning through technology, especially web-conferencing, increased student morale and engagement by influencing their emotional, behavioral, and cognitive aspects. Such students will ultimately be more participative in the session, unlike in an environment where digital tools are not used.

Raja and Nagasubramani (2018) focus on the effects of technology in two essential learning and teaching processes. The scholars point out that learning has been drastically changed through the application of technology, pointing out the major benefits of using technology in the education system. They emphasize the contribution of technology to enhanced learning and teaching, stipulating that technological developments such as projectors, digital cameras, computers, 3D visualizations, and PowerPoint presentations are a powerful source for instructors for effective teaching provision. In addition, they help students to grasp and digest concepts more easily. Students can easily understand because the tools provide more lively session interactions, which enable minds to process and store the information learned. The authors add in support of Lin and Chen (2017) that geographical limitations are done away with technology through technology. With this regard, the need for students to be in specific physical locations (classrooms) for sessions is not an issue. One can easily opt to study online, a technological provision in the education system that has become common.

Negative Contributions of Technology in Learning

The negatives of incorporating technology in learning have also received keen attention in recent. Raja and Nagasubramani (2018) point out that when technological tools deployed in the learning process are used especially beyond the limit, there are high possibilities of students and instructors developing health issues. In particular, students are at increased risk of developing health-related problems such as vision problems because they have to spend a lot of time reading and revising. Halupa (2016) substantiates Raja and Nagasubramani's claims in her study that focused on establishing the effects of technology and online learning on the students. The author asserts that the use of technology in education affects the social, emotional, and mental health of some students. Due to social disparities, some families often have no capabilities to meet technological requirements in learning based on technology. For instance, the author points out that some families cannot afford internet requirements for knowledge leading to social, emotional, and mental health issues among students who belong there. Another recent scholarly research on the impact of online education on health issues, particularly eye, concluded that using technology-assisted tools in facilitating online learning affects eye health (Kaya, 2020). The scholar established that most participants in the study recorded issues about eye fatigue, an issue that drastically dropped their academic performance with previous results.

The use of technology in the learning and teaching process impacts student's writing skills (Raja and Nagasubramani, 2018). More often, learning institutions have shifted into using digital tools in facilitating teaching and pay minimal focus in students' writing skills. According to Raja and Nagasubramani, such students will have poor writing skills, which are essential for students' future lives. A scholarly review by Strain-Moritz (2016) substantiates the assertions pointing out that despite instructors recognizing students' formal writing skills as essential,

technology makes most students develop negative mentalities towards writing, often resulting in the poor grasping of the skills. The study revealed that students often write shorter sentences with poor connections, unlike when using digital tools where their interest is much, and they could write appropriately. As such, digital tools give students motivation to concentrate while demotivating them on writing skills.

In conclusion, technology is a super element in the learning and teaching processes. The concept has received a wide range of attention, especially from scholars and other relevant authors. Technology has contributed to enhancing motivation for learning among students, consequently boosting their academic performance. Learning has also been enhanced by the use of appropriate technology such as PowerPoint presentations. However, it has negatives, including health issues and poor development of student's writing skills, essential in a student's life.

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