Emerging Technologies for Online Learning

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Abstract

When teaching an online class, there are many forms of technology that are available for teachers to use to work with students. Online classes allow students the opportunity to use a variety of mobile devices to make it easier for students to participate in online classes. A literature review was conducted through Google and GoogleScholar to determine what forms of technology can be available for teachers to use in an online course. Research revealed that there is a variety of tools that teachers can use to work with students when conducting an online class. Even as advanced as technology will become in the future, there will always be some form of mobile device that will be able to help students in working with online courses.

How Technology Can Enhance Adult Learning

Taking courses online allows students to have access to many forms of technology. These forms of technology allow students to have access to their classes at their convenience, anytime and anywhere. Depending on their preferences, certain devices can benefit students so that they can become successful on their terms. This paper provides a variety of what technology is available to students for their education and how they may enhance their adult learning.

Virtual Reality

Virtual Reality (VR) can be used as a game and or training purposes. VR is a computer-generated environment that simulates the physical presence of people, objects, and realistic sensory experiences (Young et al., 2020). VR can make the learning process more exciting and engage the learners with fun activities to motivate and improve academic grades (Srimadhave et al., 2020). VR can also be used especially in the medical field where medical students can practice surgery before performing the actual maneuvers.

Interactive White Board

This technology can make it easier for teachers of all grades and of higher education to make it easier for students to interact with everyone in the class. Interactive White Boards (IWBs) is an electronic WB connected to a networked computer and a data projector (Smith et al., 2005). IWBs allow for student engagement that includes the students' active involvement with their learning peers, instructor, and environment (Dixon, 2015). Teachers can use IWBs to add graphics to enhance the information on the board. Videos can also be added to strengthen the study lesson for the day.

Wikis

Wikis technology (Richardson, 2006) is an internet software for visitors who wish to contribute to or edit information on the website. It is considered an open-sourced encyclopedia where programmers can create and share the software. This sharing of information can eventually improve its code (Blehost, 2022). One example of this type of technology is Wikipedia (Holloway et al., 2007). Students can use it to update, for example, any historical sites that they are researching in a history class. This type of Wiki writing can be effective in teaching this kid of depersonalized instructive writing in the business world.

Moodle

Students can use discussions forums, real-time chats, quizzes, and wiki writing on another free, open-source course management system like Moodle (Friday, 2009). Moodle can organize collaborative written discussions between students and teachers. Moodle is a platform that can be used for online learning to create online courses, add assignments, and keep track of students' progress (Kokoulina, 2022). This technology can offer complete online courses with interaction that can either be synchronous or asynchronous. Moodle can be used for English as a Secondary Language and adult basic education instruction.

Mobile Devices

Kim (2016) considers mobile learning as the future of learning on the go. Mobile devices can always provide portable materials when studying for classes. The ability to study in short bursts is always essential. The main time to study using these devices is during gaps in-between other activities. Resources can always be available to be downloaded when needed. Students can always use short bursts of formative assessments when needed.

Smartphones

  Smartphone technology offers endless possibilities especially if students do not have internet access or attend school (Ehnie, 2021). This technology offers teachers the capacity to facilitate and inspire students to learn and create while increasing motivation. When using the smartphone, students are not as likely to be distracted. Smartphones give students a way to learn, collaborate, share and create in many ways. They can also be used to create short videos quickly on their own mobile devices.

iPads

  One of the most popular ways to participate through mobile learning is using iPads (Leiberman, 2019). This technology allows students to interact during class participation while working on assignments without a desktop or a laptop screen blocking their view of those around them. Teachers are fond of this technology as iPads are less distracting to the eye and have a feel of the classroom. Students can use iPads to research online for term papers or add literature to assignments. They can also take pictures and videos of laboratory experiences.

Machine Learning

  According to Lynch (2019), machine learning (ML) is a computer science that uses statistical techniques to give computer systems the ability to learn. ML has the potential to make educators more efficient by completing tasks. ML can help teachers gain insight into data that cannot be collected by using the human brain. Computers can sift through millions of pieces of content and make connections and conclusions that can positively impact teaching and the learning process. It can make conclusions about what can happen in the future. ML can remediate struggling students or challenge gifted ones. ML can grade assignments and exams more accurately than a human. These predictions can only be as good as the input that is

required from a human. ML can be used for classroom management, scheduling, and predicting students' academic futures.

Podcasting

This technology can capture an audio event, song, speech, or mix of sounds that can then be posted to a website or blog (Meng, 2005). Users can subscribe to a web page with audio files and download these files directly into an audio management program on their computers. When users synchronize their portable audio devices with their computers, the podcasts are automatically transferred to that device to be listed to anytime and anywhere. Podcasting can be used in post-secondary institutions to preload orientation information and academic materials in digital format.

Websites

Websites can enhance adult learning by using particular research terms to locate particular sources such as articles and PowerPoints. Using websites can also quickly locate certain material if the source is available. Websites can generate college online learning sites. These sites can help working adults decide if attending school online would make it easier for them, especially if they have a family (Vander Ark, 2017). Companies could offer more skills on their websites to better train their employees and can then relocate them to another department (Price, 2020).

Tutorials

Tutorials are learning-based videos that students can use on their own and on their own time. Students can research the internet to locate tutorials on any subject they chose to learn about. How new students are introduced to them and how their expectations are received can affect the way they approach the subject matter and how they relate to the tutorial (Rosaner &

Chiriac, 2016). Tutors can be used as a trigger for continuous learning (Habjanic et al., 2014).

They can also support, as well as challenge, students' knowledge acquisition. It can also be used

for training collaboration abilities (Azer, 2009; Hmelo-Silver, 2004). Lastly, tutorials can be

used to visit YouTube applications, search for a particular "how to do" subject, and see what is

listed.

   The technology that is listed here represents just a fraction of what is available to students

and teachers. They have proven to be compatible with most students who take classes online and

other devices that can also be used in conjunction with other mobile devices. These devices are

not required to be used on online courses but have been proven to enhance students' potential to

improve their academic professions. The future of these devices may change depending on their

need in these classes.

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