EFFECTIVENESS OF VIRTUAL LEARNING WITH SECURITY

Abstract

The rapid growth in technology, has provided a positive contribution to the evolution of education. Virtual Learning is one of the outcomes of this growth and is defined as form of network enabled transfer of knowledge to a large number of recipients. The key benefit of virtual learning is the students can learn not only their academic courses but also gain experience in appropriate use of social media, multimedia training and digital technologies. An important factor that needs to be considered when delivering virtual learning is the security, which includes the process of authentication, authorization, preserving confidentiality and use of secure network protocols. A secure virtual learning environment will give confidence to the user that their personal information is safe and the information delivered is authentic. This in turn will help in the overall reliability and effectiveness of the process.

Keywords: e-Learning, social media, security, multimedia, authentication, authorization, confidentiality, network protocols.

Introduction

The traditional classroom normally with one or two instructors and peers,who can hold a student. To their course evaluation. An online course involves setting their own goals and tracking the progress of overall performance . On top of that, technology with visual experience by incorporating animations that can be used to increase the effectiveness of learning and communication

Studies have identified and examined some issues affecting the quality of online education such as lack of learner's readiness, communication barriers, time management, lack of information about technology and assessment. The instructors are challenged everyday when planning and generating materials for virtual class. Converting some courses such as mathematics subjects from traditional to online curriculum can be very challenging. Online delivery also depends on the effectiveness of faculty communication crossing language barriers and efficient use of available technological modes. However, the absence of learner's readiness can easily affect the quality of teaching, impede the learning process that would threaten to render the efforts of the instructor meaningless.

As an internet based learning, it allows a synchronous and asynchronous exchange of information over communication network. However, there are lots of illegal activities, security threats, risks and attacks taking place on internet. Unfortunately, many organizations are adopting online learning management systems without proper planning and understanding of the security aspects of virtual learning. Improper security practices/process can damage educational assets, threaten confidentiality, prevent availability and affect integrity of the information process.

Materials and Methods

Many methods and tools helps to improve the quality of education such as online instructional videos, Interactive worksheets, mind maps, online short quizzes. Video tutorials become an integral part of today's learning because it is easier to understand than printed material or help pages. Mind maps are used to convert the complex topics into simpler form and can summarize easily. Online short quizzes example Kahoot Application give the quick evaluation of students' knowledge helps to check the current status of learning.

Digital Library Tools is a method to focus on locating resources. It helps users to find the right information among a huge amount of digital material. Digital library features usually include search, browsing and discovering special collections or current topics. Another method is a visualization tool can engage both learners and instructors in an active learning process when they construct spatial semantic displays of the knowledge, concepts, and skills that the learner possesses and acquires.

Result

For the effectiveness of online education, correct security protection measures and secure network protocols should be implemented. This includes authentication, authorization and confidentiality. Authentication means the validation of the learner's identity should be confirmed before the access is assigned. Granting the rights and access based on successful authentication is authorization. Confidentiality is prevention of access of information or data to third party who is not authorized. Wrong implementation in any of the above can allow hackers to collect personal information, access the resources and distract the classroom punctualities.

The competitive nature of education demands more opportunities for learners to explore future options. Studies have identified that communication and interaction are the two key factors for the success of online education.

Learning with security measures assures that information and data have not been accidentally or maliciously modified or destroyed, and are in accurate, correct, and complete original form.

Discussion

In this study we looked key factors that affect the effectiveness of virtual learning and three main areas of security when using a virtual learning system. Microsoft Intelligence reported that the

education industry accounted for 61 percent of the 7.7 million malware encounters experienced by enterprises in the previous thirty days more than any sector. The following are the popular online platforms and applications that can be used for virtual learning. Apart from great features like screen sharing and chat, they also implement good secure practices like multifactor authentication and https protocol for communication.

- Moodle – LMS (Learning management System)
- Zoom App – Highly popular online learning tool provides free video conferencing and educators used for conducting online classes.
- Google classroom, Google Meet – to track student progress, host classes and generating materials and assessment.
- Nearpod App – Help educators to make lessons interactive whether in the classroom or virtual. A teacher can create interactive presentations that can contain Quiz's, Polls, Videos, Collaborate Boards, and more.

Educational institutes that use platforms which do not implement proper security measures can expose an online classroom to increased risk of cyberattacks. An unauthorized person can interrupt the classroom by making unwanted comments distracting others.

Conclusion

Virtual Learning environment includes a large variety of users like, students, visitors, instructors, tutors etc... Hence, administrators should focus on a login system accessible only registered user or groups, so that only the right person is provided access to the resources. Virtual learning with today's available technology is very effective and can overcome many geographical, economic, social or personal restrictions. Virtual learning may never replace traditional in class room

learning but can be considered an alternative. However, due to the flexibility, accessibility and affordability offered by virtual learning, it is gaining popularity among people who find it difficult access education due to physical distance, schedule conflicts and high cost of traditional education.

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