Virtual Learning Environment

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Abstract

The global economic system is being revolutionized by information technology. Additionally, it is offering new features for online learning and development, which the workforce's higher education demands. The dimensions of current learning and the relationships between teachers and coaches can be drastically changed by the presence of a virtual learning environment (VLE). This essay will examine how educational institutions, organizations, and the staff members who work there can all gain from the responsible use of technology to support learning in a setting that is more favorable than traditional face-to-face teaching techniques. The potential drawbacks of utilizing VLE are highlighted in the paper. The question of whether or not VLE supports the collaboration element is also investigated. Transferring knowledge acquired in a virtual environment to a real-world context is the ultimate aim of virtual learning environments. The necessity of VLE assessment is covered in the paper. There is a widespread and established consensus based on prior research that abilities gained in a virtual setting can be translated to real-world scenarios and enhances task performance in real-world settings. The paper does point out that in order to guarantee that cognitive abilities learned in a virtual learning environment (VLE) are applicable in real life, training objectives must be closely connected to realistic scenario events, which are then closely connected to assessments of particular necessary behaviors.

Keywords: Effectiveness, Virtual Learning Environment.

1. Introduction

Have you ever considered alternative learning settings outside of the classroom as a potential improvement over traditional classroom instruction? We might consider sending the staff members or students for a few days to gain firsthand knowledge of, say, an automobile manufacturing facility. But, it is impractical for an organization's sixty young trainees or students to travel 200 kilometers to the business. Furthermore, it's possible that the business can't take on so many students. The cost, duration, or risk/danger involved are the other obstacles to the aforementioned idea. Computer-generated Virtual Learning Environments (VLE) hold the key to the solution.

Virtual learning, as defined by Stonebreaker and Hazeltine (2004), is the delivery of instruction through electronic mediation that bridges the gap when the teacher and the student are geographically or temporally apart. Wilson (1996) defines Virtual Learning Environments (VLEs) as "computer-based environments that allow for interactions and encounters with other participants, as they are relatively open systems." By including three additional dimensions—interaction, technology, and control—this definition expands on the traditional understanding of the learning environment (Piccoli, Ahmad, and Ives, 2001).

Both blended and online (distance) learning are supported by virtual learning environments (VLEs). These can be used to deliver training sessions or to provide extra learning materials, assignments, feedback, useful web links, grades, discussion boards, and a platform for communication between students and tutors (Halawi, Pires, and McCarthy, 2009).In the literature, VLEs are also known as learning management systems, web enhanced learning, web-based learning, and technology-mediated learning.

1.1. Benefits of Vle

1.1.1. Improved Contact between Learner and Instructor

Via the use of specialized software, using a VLE enables students to interact directly with their instructor (e.g. Moodle, Blackboard, WebCT,CaMILE etc.). Members of the group can consider

earlier disputes and provide a well-reasoned rebuttal. It also gives ample time for consideration. McKeough (2009) proposed that online tutorials allow students more time to read required texts at their own pace. There is also an increase in the quantity and caliber of feedback exchanged between teachers and students.

1.1.2. Improved Flexibility

Distance learning problems are eliminated because Virtual Learning Environments (VLEs) allow students to listen to lectures, negating the need for in-person attendance (Sawaan, 2006; Chattopadhyay and Sumrall, 2007).Teachers and students benefit from increased working hour flexibility and more efficient time management thanks to VLE. Outside of class, they have more control over their own learning and can choose when and how to complete their tasks (Potter and Johnston, 2006). Students have the choice of combining their studies with a part-time job to gain the work experience they need to advance their careers and strengthen their resumes.

1.1.3.   Active Learning

The pupils take an increasingly active role in their education. In addition to receiving knowledge, students actively participate in the process of learning. Therefore, even though a "virtual experience" cannot fully replace the effectiveness of in-person learning opportunities, a combination of media—such as interactive, video, and content created in a thoughtful environment—offers opportunities to enhance in-person learning for students in large cohorts (Stanley and Edwards, 2005). A pupil possesses the ability to examine data from different angles and from the viewpoints of different stakeholders. Unlike traditional learning methods, a virtual learning environment (VLE) engages students through a variety of activities such as thinking, acting, reading, listening, and doing. As a result, it can accommodate a wide range of student learning styles.

1.1.4. Participation Equalization Effect

Students have the ability to post their opinions simultaneously in VLE environments. Students may wish to contribute in face-to-face communication, but they may be unable to do so because of power dynamics or other implicit norms that control the flow of the conversation. According to research, groups that interact online have more evenly distributed participation than those that interact in person. Low-status members in face-to-face groups participated less and had less influence over group decisions than high-status members, as demonstrated by Bonito J.A. & Hollingshead A.B. (1997).

1.2.   Potential Disadvantages of Vle
1.2.1. Impersonal Relationship

First off, since communication takes place mostly via computers, the teaching relationship between teachers and students may become impersonal. Due to the lack of "elements of immediacy" like eye contact, smiling, and vocal expressions, exposure to VLE tends to make learners feel isolated. It also makes them feel frustrated, anxious, and confused (Hara and Kling, 2000), and reduces their interest in the subject matter (Maki et al., 2000). Numerous studies (Reynolds, Rice, and Uddin, 2007; Braeckman, Fieuw, and Van Bogaert, 2008) indicate that students favor a blend of in-person instruction and virtual learning environments.It has been proposed that the human element in the educational process can be restored in a suitable blended learning environment that blends virtual learning with novel forms of physical space (Bleed, 2001).

1.2.2. Technical Problems

Second, it's impossible to completely rule out the chance of technical issues. This might be the result of an issue with the hardware, software, networking, or internet connectivity. Students expressed worry that there were still instances of interrupted audio or video connections in a research study by Lightner and Olson (2001), and some students specifically named "technical problems" as a challenge.

1.2.3. Passive Attitude

Thirdly, learners may be encouraged to adopt passive attitudes. For students to pay more attention in class, ask questions of the teacher, collaborate in groups, and learn effectively, they must

be motivated. As a result, students enrolled in VLE must possess adequate self-discipline, be motivated, and be self-directed. Because of this, a lot of studies believe that student motivation and participation are crucial for the success of VLEs (Rao and Walsh, 2000; Love and Fry, 2006; Hussin, Bunyarit and Hussin, 2009).

2.   Virtual Learning Environment and Collaboration

Early studies conducted in the 1980s and 1990s revealed that virtual learning environments (VLEs) are democratic, open, and have many advantages over other forms of communication when it comes to fostering teamwork.Online asynchronous discussion can help with argumentation skills because, according to Marttunen and Laurinen (2001), "these environments have been characterized as democratic and equal in nature."They present a study that demonstrated how asynchronous computer discussions can improve argumentation skills. Regarding the (interaction) design of computer-supported collaborative learning environments, Kirschner et al. He emphasizes the importance of being able to pay for the social, educational, and technical components of these settings. After conducting a meta-analysis to compare face-to-face and VLE settings for decision-making, Baltes, Dickenson, Sherman, Bauer, and LaGanke came to the conclusion that face-to-face decision-making is not superior to VLE setups for decision-making.

2.1.   Assessment of Vle

According to Womble (2008), exploratory research is necessary to ascertain the value of VLE. Higher education institutions are gradually shifting away from the information transfer mode and toward a more student-centered learning focus (Potter and Johnston, 2006). This shift emphasizes the need for blended learning, which combines traditional face-to-face teaching methods with virtual learning environments (VLE).

An empirical study comparing a VLE group and a traditional learning system group in medical education was carried out by Henning and Schnur (2009). They discovered that while both groups show "a significant knowledge gain" over their initial knowledge, the e-learning group's knowledge gain is, on average, twice as large as the traditional learners'. Additionally, none of the participants who studied on a computer failed their Continuing Medical Education exam; in contrast, the average failure rate for those who studied from printed materials was 20%. Similar to this, Anitsal et al. (2008) investigated the function of personality traits in assessing the course attributes of VLE-based courses and conventional face-to-face courses, concentrating on Business and Engineering students of an American university.

Anitsal et al. (2008) came to the conclusion that on-ground students were more extroverted, but online students were more emotionally stable. When medical situations were marked by uncertainty, ambiguity, and time constraints, learning through books and lectures was found to be less effective than using simulations, according to a 2002 study by Satish U. & Streufert, S. According to a study by Biocca F. & Delaney B. (1995), learning outcomes of pilots after flight simulator experiences indicated that trainees did learn more effectively from the interactive virtual environment than from non-interactive media like textbooks. Conversely, Piccoli, Ahmad, and Ives (2001) found no appreciable differences in the efficacy of a web-based VLE for teaching fundamental IT skills in undergraduate education.

Prior studies have concentrated on the part that specific psychological variables play in the evaluation of VLE. These included the cognitive needs of the students (Peng, 2009), as well as their attitudes and perceptions (Tanner, Noser, and Totaro, 2009). Peng (2009) investigated the effects of students' cognitive need, computer efficacy, and perception on their performance in an online accounting homework system based on responses from 61 Financial Accounting students in an American university. Peng's research revealed that students' perception of the usefulness of online homework systems in an accounting course is influenced by their intrinsic motivation and computer efficacy. Tanner, Noser, and Totaro (2009) also examined undergraduate students' attitudes and perceptions of online learning against those of business faculty members in the context of two other American universities.

2.2.   Transfer of Skills Acquired in a Virtual Learning Environment to Real Situations

By simulating real-world scenarios in virtual environments, virtual learning environments (VLEs) offer a compelling way to meet training needs. On the other hand, learning environments should replicate the exact conditions that students will encounter in the workplace. The intention is for the students to respond to the scenario using the same actions or words that they would use in the actual world. According to a 2005 study by Baker D.P., Gustafson S., Beaubien J. et al., training must therefore be given in stressful operating conditions similar to those found in the real workplace.

According to Zakay D. & Wooler S. (1984), performing some tasks under stress did not result in improved task performance when training procedures were followed. Stress training was created especially to teach the skills required maintaining effective task performance under stress conditions, and it has been successfully applied in VLE settings, according to a study by Driskell J.E. & Johnston J.H. (1998).

Kyllonen, P.C. (2000) described the VLE performance assessment as informal, subjective, disorganized, and inconsistent. More and more VLEs are being used to train people in critical, high-level cognitive skills needed in emergency situations or workplace disasters.

The VLEs frequently imitate real-world scenarios from a variety of industries, such as mining, aviation, oil and gas, chemical, and power and rail, where important events may pose a physical threat to life. To ascertain whether students have acquired the necessary knowledge and skills and are able to apply them in the virtual workplace environments, performance measures are developed.

They also offer a way to pinpoint the performance gaps in which skill development isn't taking place. Consequently, the way that VLE curriculum is designed should ensure that the context in which the skills are learned in a VLE setting is the same as the context in which they must be demonstrated.

3.   Conclusion

Any learning environment can now be suitably simulated electronically thanks to recent advancements in computer technology. The advantages of these VLEs for students and the institutions are far greater than the drawbacks. With the aid of context-rich guided learning, students can assimilate information and cultivate practical problem-solving abilities. Virtual learning environments will only become more prevalent in the future due to the falling cost of technology and the increasing technical expertise found in educational institutions.

It can be challenging to foster collaboration in a VLE environment, and effective collaboration is not always a result of VLE. To enhance students' communication, coordination, and collaborative skills, as well as to improve the technical, educational, and social aspects of virtual learning environments (VLEs), collaborative learning environments must be developed.

While implementing VLE for a particular learning outcome is a positive step, more work needs to be done to determine how the VLE will affect the learning outcome and what needs to be done to improve it. The purpose of utilizing VLE is to give students an interactive learning environment rather than just to transfer information.

VLEs play a significant role in creating training courses on critical incidents in secure, manageable settings. On the other hand, the same cues that they will encounter in the workplace should be presented to the students. Dissonance resulting from any deviation between the two factors will lessen the impact of the VLE. Consequently, the creation of robust performance metrics determines how effective a given VLE is.

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