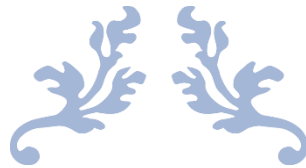




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RESEARCH REPORT ON THE IMPACT OF VIRTUAL LEARNING ENVIRONMENT (VLE)



Research report on the impact of Virtual Learning Environment (VLE) on the students' learning experience

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Introduction

In modern times, education is increasingly conducted through digital and online environments. The traditional education system has adapted to these various technologies. They are called virtual learning environments or VLEs, and they offer a wide range of programs and functionalities for both educators and students. The virtual learning revolutionizes the way we learn today. Virtual classrooms allow the teacher to provide lessons using online resources rather than teaching in a traditional classroom setting. Kids can now learn in a regular classroom from home using modern technology. VLEs are becoming more common in educational institutions. There is therefore no need to question their acceptability. However, making them a major contributor to pupil achievement is challenging. Students' performance is influenced by many factors, which makes it nearly impossible to identify and analyze all students' contribution to their learning potential. As a result of the COVID-19 regulations, students at the University of Wales Trinity Saint David London Campus learn online using the Moodle platform. It will examine how Moodle can improve students' learning experiences.

Research Title

Learning outcomes at the University of Wales Trinity Saint David London campus in relation to the Virtual Learning Environment (VLE) - Moodle.

Objectives of the research

The purpose of this study is to discuss the impact of virtual learning environments (VLEs) on college students' learning experiences.

Objectives

- To determine how frequently students at each institution access the Virtual Learning Environment (VLE).
- Explain how students' access to the VLE affects their performance on coursework.
- To examine the impact of Virtual Learning Environments (VLEs) on student learning.
- To gain insight into how students' learning experiences are impacted by Moodle - the Virtual Learning Environment.
- The research should be based on both primary as well as secondary sources to support the conclusion.
- Making some recommendations on how to improve the Moodle learning experience for students

Research Questions

- What is the frequency with which students at the University of Wales Trinity Saint David access the Virtual Learning Environment (VLE)?
- Is there a relationship between the frequency with which students access the VLE and their coursework performance?
- Is there a relationship between the frequency with which students access the VLE and their coursework performance?

Background

Literature review

There have been virtual learning environments for instructors, students, and schools that have been used for formal teaching and interactions. In recent years, educators, students and teachers have grown increasingly interested in Internet-based virtual learning environments. A virtual learning environment is a dynamic concept based on the continuous development of digital technology, its characteristics, and potential (Simkova, and Stepanek, 2013). Increasingly, colleges, companies, and government agencies are utilizing web-based educational systems to enhance their traditional face-to-face classes as well as incorporate online technologies. Data collected by these systems can be used by the students to analyze the contents of courses and to utilize technology and digital resources to learn more effectively. Since they provide a platform for contact, interrelation, and ongoing communication, they allow the building and reconstruction of knowledge and meaning as well as habits and behaviors in a context that is shared by all those participating in various educational process. It is necessary to recognize the main characteristics and potential of VLEs in each context before making use of them. In the digital society, learning environments and contexts are variously dynamic and multifaceted.

Although it's hard to determine just how long VLEs have existed, they have been around for quite a while. Since 2000, the business VLE "Board" has been protected at the Open University, despite the fact computers have been used for learning there since the 1970s. Over 3700 educational establishments in more than 60 nations utilized Board programming in 2010. 'Moodle,' the second most popular VLE, was released in 2001. With 212 nations and 49,365 active destinations in more than 75 dialects by 2011, Moodle helped instructors create online courses with an emphasis on social interaction and collaborative content creation. Using virtual learning environments has played an important role in supporting and promoting formal education since formal education institutions apply each country's educational norms and curriculum. However, when viewed through the lens of change and innovation, VLEs can also benefit informal and non-formal learning. Nowadays, innovation tends to connote a need for change as well as a desire to try something unique and different, with some implying a need for renovation (renovation/change) as well. Barker and Gossman (2013) make the claim that the relationship between data about students' actions within a VLE and the student's performance depends on the teaching settings. Researchers were able to connect individual degrees from nine different universities through the use of a regression model. It was determined that only three variables, namely the number of logs, the number of actions performed in forums, as well as the number of resources, were significant indicators of students' achievement, representing 21% of the variance.

In virtualized learning environments, McComas (2014) points out that, as the norms and curriculum for

each nation are applied in formal education institutions, the support and promotion of formal education plays an important role. In terms of change and innovation, however, VLEs can play an important role in supporting learning in non-formal environments. Currently, innovation is understood as something that has to be changed or renovated. Students' actions on a VLE are combined with their performance based on instructional circumstances. Before the data logs can be used to construct models to forecast student performance, special attention must be paid to the technical differences, especially in terms of how students use VLEs. Without considering the teaching settings, the importance of VLE features for student academic achievement may be over or under-estimated. In addition, schools are now seeking broader methods for identifying learners likely to fail. Using the data from the Student Management Systems (LMS) databases, the learning management systems (LMS) monitor the activities of the students on the virtual computers, and apply machine learning algorithms to identify students who are at risk early based on their profiles and log files. Students are likely to interact with their course and school by using the course site content, and interacting with their schools by using course and course content, which may indicate how engaged they can be and, thus, how likely they will stop attending school.

Methodology

A mix of quantitative and qualitative techniques was used in this research, as has been the case with many others examining e-learning. It was a phenomenon-type survey, where participants were heavily asked about their behaviors, views and experiences. Open and closed questions were used in the online survey. An online survey questionnaire (Survey Monkey) was used in the quantitative study, and the results could be analyzed in Microsoft Excel. WhatsApp links were shared with participants to complete the questionnaires. Because this was the most convenient method to distribute the survey, I used it. The questionnaire was distributed to 12 undergraduates studying at the London Campus of the University of Wales Trinity Saint David. In the group sessions, the reviews were pushed at the same time, and understudies were instructed to finish them by themselves. An example size computation was performed in order to determine a delegate base test size. An example size of 10 and a reaction pace of 37% were required in order to obtain the agent results. It has been decided to keep the outcome of the review secrecy, and all understudies have been made aware of this before they completed the review. As a result of the survey's completion, data used in the study was considered as informed consent. We sent out notification notifications prior to the final data collection taking place in about one and a half weeks. There is a significant amount of descriptive analysis that is conducted.

Results

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Moodle is my go-to learning tool every day	90%			10%	
Moodle is easy to use	50%	40%	10%		
Moodle gives me much more than without it	30%	50%		20%	
Using Moodle, I can find information on all topics	40%	30%	10%	20%	
My learning experience has been enhanced by Moodle	50%	30%	15%		5%
As a student, Moodle has greatly enhanced my productivity	20%	70%		10%	

Moodle is always available to me whenever I need it	90%		10%		
I am encouraged to learn independently by Moodle	20%	70%		10%	
My studies are greatly assisted by Moodle	50%	20%	30%		

Discussion

Moodle is widely used by students at the university, with most of them using it every day to study. However, a small percentage of them only use it occasionally. They foster interrelation and contact within an ongoing process of communication, enabling knowledge as well as meaning to be built and reconstructed, as well as habits and behaviors, in a context that is united between everyone involved in the educational process (Alves, Miranda, and Morais, 2017). More than half of respondents said that Moodle is very user-friendly, and 40% said the same. 10% of the respondents were neutral. The purpose of Moodle is to assist professors in building online courses with a focus on teamwork and synergy. Moodle is a lot better than not having it, according to 30% of respondents strongly. About 20% of respondents did not agree. In contrast, VLEs can play a crucial role in supporting learning in the non-formal and informal sectors when evaluated through the lens of innovation and change. Nevertheless, it is clear from these results that not all students prefer VLEs. In the survey, 40% of respondents strongly agreed that they get information on every topic through Moodle, while 30% agreed. There was a 20% disagreement rate between the respondents and 10% neutrality among them. A growing number of colleges, businesses, and institutions are utilizing web-based educational systems. These systems are not just used in order to provide online education but also as a supplement to traditional face-to-face education. Moodle has helped 50 percent of respondents improve their learning experience, while 30 percent strongly agreed. 5% of respondents strongly disagreed with the statement, while 15% of respondents were neutral. It may be possible to predict a student's level of interest in their course and the institution by the way they interact with the course and the institution (Stricker, Weibel, and Wissmath, 2011). As an understudy, Moodle has greatly enhanced the effectiveness of 20% of the respondents and 70% of the respondents. The remaining 10% could not resist contradicting the statement. Students' motivation was enhanced by the fact that their comments were seen by other students, and they felt eager to participate more actively in the course due to collaborative tools like forums according to a study by Demian, and Morrice (2012). Students also prefer online courses because they are more convenient. The majority of respondents strongly agreed that Moodle can be accessed whenever it is convenient for them. Approximately 10% remained neutral. Moodle, according to 20% of respondents, encourages independent learning, while 70% agreed. About 10% were opposed to the statement. Among the respondents, 50% thought Moodle was a valuable tool for their studies, and 20% thought it was a valuable help. Thirty percent expressed neutral views. Utilizing VLEs means recognizing their main characteristics and potential in each setting. The concept of learning settings and contexts is dynamic and multifaceted, arising out of the digital society's new educational conceptions and activities .

Conclusion

Based on empirical evidence in the literature, the research questions are formed into hypotheses. A VLE promotes self-governed learning because it enables students to adjust casually according to their time, location, and speed, which is ideal for students with rushed schedules. Furthermore, the writing focus shows that using a VLE improves students' learning abilities, fosters correspondence and collaborative learning, and supports prompt feedback. It's interesting to see if branches of knowledge affect learning despite the fact that Moodle benefits understudy learning. Additionally, it would be interesting to investigate whether forums, quizzes, and course handouts have the greatest impact on student education. However, owing to the absence of time and the positive strategy adopted, statistical analysis has produced substantial results but does not provide depth.

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Appendix 1

QUESTIONNAIRE

1. Sex?

☐ Yes

☐ No

2. How does Moodle fit into your life outside the classroom?

☐ Yes

☐ NO

3. Using Moodle to support your learning is valuable, don't you think?

☐ Yes

☐ No

4. In the table below, please mark only one box.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Moodle is my go-to learning tool every day	90%			10%	
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Moodle gives me much more than without it	30%	50%		20%	
Using Moodle, I can find information on all topics	40%	30%	10%	20%	
My learning experience has been enhanced by Moodle	50%	30%	15%		5%
As a student, Moodle has greatly enhanced my productivity	20%	70%		10%	

	study					
8	Moodle encourages me to learn independently					
9	Moodle is a valuable help in my studies					