



*Impact of Virtual Learning Environment (VLE) – Moodle
on students' learning experience at the **University of
Wales Trinity Saint David (UWTSD) London Campus***

Research Project

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Abstract

This research study has described the impact of the virtual learning environment for the students of *the UWTSD London Campus*. Therefore, the findings of this research study it has described the necessity of this research and its objectives through survey and thematic analysis. Moreover, in the survey, 15 responses have been taken and from there most of the respondents are in favour of the usages of the virtual learning system. In the end, through thematic analysis, the impact of online learning on income and the high reliable learning experience has been evaluated.

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1. Introduction

1.1 Introduction of research problem

According to Borba *et al.* (2018), the virtual learning environment is one of the most widely used tools in education with various sectors for delivering instructional materials and facilitating communication. However, some of the experts have expressed their views that web-based instructions limit social and emotional interactions that usually take place in traditional classrooms. In contrast to this, Alves *et al.* (2017) argued that about 75% of the academic leaders trust online education and believe that it is equal or superior to on-campus learning. In accordance with this, some of the students feel that they lack the flexibility and contractions to grasp lessons by VLS.

1.2 The Rationale of the research

Karuović *et al.* (2021) stated that the current pandemic of Covid-19 has significantly increased the usage of VLS among educators and students, which is likely to rise in the coming years. The usage of VLS has helped the teachers and students in maintaining online communication for developing their understanding and analytical skills. This has especially become most prominent during the crisis of the Covid-19 pandemic in maintaining the consistency of education for students.

1.3 Research aim

This research study aims to analyse the impact of Virtual Learning Environment (VLE) Moodle on student's learning experiences at the UWTSD London Campus.

1.4 Research objectives

- *To analyse the concept of Virtual Learning Environment (VLE) Moodle*
- *To evaluate the role of Virtual Learning Environment (VLE) Moodle on learning experiences of the students at the UWTSD London Campus*
- *To recommend optimal strategies to improve the learning experiences of the students at the UWTSD London Campus through Virtual Learning Environment (VLE) Moodle*

2. Literature Review

2.1 Data collection method of literature review

The researcher has collected the journal articles for carrying out the literature review from the University library and Google Scholar. Furthermore, the collected journal articles have been analysed using the content analysis technique.

2.2 Review of the existing literature

2.2.1 Requirements of digital skills in the Virtual Learning Environment (Moodle) in UWTSD

According to Molots (2020), a virtual learning environment is very useful for the teachers in planning their lessons, and managing administrative, activity, track students and levels of engagement. This will ensure that the entire teachers' body at UWTSD can plan a structured lesson for the students. Bergdahl *et al.* (2020) stated that a VLE is not a very new phenomenon in the field of education. The implementation of proper VLE can help UWTSD in becoming more flexible in education processes, especially in the case of time management.

2.2.2 Impact of Virtual Learning Environment (Moodle) on students' learning experience in UWTSD

Cerezo *et al.* (2020) stated that about 79% of the students find learning through VLE has made a positive difference in their studying and has enhanced their understanding. In contrary to this, about 28% of the students have expressed that the traditional teaching method is more effective (Ifinedo *et al.*, 2018). This would a very effective way for UWSTD in improving the satisfaction and engagement of the students. Further, the students at UWSTD will also be able to maximise their scores for retaining their performance.

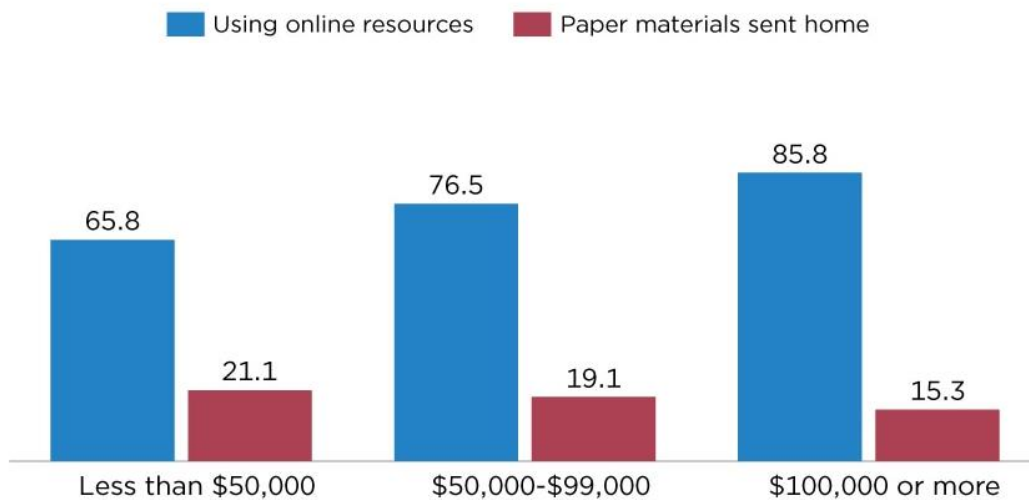


Figure 1: Prevalence of online learning

(Source: Cerezo *et al.*, 2020)

2.2.3 Strategies for developing the Virtual Learning Environment (Moodle) to enhance the students' learning experience in UWTSD

In order to enhance the learning experiences of the students at UWTSD, they must maintain clear communications. Along with it is also necessary for the teachers at UWTSD to contently vary the lesson plans and make them more interactive and knowledgeable. This will help in maintaining the engagement of the students throughout the class. Uzunboylu *et al.* (2020) argued that the current outbreak of Covid-19 has significantly made the students and educators dependable on online learning systems such as Virtual Learning Environment. Considering this, UWTSD must look up better technological tools for advancing the usage of VLE within their educations pattern for the effective learning of the students.

3. Research Methodology

3.1 Research method and the methodology

3.1.1 Research philosophy

In this research, both the positivism and interpretivism philosophy have been used. The positivism philosophy has been used to evaluate the results of the survey, which is a quantitative dataset (Snyder, 2019). The interpretivism philosophy has been used to analyse the collected secondary data in a qualitative fashion.

3.1.2 Research approach

In this research, both the deductive and abductive research approach has been used. The deductive approach has been used for the primary survey (Mohajan, 2018). The abductive research approach has been used for handling the secondary data.

3.1.3 Research design

In this research, both the descriptive and exploratory designs have been used. The descriptive design has been used for carrying out the survey with the quantitative data collection and analysis (Ørngreen and Levinsen, 2017). The exploratory design has been used to carry out the secondary data analysis.

3.2 Qualitative, Quantitative and combined strategy

This research uses a combination of the quantitative and qualitative strategy. The quantitative research strategy used here is an online Questionnaire survey conducted through Microsoft Forms (Snyder, 2019). The qualitative research strategy involves collecting and analysing 3 existing secondary literatures chosen from the University Library and Google Scholar.

3.3 Data, Primary and secondary data

The primary data collected in this research is quantitative survey responses. The secondary data collected in this research is qualitative information from existing texts.

3.4 Data collection process

The primary data is collected through an online questionnaire survey in Microsoft Forms. The secondary data is collected from existing journal articles searched through University library and Google Scholar.

3.5 Population, Sample and Sample size

The population size for this research is 20. In other words, 20 students were approached to this survey. The sample size for this research is 15. In other words, 15 students agreed to take part in this survey. The sampling technique used in this research is purposive sampling, meaning that the students were chosen as per their relevance to this research situation (Mohajan, 2018).

3.6 Ethics in data collection

While collecting data, strict research ethics is maintained according to Data Protection Act 2018 (Townend, 2017). All information given by the survey participants are kept secure and their identities are kept anonymous. All secondary data used in this research are cited through proper format.

4. Data analysis

4.1 Primary data analysis and discussion

4.1.1 Primary data findings

1. How effective is virtual learning education for you ?

Very ineffective	1
Somewhat ineffective	7
Somewhat effective	1
Very effective	6



Figure 2: How effective is virtual learning education for you?

(Source: Learner)

2. What device you using for virtual learning education?

Laptop	9
Desktop	2
Tablet	1
Smartphone	3



Figure 3: What device you using for virtual learning education?

(Source: Learner)

3. Approximately how many hours you spending each day for learning ?

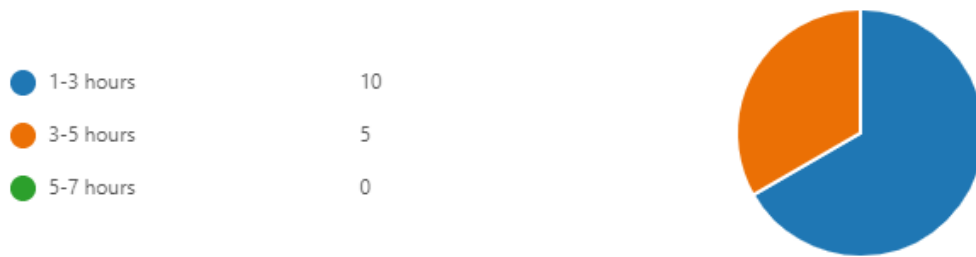


Figure 4: Approximately how many hours you spending each day for learning?

(Source: Learner)

4. How do you rate the Moodle platform ?

13
Responses



Figure 5: How do you rate the Moodle platform?

(Source: Learner)

5. How do you rate our Digital library?

14
Responses



Figure 6: How do you rate our Digital library?

(Source: Learner)

6. Do you think the courses materials are clearly organized in Moodle?

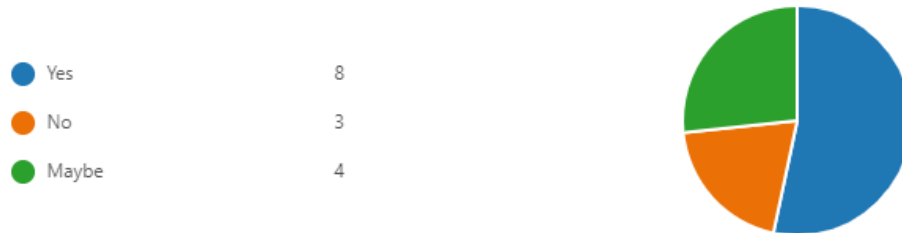


Figure 7: Do you think the courses materials are clearly organised in Moodle?

(Source: Learner)

7. Do you agree that the Virtual learning education helped you to develop your digital skills?

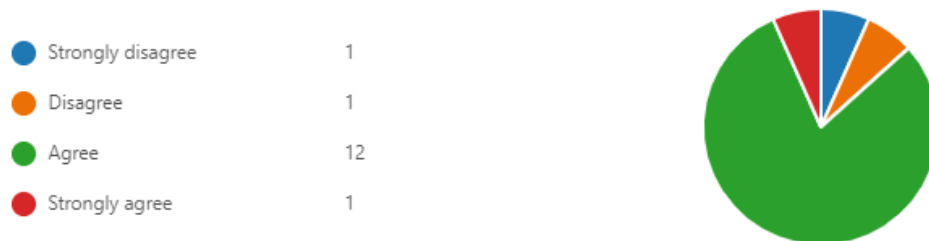


Figure 8: Do you agree that the Virtual learning education helped you to develop your digital skills?

(Source: Learner)

8. Are you comfortable with the Virtual learning environment that the university provides you ?

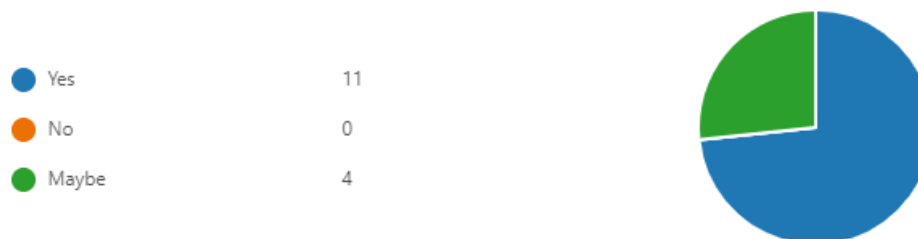


Figure 9: Are you comfortable with the Virtual Learning Environment that the university provides you?

(Source: Learner)

9. Which one you prefer : Virtual learning education or Face-to-face learning?

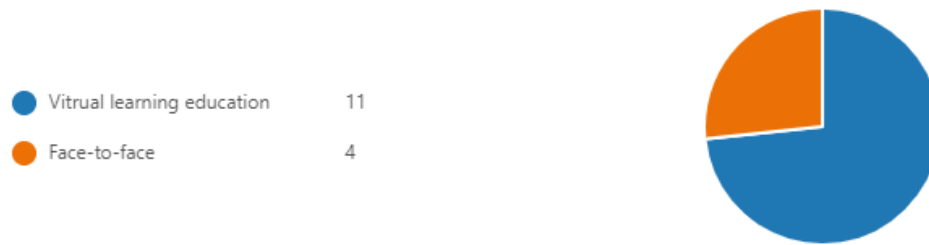


Figure 10: Which one you prefer: Virtual learning education or Face-to-face learning?

(Source: Learner)

10. What is the impact from Virtual learning environment on you?

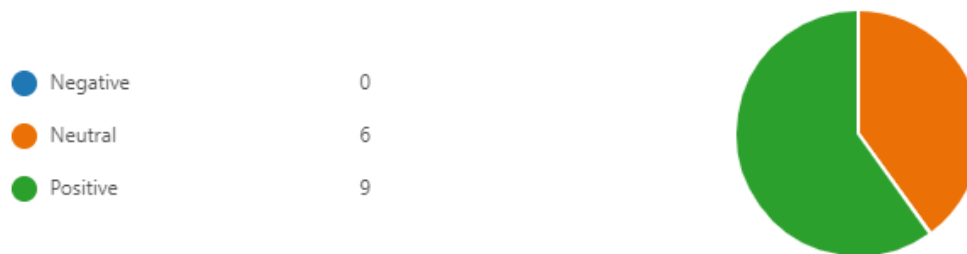


Figure 11: What is the impact from Virtual Learning Environment on you?

(Source: Learner)

4.1.2 Discussion on primary data

The survey of this above study has described the importance of virtual learning education for the students at the UWTSD London Campus. Thus, with 40% of the agreement with the effectiveness of the virtual learning education system the importance of the virtual learning system has been evaluated. Moreover, 60% of the respondents from 15 responses regarding this topic have agreed that the Laptop is the most effective device for the virtual learning education system. Thus, in this Covid-19 situation, the impact of the virtual learning process has been spread to most of the respondents in this survey. After that, the survey discussed the hours spent each day for the virtual learning, in which 60% of the respondents went with the 1 to 3 hours and 33% of the respondents went with the 3 to 5 hours. In further discussion, the Moodle platform has 4 average ratings from the 13 responses and a 3.86 average rating for its digital library from the 14 responses. From the findings of the survey, it can be said that the respondents are more in favour of using the virtual

learning system in the current situation. Hence, that proved the survey is aligned with the research objectives and the literature of this research, which described the importance of virtual learning experience for the students of *the UWTSD London Campus*.

With the agreement of 8 responses from 15 respondents depicting that in Moodle, the course materials are clearly organised for the students. Moreover, 80% of the responses from 15 respondents agreed that virtual learning has helped them in the development of digital skills. Hence, from this data, it can be concluded that the students of *the UWTSD London Campus* are benefiting from the virtual learning education system. In the further development of the survey, it is also observed that 73% of the students prefer the virtual learning environment that their university is providing them. In this Covid-19 situation, 11 out of 15 responses agreed that virtual learning is better than face-to-face learning and 60% of the responses are optimistic about the impact of the virtual learning environment on them. With this result, it is assuring that it complements the research objectives and the literature review of this research study.

4.2 Secondary data analysis and discussion

Theme 1: Influence of Virtual Learning Environments for the students' performance

Findings and analysis: It is opined by Alves *et al.* (2017) that it is observed that with the help of the virtual learning environments the students started to improve their gradation in their respective courses. Moreover, one research has found that online learning improves one student's motivation, engagement and learning ability as the online study is very flexible. After that, the impact of the online classroom is that the learner can travel all around the world and can learn lessons from faculties from all over the globe. Hence, they can communicate with any field experts to develop their learning to develop their performance.

Link with Literature and Objectives: From the above thematic analysis, it is observed that the virtual learning education system can improve the students' performance, as online learning is very flexible. Therefore, that aligns with the research objective and the research literature review of this research study.

Theme 2: Virtual Learning for Statics learning

Findings and analysis: It is opined by Tenório *et al.* (2018) that across the world, the e-learning market will be worth \$325 billion by 2025. Moreover, virtual learning has developed the potentiality of the learning of statistics. Therefore, the students of statistics can make their knowledge vast with the help of the virtual learning process. In the opinion of Alves *et al.* (2017), e learning has increased the income of the online learner of statistics by 42%.

Link with Literature and Objectives: From the above thematic analysis, it is observed that e learning not only increases the learning process but also the income of the learners. Thus, it complements the research objectives and the literature review of this research study.

Theme 3: Recommendations for online learning in the Covid-19 period

Findings and analysis: In the recommendations for the online learning study in the Covid-19 period it can be said that the students who take the online learning must have to interact with the learning management system for the subject matter. It is opined by Mukhtar *et al.* (2020) that the best solution of using online learning education is that the students can set the time for study in their flexible time. Therefore, that will help the students to learn the subjects with a depth of concentration, responsibilities and obligations. Furthermore, communication with colleagues for group projects can also improve the standard of online learning.

Link with Literature and Objectives: Thus, the discussion of the above thematic analysis described the recommended strategies for the online learning study in the Covid-19 period. Therefore, it displays the importance of the online learning procedure for the students in the Covid-19 period and aligns with the research objectives and the research literature review.

4.3 Summary of the discussion

From the study, it can be seen that the virtual learning process is being used by the majority of the educational systems in the Covid-19 situation. Furthermore, people now prefer using the virtual learning system in the current situation. In fact, the UWTSD students are benefiting from the virtual learning education system as well. It is argued that online learning education system can improve the students' performance, as it is very flexible, thus making it more useful and efficient.

5. Conclusion and recommendations

5.1 Conclusion

From the above research study, it can be concluded that the online learning system is the most viable and the most important learning process in this critical situation. Hence, from the study, the knowledge of the digital skills over the virtual learning environment for the improvement of the study of *UWTSD London Campus* has been evaluated. Moreover, in the conclusion of this research study, it can be further said that the survey and the secondary research have described the importance of the virtual learning education system for the students of the *UWTSD London Campus*.

5.2 Recommendations

The instructors at UWTSD must focus on establishing student-centred learning through VLE, as this will give students more control over their learning based on a particular topic. Further, this will also help the instructors of UWTSD providing the students with personal interaction, which will ensure that students are more active in their learning processes. In addition, the UWTSD must also ensure in offering such an environment to the students where they can give their immediate feedback with the easiest and fastest replies (Kim *et al.*, 2019). For instance, automatic grading features in LMS can be an effective approach for UWTSD.

References

- Alves, P., Miranda, L. and Morais, C. (2017). The influence of virtual learning environments in students' performance. *Universal Journal of Educational Research*, 5(3), pp.517-527.
- Bergdahl, N., Nouri, J. and Fors, U. (2020). Disengagement, engagement and digital skills in technology-enhanced learning. *Education and information technologies*, 25(2), pp.957-983.
- Borba, M.C., de Souza Chiari, A.S. and de Almeida, H.R.F.L. (2018). Interactions in virtual learning environments: new roles for digital technology. *Educational Studies in Mathematics*, 98(3), pp.269-286.
- Cerezo, R., Esteban, M., Sánchez-Santillán, M. and Núñez, J.C. (2017). Procrastinating behavior in computer-based learning environments to predict performance: A case study in Moodle. *Frontiers in psychology*, 8, p.1403.
- Ifinedo, P., Pyke, J. and Anwar, A. (2018). Business undergraduates' perceived use outcomes of Moodle in a blended learning environment: The roles of usability factors and external support. *Telematics and Informatics*, 35(1), pp.93-102.
- Karuović, D., Tasić, I., Hains, V.V., Glušac, D., Namestovski, Z., Szabo, C., Kocaleva, M. and Milanov, D. (2021). Students' habits and competencies for creating virtual learning environments. *Computer Applications in Engineering Education*, 29(4), pp.864-882.
- Kim, E., Park, H. and Jang, J. (2019). Development of a class model for improving creative collaboration based on the online learning system (Moodle) in Korea. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(3), p.67.
- Mohajan, H.K. (2018). Qualitative research methodology in social sciences and related subjects. *Journal of Economic Development, Environment and People*, 7(1), pp.23-48.
- Molotsi, A.M. (2020). The university staff experience of using a virtual learning environment as a platform for e-learning. *Journal of Educational Technology and Online Learning*, 3(2), pp.133-151.
- Mukhtar, K., Javed, K., Arooj, M. and Sethi, A. (2020). Advantages, Limitations and Recommendations for online learning during COVID-19 pandemic era. *Pakistan journal of medical sciences*, 36(COVID19-S4), p.S27.

Ørngreen, R. and Levinsen, K. (2017). Workshops as a Research Methodology. *Electronic Journal of E-learning*, 15(1), pp.70-81.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of business research*, 104, pp.333-339.

Tenório, M.M., Lopes, R.P., Góis, L.A.D. and Junior, G.D.S. (2018). A gamified virtual learning environment for statistics learning. In *12TH INTERNATIONAL TECHNOLOGY, EDUCATION AND DEVELOPMENT CONFERENCE (INTED)* (pp. 6248-6257).

Townend, J. (2017). Data protection and the ‘right to be forgotten’ in practice: A UK perspective. *International Journal of Legal Information*, 45(1), pp.28-33.

Uzunboylu, H., Tezer, M. and Yildiz, E.P. (2020). The Effects of the Authentic Learning Approach with a Course Management System (Moodle) on Students' Mathematics Success and Online Authentic Learning Self-Efficacy. *Educational Research and Reviews*, 15(11), pp.679-689.

Appendices

Appendix 1: Questionnaire

1. How effective is virtual learning education for you?

- Very ineffective
- Somewhat ineffective
- Somewhat effective
- Very effective

2. What device you use for virtual learning education?

- Laptop
- Desktop
- Tablet
- Smartphone

3. Approximately how many hours you spend each day for learning?

- 1-3 hours
- 3-5 hours
- 5-7 hours

4. How do you rate the Moodle platform?



5. How do you rate our digital library?



6. Do you think the course materials are clearly organised in Moodle?

- Yes
- No
- Maybe

7. Do you agree that the Virtual Learning education helped you to develop your digital skills?

- Strongly disagree

- Disagree
- Agree
- Strongly Agree

8. Are you comfortable with the Virtual Learning environment that the University provides you?

- Yes
- No
- Maybe

9. Which one you prefer: Virtual learning education or face-to-face learning?

- Virtual learning education
- Face-to-face

10. What is the impact from Virtual learning environment on you?

- Negative
- Neutral
- Positive