

# THE IMPACT OF VIRTUAL LEARNING ENVIRONMENT ON UWTSD STUDENTS



Radu Milea- 2019144  
Lecturer – Balendran Kandasamy  
Module Code: BMSW4003

# Assignment Title: DSR Assessment 2 Individual Report

## Table of Contents

|                              |    |
|------------------------------|----|
| 1. INTRODUCTION .....        | 3  |
| 2. BACKGROUND .....          | 3  |
| 3. AIMS AND OBJECTIVES ..... | 4  |
| 4. METHOD .....              | 5  |
| 5. RESULTS .....             | 5  |
| 6. DISCUSSION .....          | 7  |
| 7. CONCLUSION .....          | 8  |
| 8. References .....          | 9  |
| 9. Appendix.....             | 11 |
| Questionnaire .....          | 11 |

## 1. INTRODUCTION

COVID-19 resulted in the education system coming to a standstill. When it became clear that the pandemic would not subside, countries worldwide opted for virtual or online learning methods (Li and Lalani, 2020). The shift away from the traditional classroom has given rise to a debate – is online learning an acceptable method of educating the students? The research concludes that virtual learning environments (VLE) take less time and improve knowledge retention. At the same, it must be acknowledged that online learning does have drawbacks. Not every student has access to high-speed internet and/or a personal computer. Only 35% of Indonesian students have access to laptops, while the percentage is 95% in Austria and Switzerland (Li and Lalani, 2020).

Even within countries, there is a gap among students, as Auxier and Anderson (2020) report. According to the two authors, black, Hispanic and lower-income households have less access to internet connectivity and laptops as compared to others. It would be interesting to understand how the students respond to VLE - is the response and impact similar across all education levels, income groups, or cultures? In the light of the debate on virtual learning, the researcher wishes to study the impact of VLE on the students of the University of Wales Trinity Saint David (UWTSD). The study will provide valuable insights into how university students perceive VLE.

## 2. BACKGROUND

VLE refers to a system where students are provided with learning materials over the web. The students can use these systems to take classes, sit for exams, communicate with others (teachers and students), and collaborate. Such systems can be used on and off-campus (Suman et al., 2010). Thus, educational institutes can teach students who cannot visit the campus due to time and geographical constraints. VLEs are referred by many names, including Course Management System (CMS) or Learning Management System (LMS). While there are different types of VLEs available, their ultimate purpose remains the same – provide learning materials over the web.

Virtual learning is becoming a common phenomenon in the education sector that greatly impacts students' overall learning achievement and performance. A study conducted by Yilmaz (2015) concluded that virtual learning positively impacts the students as live sessions were highly desirable by the participants. The study involved a live physics classroom, and it further revealed that students highly appreciate the facility to have recorded class lectures.

Nevertheless, some studies have found contrary results to the above information. For example, Uzoamaka (2017) found mixed results in a study involving students of federal and state universities. The author found the participants reporting that virtual classes have both positive and adverse impacts on the students, such as the inability of online learning to provide practical experience. However, when it comes to the impact on a student's academic performance, there is no solid evidence for impact. Suwais & Alshahrani (2018) concluded that virtual learning has no significant impact on the students' grades.

Furthermore, a similar study by Alhawiti (2017) involving two groups as control and experimental groups in which the experimental group members attended virtual classes. The author concluded that the experimental group had significantly high achievement in the test results. In this regard, a study conducted by Wavle & Ozogul (2019) investigated the impact of online studying on the degree completion of undergraduate students and concluded that taking online classes increases the likelihood of completing the degree. When it comes to the overall performance of the students, the authors found mixed results in the form of lower and higher grades. The authors controlled several demographic factors such including the first semester's CGPA and the type of campus.

The above information emphasis on the positive emphasises that online classes positively impact degree completion, but since the performance results are mixed, it can be said that online education still lacks effectiveness. Likewise, similar results were earlier found by Xu & Jaggars (2013) that online education has a negative impact on the students' performance and grades. In addition to this, the percipients reported that they wished if they had focused on the evaluation and improvement of the online classes before accepting them. Ryan and Poole (2019) found that student's learning styles have no impact on their satisfaction or ease of learning.

To conclude, literature regarding the subject matter seems to be divided. Many studies believe that there is a significant positive impact on the student regarding their achievement and performance. However, a massive part of the literature concluded negative impact. As every study faces some limitations, it can be said that the subject matter is an open debate.

### 3. AIMS AND OBJECTIVES

This research aims to investigate the impact of VLE on UWTSD students. The objectives are:

- To investigate how VLE impacts the students' learning, confidence, and motivation.
- To investigate whether VLE is feasible in the long-term or a temporary solution due to the pandemic.

- To investigate the strengths and weaknesses associated with the VLE.

#### 4. METHOD

This study's nature is quantitative, and the data was obtained using a questionnaire. Due to the coronavirus pandemic, the researcher collected the data online through Microsoft Forms. The benefit of using a questionnaire is that it enables a researcher to gather and analyse extensive amounts of data quickly (Allen, 2017). The research population consisted of UWTSD students. The sample consisted of students who were taking their classes online. The participants were selected through various sample techniques. The researcher used convenience sampling first (Lavrakas, 2008). Fellow students and other UWTSD students enrolled in online classes were asked to fill out the questionnaire. Secondly, the participants were asked to share the questionnaire with other UWTSD students, which can be considered snowball sampling (Naderifar et al., 2017). A total of 10 questions were asked in the questionnaire, while one of them had further sub-questions. The participants were asked to select an answer from the given options. Each question had a different purpose, but their ultimate goal was to help the researcher assess the impact of VLE on students. For example, one question was:

What is the type of technology you use for Virtual Learning? \*

- Smartphone
- Tablet
- Desktop
- Laptop

This question's purpose was to see whether all students have access to a computer, a basic requirement in a VLE. Similarly, another question was about digital skills. If students do not have adequate digital skills, it is challenging for them to benefit from the VLE. Question 8 was directly related to the research topic and asked the students about VLE's impact. Once the data was collected, it was analysed through simple descriptive statistics.

#### 5. RESULTS

The sample population consists of 9 respondents, and no response has been discarded.

| No. of Respondents | Total | Male | Female | Non-Binary | Prefer Not To Say |
|--------------------|-------|------|--------|------------|-------------------|
|                    | 9     | 4    | 5      | 0          | 0                 |

| Age Category                                                                                              | 18-25                   | 26-35                      | 36-45                     | 46-Onwards        |                |
|-----------------------------------------------------------------------------------------------------------|-------------------------|----------------------------|---------------------------|-------------------|----------------|
|                                                                                                           | 3                       | 4                          | 1                         | 1                 |                |
| What is the type of technology you use for Virtual Learning?                                              | Smartphone              | Tablet                     | Desktop                   | Laptop            |                |
|                                                                                                           | 1                       | 0                          | 1                         | 7                 |                |
| What is your preferred method of study?                                                                   | Virtual Learning (Home) | Traditional Class Learning | Virtual + Traditional     | Prefer Not To Say |                |
|                                                                                                           | 4                       | 2                          | 3                         | 0                 |                |
| On a scale from 1 to 5, how would you rate your Digital Skills?                                           | Average                 |                            |                           |                   |                |
|                                                                                                           | 4.22                    |                            |                           |                   |                |
| Do you find it difficult to look for information on Moodle?                                               | Yes                     | No                         | Maybe                     |                   |                |
|                                                                                                           | 0                       | 8                          | 1                         |                   |                |
| Did the transition to VLE has been sufficiently explained by the University of Wales Trinity Saint David? | Yes                     | No                         | Maybe                     |                   |                |
|                                                                                                           | 8                       | 0                          | 1                         |                   |                |
| The opportunity to study from home VLE has helped me on a daily basis and kept me motivated.              | Strongly Disagree       | Disagree                   | Neither Agree or Disagree | Agree             | Strongly Agree |
|                                                                                                           | 2                       | 0                          | 1                         | 5                 | 1              |
| The variety of course tools and resources available has kept me engaged in virtual learning.              | Strongly Disagree       | Disagree                   | Neither Agree or Disagree | Agree             | Strongly Agree |
|                                                                                                           | 0                       | 1                          | 1                         | 5                 | 2              |
| The virtual classes and courses had a positive impact on my confidence                                    | Strongly Disagree       | Disagree                   | Neither Agree or Disagree | Agree             | Strongly Agree |
|                                                                                                           | 0                       | 1                          | 2                         | 3                 | 2              |

|                                             |                   |          |                           |       |                |
|---------------------------------------------|-------------------|----------|---------------------------|-------|----------------|
| VLE had improved the quality of my learning | Strongly Disagree | Disagree | Neither Agree or Disagree | Agree | Strongly Agree |
|                                             | 0                 | 0        | 1                         | 6     | 2              |
| Would You Recommend Learning with VLE?      | Yes               | No       |                           |       |                |
|                                             | 9                 | 0        |                           |       |                |
| How do you rate your experience with VLE?   | Average           |          |                           |       |                |
|                                             | 4.67              |          |                           |       |                |

## 6. DISCUSSION

2 students prefer traditional learning, while 3 are inclined towards VLE and traditional. 4 prefer complete VLE. It shows that the students are not entirely in favour of VLE and prefer some form of in-class learning. Therefore, educational institutes that are entirely opting for VLE need to reassess their strategy. The study's findings show that digital skills are not a problem for the students as the average score for it is 4.22. It indicates that the University only gives admission to students who have a certain level of digital skills. Due to their high digital skills, the students do not find it difficult to look up information on Moodle. It also indicates that the University has designed the Moodle in a way that is easy to use. It highlights that the University has a firm grasp of what students look for in a VLE. Only 1 student answered 'Maybe' when asked if they had difficulty looking up information on Moodle. Interestingly, there is one student in the sample that is aged above 46. It can be argued that due to their old age, the student lacks good digital skills. Hence, they have trouble adjusting to the VLE.

The lack of interest or motivation during online classes is a common phenomenon worldwide. One reason for it is that the students can get easily distracted. Kebritchi et al. (2017) recommend using graphics to improve interest and motivation. In this study's sample population, 6 students felt that lack of motivation is not a problem, indicating that the University's online classes policy and material are according to the students' preferences. Only 2 students felt a lack of motivation. Again, the age factor cannot be ignored. There are two students aged above 35, meaning that older students have difficulty adjusting to a digitalised learning environment. The current research does not focus on the sample population's past education, income group, and other factors. There is ample past research that shows people from a higher income group have access to better resources. Therefore,

what if a few students do not have financially sound backgrounds, meaning they have little prior experience with laptops and other gadgets.

Thus, if universities fully adopt a VLE or a hybrid model, they need to impart fundamental computing skills to all students. They can do it by offering an optional course for students. It will help students from disadvantaged backgrounds to learn the skills necessary for a VLE. 8 students remarked that the VLE improved their learning quality, while 1 neither agreed nor disagreed. These findings are supported by past research, which concluded that VLE enhances the students' learning abilities (Barker and Gossman, 2013; Hettiarachchi and Wickramasinghe, 2016). The researchers argue that the reason for it is that the VLE facilitates open communication and considers the needs of students. Interestingly, all 9 students said that they would recommend VLE. It shows that despite its shortcomings and problems faced by the students, they consider VLE to be the future of learning. Therefore, educational institutes and concerned stakeholders need to make sure that VLE addresses the needs of every student, not just the financially strong ones.

### **Limitations**

There are several limitations that must be kept in mind when quoting the findings of this study. First, the sample population only consists of 9 students, meaning that the sample size is too small, preventing the generalisability of the findings. Secondly, the study is only focused on the students of UWTSD. The findings may differ for students from other universities in the UK or abroad. Lastly, the study does not focus on the role of other factors such as income, past education, or age group. Thus, future research must centre around these factors to determine the true impact of VLE on students.

## **7. CONCLUSION**

Since the outbreak of COVID-19, education has moved towards VLE. Despite its drawbacks, VLE has proven as a valuable way of imparting education and skills to students. The purpose of this research was to study the impact of VLE on UWTSD students. The research findings show that the VLE has positively impacted students' learning and motivation. This notion is further supported by their intention to recommend studying with VLE and overall experience with VLE. Nevertheless, educational institutes must ensure that all students have the required digital skills to utilise VLE. It can be achieved by offering free courses or tutorials.

## 8. References

- Alhawiti, M. M. F. (2017). The Effect of Virtual Classes on the Students English Achievement in Tabuk Community College. *International Journal of Learning, Teaching and Educational Research*, 16(5), Article 5. <https://www.ijlter.org/index.php/ijlter/article/view/927>
- Allen, M., 2017. Surveys, Advantages and Disadvantages of, in: *The SAGE Encyclopedia of Communication Research Methods*. SAGE Publications, Inc, 2455 Teller Road, Thousand Oaks California 91320. <https://doi.org/10.4135/9781483381411.n616>
- Auxier, B., Anderson, M., 2020. As schools close due to the coronavirus, some U.S. students face a digital 'homework gap.' Pew Research Center. URL <https://www.pewresearch.org/fact-tank/2020/03/16/as-schools-close-due-to-the-coronavirus-some-u-s-students-face-a-digital-homework-gap/> (accessed 5.4.21).
- Barker, J., Gossman, P., 2013. The learning impact of a virtual learning environment: students' views. *Teacher Education Advancement Network Journal (TEAN)* 5, 19–38.
- Hettiarachchi, S., Wickramasinghe, S., 2016. Impact of virtual learning for improving quality of learning in higher education.
- Kebritchi, M., Lipschuetz, A., Santiago, L., 2017. Issues and Challenges for Teaching Successful Online Courses in Higher Education: A Literature Review. *Journal of Educational Technology Systems* 46, 4–29. <https://doi.org/10.1177/0047239516661713>
- Lavrakas, P., 2008. Convenience Sampling, in: *Encyclopedia of Survey Research Methods*. Sage Publications, Inc., 2455 Teller Road, Thousand Oaks California 91320 United States of America. <https://doi.org/10.4135/9781412963947.n105>
- Li, C., Lalani, F., 2020. The COVID-19 pandemic has changed education forever. This is how [WWW Document]. *World Economic Forum*. URL <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/> (accessed 5.4.21).
- Naderifar, M., Goli, H., Ghaljaei, F., 2017. Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research. *Strides in Development of Medical Education* In Press. <https://doi.org/10.5812/sdme.67670>

Ryan, E., Poole, C., 2019. Impact of Virtual Learning Environment on Students' Satisfaction, Engagement, Recall, and Retention. *J Med Imaging Radiat Sci* 50, 408–415. <https://doi.org/10.1016/j.jmir.2019.04.005>

Suman, S., Amini, A., Elson, B., Reynolds, P., 2010. Design and Development of Virtual Learning Environment Using Open Source Virtual World Technology, in: Reynolds, N., Turcsányi-Szabó, M. (Eds.), *Key Competencies in the Knowledge Society*, IFIP Advances in Information and Communication Technology. Springer, Berlin, Heidelberg, pp. 379–388. [https://doi.org/10.1007/978-3-642-15378-5\\_37](https://doi.org/10.1007/978-3-642-15378-5_37)

Suwais, K., & Alshahrani, A. (2018). The Impact of Virtual Classes on Students' Performance in Open Learning Environments: The Case of Arab Open University, Saudi Arabia. *Journal of Computer Science*, 14, 14–22. <https://doi.org/10.3844/jcssp.2018.14.22>

Uzoamaka, J. (2017). IMPACTS OF VIRTUAL CLASSROOM LEARNING ON STUDENTS' OF NIGERIAN FEDERAL AND STATE UNIVERSITIES. *European Journal of Research and Reflection in Educational Sciences*, 5(3), 16.

Wavle, S., & Ozogul, G. (2019). Investigating the Impact of Online Classes on Undergraduate Degree Completion. *Online Learning*, 23(4). <https://doi.org/10.24059/olj.v23i4.1558>

Xu, D., & Jaggars, S. S. (2013). The impact of online learning on students' course outcomes: Evidence from a large community and technical college system. *Economics of Education Review*, 37, 46–57. <https://doi.org/10.1016/j.econedurev.2013.08.001>

Yilmaz, O. (2015). THE EFFECTS OF “LIVE VIRTUAL CLASSROOM” ON STUDENTS' ACHIEVEMENT AND STUDENTS' OPINIONS ABOUT “LIVE VIRTUAL CLASSROOM” AT DISTANCE EDUCATION. *The Turkish Online Journal of Educational Technology*, 14(1), 8.

## 9. Appendix

### Questionnaire

The impact of Virtual Learning Environment on UWTSD Students

This survey purpose is to find out if VLE had a positive or negative impact on UWTSD Students.

\* Required

\* This form will record your name, please fill your name.

**1.** What is your gender? \*

- ☐ Woman
- ☐ Man
- ☐ Non-binary
- ☐ Prefer not to say

**2.** What is your age category? \*

- ☐ 18 - 25
- ☐ 26 - 35
- ☐ 36 - 45
- ☐ 46 +

**3.** What is the type of technology you use for Virtual Learning? \*

- ☐ Smartphone
- ☐ Tablet
- ☐ Desktop
- ☐ Laptop

**4.** What is your preferred method of study? \*

- ☐ Virtual Learning ( Home )
- ☐ Traditional Class Learning ( Campus )
- ☐ Virtual Learning & Traditional Class Learning ( Combined )
- ☐ Prefer not to say

**5.** On a scale from 1 to 5 how would you rate your Digital Skills? \*

- |                       |                       |                       |                       |                       |   |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---|
|                       | 1                     | 2                     | 3                     | 4                     | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |

**6.** Do you find it difficult to look for information on Moodle?

- ☐ Yes
- ☐ No
- ☐ Maybe

**7.** Did the transition to VLE has been sufficiently explained by University of Wales Trinity Saint David?

- ☐ Yes
- ☐ No
- ☐ Prefer not to say

**8.** How Virtual Learning Environment influenced your life and to what extent do you agree or disagree with the following statements?

|                                                                                                   |                   |          |                           |       |                |
|---------------------------------------------------------------------------------------------------|-------------------|----------|---------------------------|-------|----------------|
| 8.1. The opportunity to study from home VLE has helped me on a daily basis and kept me motivated. | Strongly Disagree | Disagree | Neither Agree or Disagree | Agree | Strongly Agree |
| 8.2. The variety of course tools and resources available has kept me engaged in virtual learning. | Strongly Disagree | Disagree | Neither Agree or Disagree | Agree | Strongly Agree |
| 8.3. The virtual classes and courses had a positive impact on my confidence                       | Strongly Disagree | Disagree | Neither Agree or Disagree | Agree | Strongly Agree |
| 8.4. VLE had improved the quality of my learning                                                  | Strongly Disagree | Disagree | Neither Agree or Disagree | Agree | Strongly Agree |

**9.** Would you recommend studying with VLE? \*

- ☐ Yes
- ☐ No

**10.** How do you rate your experience with the VLE? \*

