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## Digital Skills and Research Method Virtual Learning Environment

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## 1. Introduction

This report aims to analyse the Virtual Learning Environment (VLE), its importance, advantage and disadvantage, impacts on students, lecture etc. and the user's opinion about the University of Wales Trinity Saint David Moodle.

### 1.1 Virtual Learning Environment (VLE)

Technology has been gaining more and more ground in recent times, and it is important that academic institutions develop their teaching methods in order to become more attractive to students. VLE is very important because it allows teaching to reach anywhere, anytime, thus overcoming some difficulties such as: financial, lack of time, etc.

According with Phungsuk, Viriyavejakul and Ratanaolarn (2017, cited in Oxford University Press, 2015), virtual learning environment is a structure that allows students to get access to learning material via web. The students can have access to the school material regardless of attending classes or the university campus and on any occasion they want, they only need to be registered at the institution. Semradova and Hubackova (2013) says that VLE can lead to a devaluation of the communication skills and of the communication culture. On the other hand, it brings a lot of opportunities especially for those students that have to work to afford the studies, or even for those that live far away.

## 2. Background

Access to education, especially higher education, has never been so simple. With the advancement of technology, and the world development with it, the education system has created conditions to take teaching beyond the classrooms. However, as Keleş and Özel (2016) points out, the need for education for all, comes since the eighteenth century. Some educational institutions faced this challenge by implementing distance learning programs as a correspondence course for example.

Since distance learning emerged, it has experienced significative changes, improvements, especially with the technological advancement. Technology provides the necessary tools, such as internet, computer and devices in which through these is possible to connect lecture-students, students-students, in a course that can be both synchronous and asynchronous (Keleş and Özel, 2016).

Synchronous learning, requires that the students and the teacher are online at the same time, it includes chat sessions, conference calls etc., and it also includes absences if the student is not present, while the asynchronous is more flexible. In this, the teacher makes the material available online, and students can consult at any time (Keleş and Özel, 2016).

Phungsuk, Viriyavejakul and Ratanaolarn (2017, cited in Pumapapinyo and Suwannathachote, 2014) says that online learning can be assisted in many ways including blogs, co-operative software, and virtual classrooms. However, higher

education institutions use the same type of platform to address all aspects of the course, that is a virtual learning environment.

There are many platforms (learning managements systems) that allows virtual learning environment, for example: Blackboard, ATutor, Desire2Learn (D2L), Claroline, Docebo, eFront, Dokeos, Moodle, OLAT, but Moodle and Blackboard are the learning managements system (LMS) most used for the universities (Keleş and Özel, 2016).

In the University of Wales Trinity Saint David, the LMS used is the Moodle. According to Keleş and Özel (2016), Moodle (Modular Object-Oriented Dynamic Learning Environment) is a free accessible software package, used to create Internet-based courses and their websites. Moodle can be used for institutions (educational institutions, governmental departments, healthcare organizations etc.) and individuals (independent educators, special educators, etc). It is available for phones and tablets, it has currently 15 different languages and 14 different enterprise types namely chat, database, feedback, glossary, assignments, lesson, etc.

According with Mogus, Djurdjevic and Suvak (2012), some Institution combines virtual learning with the conventional classroom, where students can have a few hours of face-to-face classes, in a physical room, with the teacher's explanations and student collaborations, in which the class materials, supporting documents, exercises, and others documents relatives to the module are also available online. Other institutions are betting on entirely online courses, without the physical classroom. According with the same ones, VLE does not modify the way students are taught and does not include the use of e-mails for example, to help teachers communicate with students about the course or parents about student performance.

## 2.1. Importance of VLE

VLE is extremely important for teaching, its structure makes many people having access to education, permits more independence to students, as they can access to school materials whenever they need it, thus giving them greater flexibility, which allows them to work while they study so they can afford their studies. It allows the development of the student's digital ability, stimulating their research capacity, leading to a less dependence on lectures explanations and notes and developing their written skills (Kanimozhi, 2018). A good example of the importance of VLE, is the situation in which the world has lived in the past few months. With the corona virus, almost everything remains closed, including schools. However, thanks to virtual learning, universities are still active, with online classes sections. The students can continue having classes, without going to universities/ schools during quarantine days and preventing them of perhaps miss the school year.

## 2.2. Advantages and disadvantages of VLE

Kanimozhi (2018) points out, that VLE has several advantages such as allowing students a certain independence, greater facility, to develop their time management skills, to improve their achievements, educational access and significant cost savings, and also it decreases or exclude a need for a classroom. However, it also has some disadvantages, as lack of social interaction, or better saying a need of face-to-face interactions between teacher and students or between colleagues. It can be a problem for those who that don't have self-motivation due to the fact that in this type of education they will have to create their own schedules, there are higher chances of distraction and its credibility is still questionable, and yet it is not completely credible by many.

## 3. Aims and Objectives

This report aims to:

- Better understand the VLE,
- Better understand the technologies used on the VLE, how it works,
- Know it's importance, advantages and disadvantages,
- Know it's impacts on the current education system.

The objectives are to:

- Conduct a primary research,
- Conduct a secondary research,
- Conduct surveys and distribute them through the university Moodle user's,
- Analyse others research about VLE,
- Get to know the impact of VLE on students and other users in the University of Wales Trinity Saint David.

## 4. Method

To carry out this report, two types of investigation were carried out, a primary and a secondary research. For the background it was made a secondary research approach, by reading, analysing, paraphrasing and summarising others research, such as journals, books, articles, about VLE, which allowed the collection of qualitative and quantitative data and to gain more knowledge about the importance of virtual learning.

For the primary research was created surveys, which are shown on the appendix 1, with 10 questions about university Moodle and VLE and two questions about the respondent. The surveys were distributed among colleagues and teachers, to collect qualitative and quantitative data about the impact of University of Wales Trinity Saint David Moodle on them. Unfortunately, with all this situation about the corona virus, it was not possible to distribute to the staffs and others students apart from my classmates. However, I took into account possible variables such

as gender, ages that may influence the responses. About 20 inquiries were distributed via the university's email. Unfortunately, I only got eleven responses, of which nine were female and only two were male. On the appendix 2, 3 and 4 has some of the surveys answered by the students.

## 5. Results

Table one shows the respondents' age variation. As you can see, people of various ages were surveyed, with the majority between 20 and 31 years old.

| Ages              |   |
|-------------------|---|
| 20 - 25 years old | 3 |
| 26 - 31 years old | 3 |
| 32 - 37 years old | 2 |
| 37 + years old    | 3 |

*Table 1 - Respondent age*

Questions 3 to 5 are about the difficulties that respondents faced or face with the university Moodle. According with table 2 and graph 1, just 4 of them faced difficulties accessing Moodle, and just 3 of them already been harmed by not knowing very well how to navigate on Moodle, however most of them, 8, think that was necessary some training on the university Moodle.

|                                                     | Yes | No |
|-----------------------------------------------------|-----|----|
| Question 3 (Difficulties assessing Moodle)          | 4   | 7  |
| Question 4 (Harmed for lack of Knowledge on Moodle) | 3   | 8  |
| Question 5 (Training on Moodle)                     | 8   | 3  |

*Table 2 - Answers to questions 3, 4 and 5.*

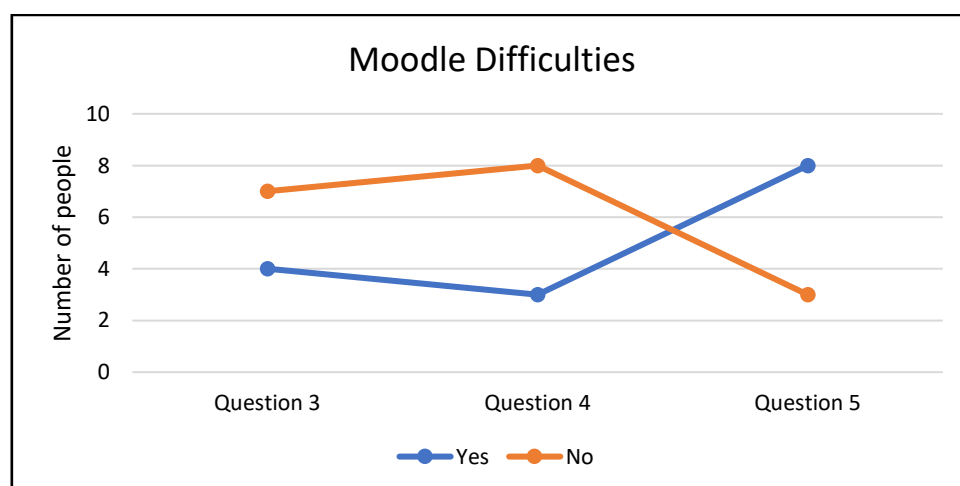


*Figure 1 - Graph of responses to questions 3, 4 and 5.*

Questions 6, 7 and 8 are related to the usefulness, functionality and security of Moodle. Based on the results, table 3 and graph 2, most of the respondents think that the university Moodle meets their needs and works very well. However, they have varying opinions about their safety.

|                                   | Excellent | Very Good | Good | Fair | Poor |
|-----------------------------------|-----------|-----------|------|------|------|
| Question 6 (Moodle Usefulness)    | 2         | 7         | 2    | 0    | 0    |
| Question 7 (Moodle functionality) | 1         | 7         | 3    | 0    | 0    |
| Question 8 (Moodle security)      | 2         | 5         | 2    | 2    | 0    |

Table 3 - Answers to questions 6, 7 and 8.

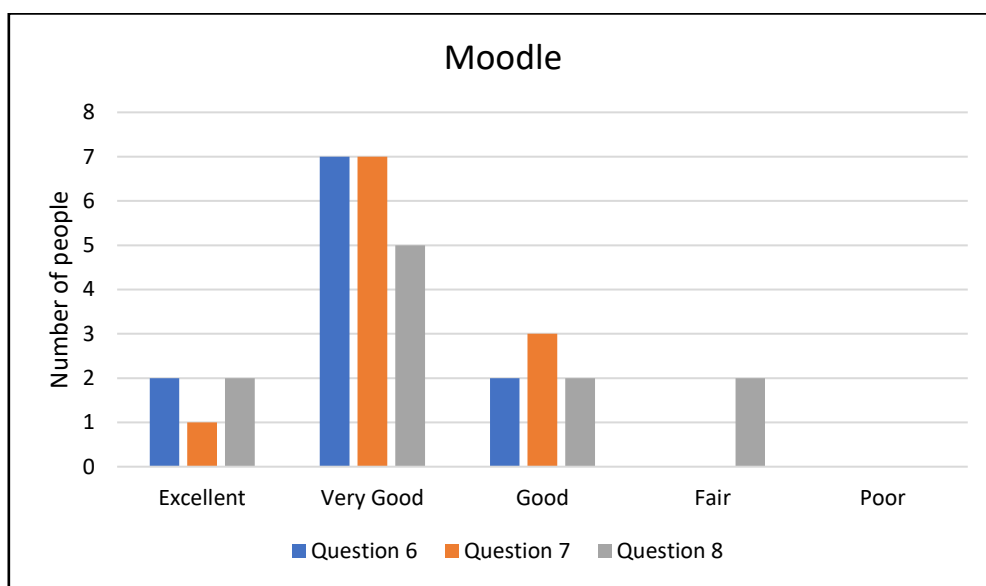


Figure 2 - Graph of answers to questions 6, 7 and 8.

The question 9, 10 and 11 are about the Moodle and VLE importance and advantage for the university and for the higher education system. As you can see on the table 4 and graphic 3, most of them strongly agree that Moodle is important for the university, with the use of VLE on higher education system. However, they have varying opinions regarding the advantages and disadvantages of VLE.

|                                | Strongly Agree | Agree | Not Sure | Disagree | Strongly Disagree |
|--------------------------------|----------------|-------|----------|----------|-------------------|
| Question 9 (Moodle importance) | 8              | 1     | 2        | 0        | 0                 |
| Question 10 (VLE importance)   | 7              | 3     | 1        | 0        | 0                 |
| Question 11 (VLE advantage)    | 3              | 5     | 3        | 0        | 0                 |

Table 4 - Answers to questions 9, 10 and 11.

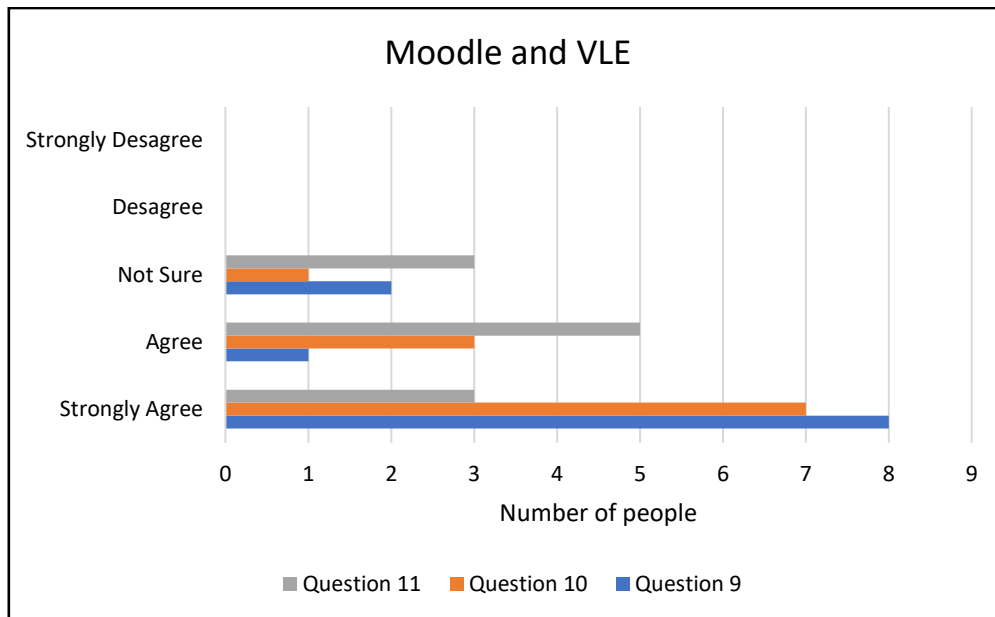


Figure 3 - Graph of answers to questions 9, 10 and 11.

Question 12 is about the respondents' opinion in the event of a disagreement or a strong disagreement in question 11. According to the results obtained in question 11, question 12 has no effect.

## 6. Discussion of Results

With this questionnaire it is clear the importance and usefulness of university Moodle and of VLE for the education system, since most of the respondents agree or strongly agree with it. It was also clear that Moodle, responds well to respondents' needs, works well and is safe, although 2 persons think that his security is fair, most of them opinions varies between excellent and very good. Some of the students, in fact 4 of the respondents, felt some difficulty in accessing Moodle, analysing their ages, majority above 31, which may lead us to conclude that they may have little practice or are not very familiar with certain technologies. However, most think that it was necessary some train on it, which leads us to the conclusion that in fact, the platform used by the university has a certain degree of difficulty, in spite of this, only 3 of the respondents felt ever hampered by the lack of knowledge in Moodle.

For my experience I can say that the major disadvantage are the complicated technologies and not everybody knows, or is a big fan of much technologies, and the fact that it depends a lot on the internet, computer, etc. if you don't have any of these items, or you have an issue with some of them it might not work for you. I have faced some difficulties in these days of online class, occasionally because of my computer, though must of them because of lack of cooperation and civility on the part of my colleagues, which made the sections of classes less productive.

## 7. Conclusion

With the work it was possible to realise that virtual learning is an important tool in the development and greater access to teaching. However, it was also possible to understand that it has some disadvantages and some flaws. However, looking back and how virtual learning has evolved over the years, I am confident that these flaws and disadvantages will be reduced and perhaps null.

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# Appendix

## Appendix 1 – Questionnaire

**Questionnaire (Romina Correia): University of Wales Trinity Saint David Moodle.**

### **1.Gender:**

F

M

### **2.Age**

a. 20 – 25

c. 32 – 37

b. 26 – 31

d. 37 +

### **3.Did you experience any difficulties accessing the Moodle?**

a. Yes

b. No

### **4.Have you ever felt harmed, for not knowing how to use Moodle very well?**

a. Yes

b. No

### **5.Do you think that was necessary any training on Moodle?**

a. Yes

b. No

### **6.Overall, how good is the university Moodle meeting your needs?**

a. Excellent

b. Very good

c. Good

d. Fair

c. Poor

### **7.How to evaluate the functioning of the Moodle**

a. Excellent

b. Very good

c. Good

d. Fair

e. Poor

**8.How do you evaluate the security of the university Moodle?**

- a. Excellent
- b. Very good
- c. Good
- d. Fair
- e. Poor

**9.Do you agree that Moodle, is very important for this university, for the students and the lecture?**

- a. Strongly Agree
- b. Agree
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**10.Do you agree with using virtual learning in higher education context?**

- a. Strongly Agree
- b. Agree
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**11.Do you agree that VLE can bring a lot of vantages, but it can bring a lot disadvantage like: lack of social interaction, high chances of distraction, complicated technology etc.**

- a. Strongly Agree
- b. Agree
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**12. If you disagree or strongly disagree in the question number 11 can you tell why?**

N/A

## Appendix 2 – Samples of responded questionnaire

### Questionnaire: University of Wales Trinity Saint David Moodle.

#### 1. Gender:

F

M

#### 2. Age

a. 20 – 25

c. 32 – 37

b. 26 – 31

d. 37 +

#### 3. Did you experience any difficulties accessing the Moodle?

a. Yes

b. No

#### 4. Have you ever felt harmed, for not knowing how to use Moodle very well?

a. Yes

b. No

#### 5. Do you think that was necessary any training on Moodle?

a. Yes

b. No

#### 6. Overall, how good is the university Moodle meeting your needs?

a. Excellent

b. Very good

c. Good

d. Fair

c. Poor

#### 7. How to evaluate the functioning of the Moodle

a. Excellent

b. Very good

c. Good

d. Fair

e. Poor

**8.How do you evaluate the security of the university Moodle?**

- a. **Excellent**
- b. Very good
- c. Good
- d. Fair
- e. Poor

**9.Do you agree that Moodle, is very important for this university, for the students and the lecture?**

- a. **Strongly Agree**
- b. Agree
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**10.Do you agree with using virtual learning in higher education context?**

- a. **Strongly Agree**
- b. Agree
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**11.Do you agree that VLE can bring a lot of vantages, but it can bring a lot disadvantage like: lack of social interaction, high chances of distraction, complicated technology etc.**

- a. Strongly Agree
- b. **Agree**
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**12. If you disagree or strongly disagree in the question number 11 can you tell why?**

N/A

### Appendix 3 – Samples of responded questionnaire

Questionnaire (Romina Correia): University of Wales Trinity Saint David Moodle.

**1. Gender:**

F

M-**Male**

**2. Age**

a. **20 – 25**

c. 32 – 37

b. 26 – 31

d. 37 +

**3. Did you experience any difficulties accessing the Moodle?**

a. Yes

**b. No**

**4. Have you ever felt harmed, for not knowing how to use Moodle very well?**

a. Yes

**b. No**

**5. Do you think that was necessary any training on Moodle?**

a. Yes

**b. No**

**6. Overall, how good is the university Moodle meeting your needs?**

**a. Excellent**

b. Very good

c. Good

d. Fair

c. Poor

**7. How to evaluate the functioning of the Moodle**

a. Excellent

b. Very good

**c. Good**

d. Fair

e. Poor

**8.How do you evaluate the security of the university Moodle?**

- a. Excellent
- b. Very good
- c. Good
- d. Fair
- e. Poor

**9.Do you agree that Moodle, is very important for this university, for the students and the lecture?**

- a. Strongly Agree
- b. Agree
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**10.Do you agree with using virtual learning in higher education context?**

- a. Strongly Agree
- b. Agree
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**11.Do you agree that VLE can bring a lot of vantages, but it can bring a lot disadvantage like: lack of social interaction, high chances of distraction, complicated technology etc.**

- a. Strongly Agree
- b. Agree
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**12. If you disagree or strongly disagree in the question number 11 can you tell why?**

N/A

Appendix 4 – Samples of responded questionnaire.

Questionnaire (Romina Correia): University of Wales Trinity Saint David Moodle.

**1. Gender:**

F

M

**2. Age**

a. 20 – 25

c. 32 – 37

b. 26 – 31

d. 37 +

**3. Did you experience any difficulties accessing the Moodle?**

a. Yes

b. No

**4. Have you ever felt harmed, for not knowing how to use Moodle very well?**

a. Yes

b. No

**5. Do you think that was necessary any training on Moodle?**

a. Yes

b. No

**6. Overall, how good is the university Moodle meeting your needs?**

a. Excellent

b. Very good

c. Good

d. Fair

c. Poor

**7. How to evaluate the functioning of the Moodle**

a. Excellent

b. Very good

c. Good

d. Fair

e. Poor

**8.How do you evaluate the security of the university Moodle?**

- a. Excellent
- b. Very good
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**9.Do you agree that Moodle, is very important for this university, for the students and the lecture?**

- a. Strongly Agree
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- d. Disagree
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**10.Do you agree with using virtual learning in higher education context?**

- a. Strongly Agree
- b. Agree
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**11.Do you agree that VLE can bring a lot of vantages, but it can bring a lot disadvantage like: lack of social interaction, high chances of distraction, complicated technology etc.**

- a. Strongly Agree
- b. Agree
- c. Not Sure
- d. Disagree
- e. Strongly Disagree

**12. If you disagree or strongly disagree in the question number 11 can you tell why?**

N/A