

University of Wales Trinity Saint David

Digital Skills and Research Methods
BMSW4003

*A study on the impact of Virtual Learning
Environment- Moodle on students learning
experience at the University of Wales Trinity Saint
David*

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Chapter 1 Introduction

Technology in the modern society is part of the everyday life. The development of the technology impacted the educational area and with the internet usage it transformed the educational system and made it available online, known as the e-learning. This study will investigate the educational process realised through e-learning at the University of Wales Trinity Saint David, focusing on the students learning experience.

Research Title “A study on the on the impact of Virtual Learning Environment- Moodle on students learning experience at the University of Wales Trinity Saint David”

Research Objectives

1. To define the concepts of Virtual Learning Environment and Moodle
2. To investigate students engagement in e-learning
3. To assess the impact of Moodle on students learning experience

Research Questions

1. What are the concepts of Virtual Learning Environment and Moodle?
2. What is the students engagement in e-learning?
3. What is the impact of Moodle on students learning experience?

Chapter 2 Literature Review

In the past the distance learning was realised using post and it was a difficult and lengthy process. Nowadays with the modern-day technology, distance learning is very accessible and very popular. Having to adapt to the new governmental restrictions on covid-19, the teaching in physical class was transformed and universities focused mainly on the virtual learning environment to deliver their courses (Universities UK, 2020).

The Virtual Learning Environment is defined as the online space designed for teaching and learning and whilst the term “virtual” refers to something that replaces real life, the virtual learning in fact does not replace the real learning, but it enhances class teaching and educational practices. It is an extension of physical learning environments, which adds more value through instigating the imagination and creativity of the teachers and students (Science Direct, 2016).

The Virtual Learning Environment is used for e-learning (distance learning) and uses a network of computer technology and internet to allow students to study from home without being in a physical class. Moodle is a Learning Management System (LMS) used to deliver e-learning. Moodle is a medium for the students and teachers interaction and realisation of online learning activities (Ikawati et al, 2020).

The education delivered at the university is important for social advancement and the development of e-learning courseware became more attractive and interactive for students as it included social networking and collaboration (Chui et al, 2020).

Therefore an important aspect to be assessed is the students engagement. It is questioned if the students engagement is different in the online learning than in the “bricks and mortar” universities. Students interaction using VLE is different than face-to-face teaching, but studies showed that it can provide positive learning outcomes. That is why teaching is not associated any longer only with face-to-face learning, but also with e-learning. The variety of the online learning resources and tools enriches the students learning as in contrast with the predictive face-to-face class settings and offer alternative proxy to gain students engagement (Boulton, 2018).

The e-learning depends on each university efforts to ensure online accessibility, to provide qualitative learning materials, to maintain high levels of communication with the student. Moodle is a functional platform used by University of Wales Trinity Saint David (UWTSD) to centralise their e-learning. Moodle can be very useful, but it depends on the teachers skills to utilise it efficiently. UWTSD Moodle is utilised for a variety of activities. On Moodle, students can find all their modules and teaching materials, they can submit their assignments, they can access the library, they

have available a calendar with dates according to their academic year, but they can also access administrative sections such as MyTSD, Hwb or Service Desk (UWTSD, 2020).

Chapter 3 Methodology

The action plan for primary data collection

The research title “A study on the on the impact of Virtual Learning Environment- Moodle on students learning experience at the University of Wales Trinity Saint David” requires complex analysis that will be conducted using data researched primary data.

Sampling is “the process used in statistical analysis in which a predetermined number of observations are taken from a larger population. The methodology used to sample from a larger population depends on the type of analysis being performed, but it may include simple random sampling or systematic sampling” (Investopedia, 2020).

This research will use quantitative data which involves numerical data collection in order to achieve the research objectives. The research instrument selected for this research is the questionnaire. The sample for this research was selected in a non-random modality. It has to be taken in consideration that the selected sample is relevant for the group of members, in this case for the UWTSD. The questionnaire will be given to the students from University of Wales Trinity Saint David. The questionnaire has 10 questions which are matched with the research objectives and are addressed to the students from the Cert HE Skills for the Workplace course who have lectures two days per week.

The process of primary data collection

The questionnaire was sent students using the student email. There is a total of 25 students at the Cert HE Skills for the Workplace course and in order to have an un-biased data it was send to 24 students as the researcher is a student also.

The first three questions from the questionnaire focused on demographic aspects, gender, age and employment status. Students were asked if they use UWTSD Moodle and how easy is to access it. There were asked how many times per week they access Moodle and how much time they spend on Moodle. Question 8 asked if they were satisfied with the quality of information found oN UWTSD Moodle and what chances are to recommend it. Last question was a closing question to identify the education level of the respondents.

Chapter 4 Findings and analysis

The analysis will emphasise to which degree the selected method of collecting primary data has met the criteria requirements. It should exist a balance between the resources used ad the informational process of the scientific purpose of the research. For the analysis will be used frequency tables, pie charts and bar charts.

There were collected 18 answers from the offered questionnaires and data collected will be recorded in tables for illustration, but a complete table that gathers all the answers can be found in the Appendices.

Table 1 Respondents gender and age

Gender	Number of respondents	Age interval Under 20	Age interval 21-30	Age interval 31-40	Age interval 41-50	Age interval More than 51
M	8	0	3	4	1	0
F	10	1	4	4	1	0

Figure 1 Respondents gender and age

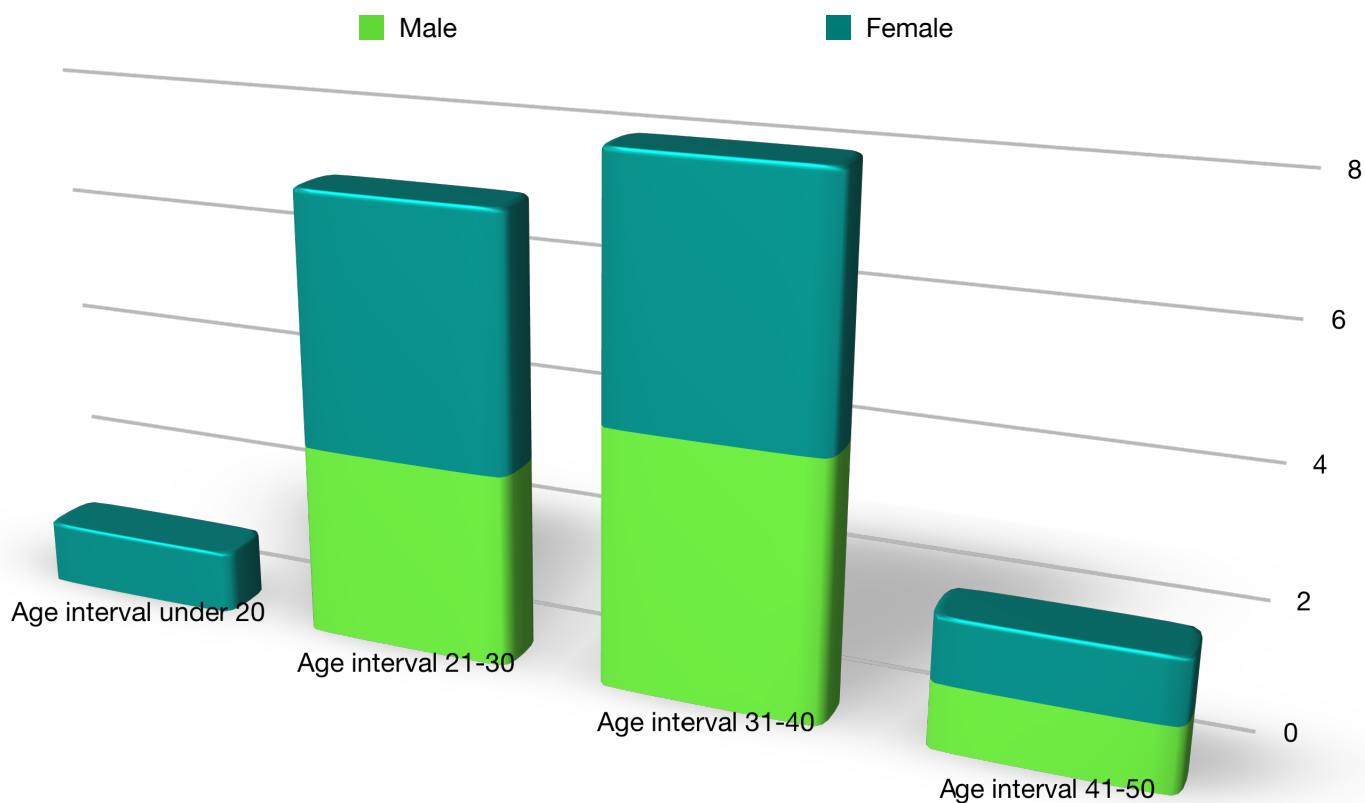


Figure 1 Respondents gender and age highlights that the age interval of the majority of the respondents is between 20 and 40 and only 2 participants are between 41 and 50 years old. It can also be observe that the number of female participants is higher. That means that majority of students enrolled to this course are young people. This is a common profile for students as identified in secondary data in the literature review which states that the education delivered at the university is important for social advancement and that is specific for students at the beginning of the road.

Table 2 Frequency table for level of education

<i>Number of respondents</i>	<i>Secondary School</i>	<i>Frequency</i>
18	18	18
		100%

Table 2 highlights that a maxim percentage of 100% of the participants have selected only the secondary education from the answers provided in the questionnaire, which enhances the findings from table 1 and strengthens the profile of the students involved in the study.

Table 3 Frequency table for employment status

<i>Employment status</i>	<i>Frequency</i>	<i>Percentage</i>
Employed	15	83%
Self employed	3	17%

Table 3 illustrates that the participants only selected 2 answers from the choices provided in the questionnaire and 15 of the respondents are employed and 3 are self employed.

Figure 2 Employment status

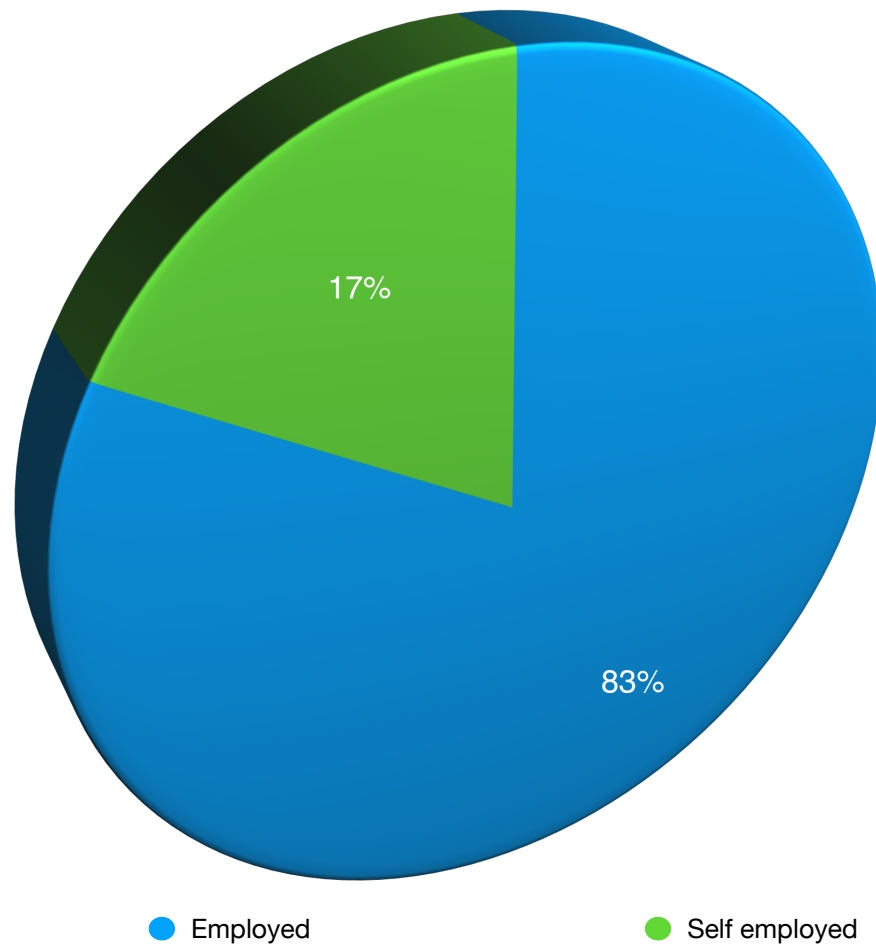


Figure 2 emphasises that all the participants are working, with a percentage of 83% being employed and 17% being self employed. That is a positive aspect related to the participants profile as it can suggest that the students are responsible persons and that could benefit the engagement and level of commitment to the course.

Table 4 Frequency table for UWTSD Moodle user

<i>Number of respondents</i>	<i>Moodle user</i>	<i>Frequency</i>
18	18	18
		100%

Table 4 highlights that all the participants are using UWTSD Moodle. It is a very positive aspect for the study as it will provide clear feedback from the students with regards to their experience using UWTSD Moodle.

Table 5 Frequency table for respondents view on UWTSD Moodle accessibility

<i>Easy to access</i>	<i>Frequency</i>	<i>Percentage</i>
Yes	13	18
No	5	100%

Figure 3 Respondents view on UWTSD Moodle accessibility

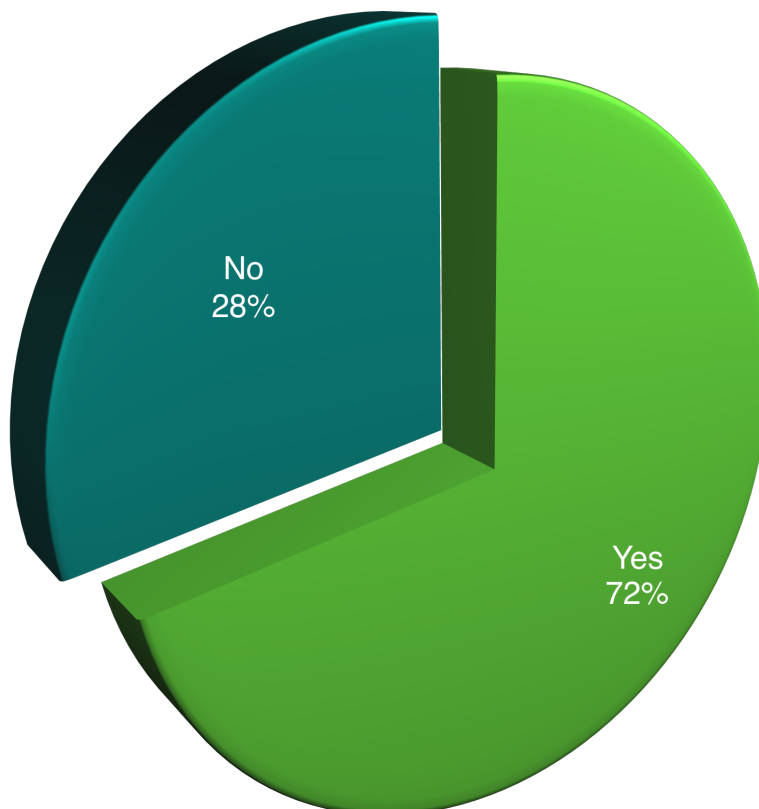


Figure 3 enhances that only a 28% of the participants do not consider that UWTSD Moodle is easy to access, whilst a very large percentage of 72% say that UWTSD Moodle has an easy to navigate interface. As highlighted in the secondary data in the literature review it is important to have a useful Moodle platform as Moodle is the medium for the students and teachers interaction and realisation of online learning activities (Ikawati et al, 2020).

Table 6 Frequency table for weekly access

<i>Access per week</i>	<i>Frequency</i>	<i>Percentage</i>
Up to 3 times	11	61%
4 times	5	28%%
5 times	2	11%

Figure 4 Participants weekly access on Moodle

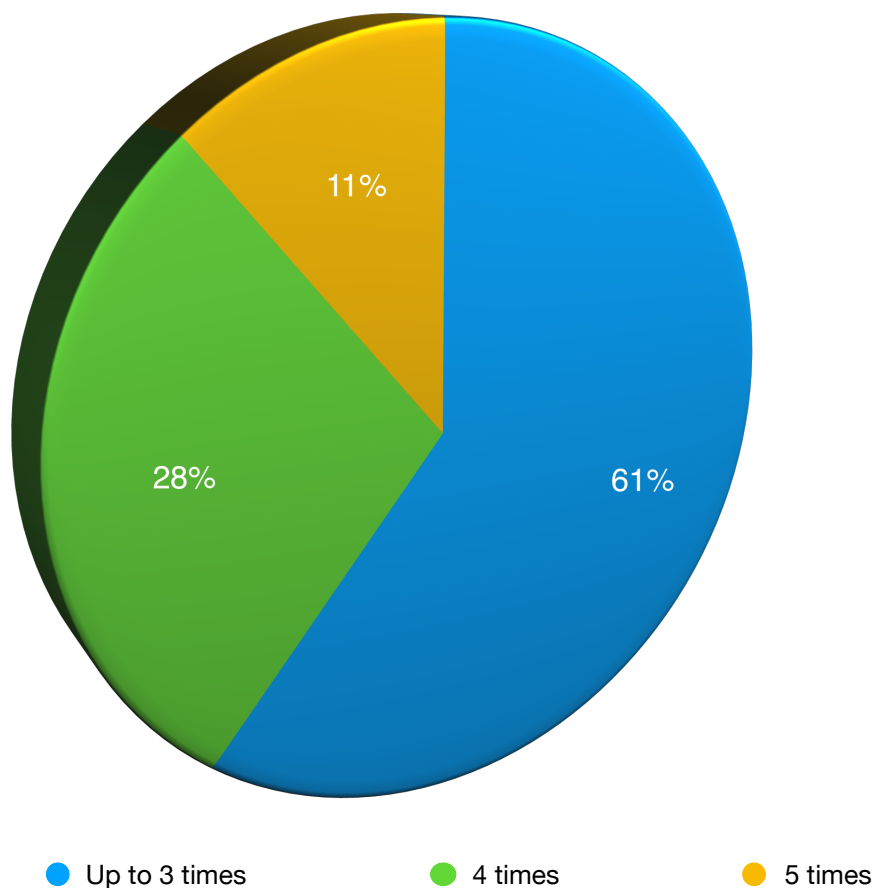


Figure 4 identified that a majority of participants 61% access UWTSD Moodle up to 3 times per week which can be viewed as average considering that 2 days per week have to participate at online classes as stated in the study. The values for participants that access Moodle more than what is considered as compulsory is 28% for 4 times per week and 11% for 5 times per week. This findings can be analysed as very positive figures that show students engagement and participation at the course. It demonstrates that e-learning can provide positive learning outcomes (Boulton, 2018).

Table 7 Frequency table for daily access

<i>Access per day</i>	<i>Frequency</i>	<i>Percentage</i>
4-6	18	100%

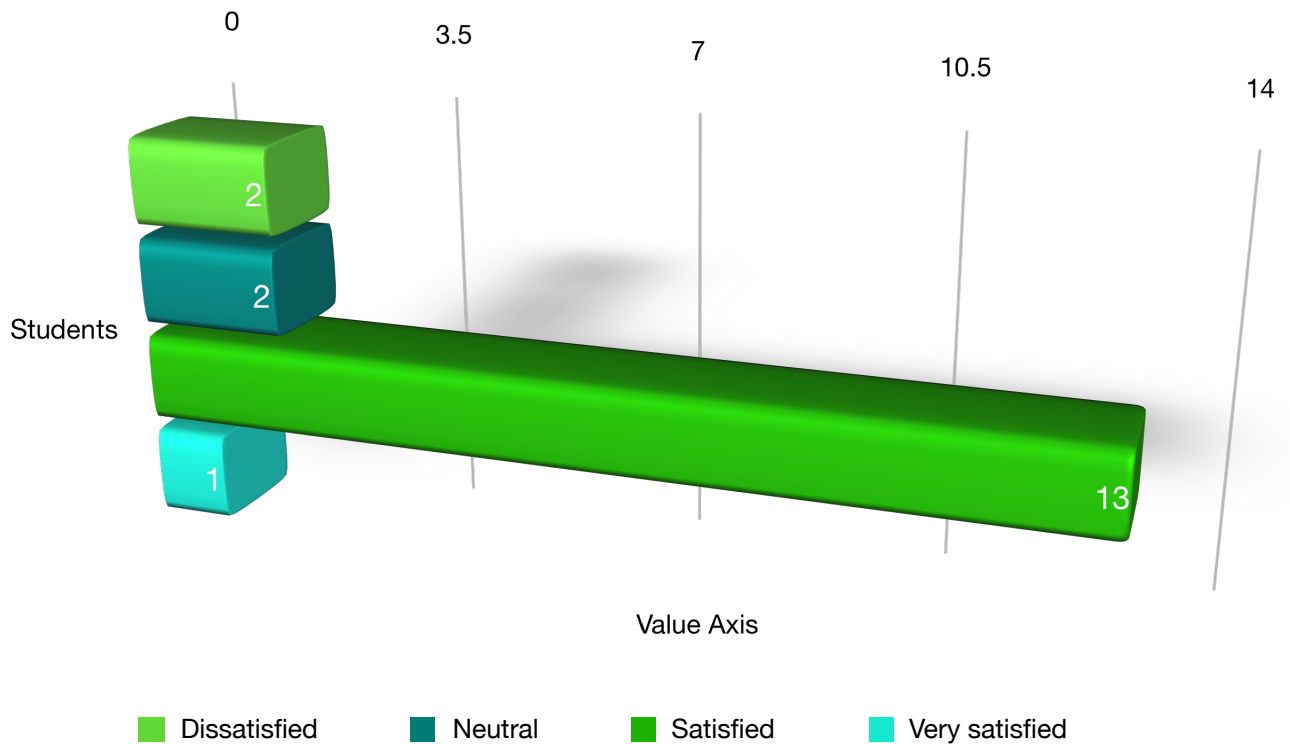
The frequency table 7 illustrates that all the participation made the selection of 4 to hours spent per day on Moodle. This answer was selected from a number of 4 choices, two of them representing lower number of hours. That means positive findings for the students engagement towards the course as they allocate a high number of hours per day to their study.

Table 8 Frequency table for levels of satisfaction with Moodle content

<i>Levels of satisfaction</i>	<i>Frequency</i>	<i>Percentage</i>
Very Dissatisfied	0	0%
Dissatisfied	2	11%
Neutral	2	11%
Satisfied	13	72%
Very satisfied	1	6%

Table 8 illustrates that there are no students very dissatisfied with UWTSD Moodle content, only 11% are dissatisfied, 11% are neutral and majority of 72% are satisfied with the quality of information found on VLE Moodle of University of Wales Trinity Saint David. On top of that a 6% of the participants are very satisfied with the content.

Figure 5 Levels of satisfaction with Moodle content



The analysis of figure 5 indicates that UWTSD manages a qualitative e-learning system as it presents high levels of satisfaction for a majority of 78% of students. Comparing this findings with the secondary data from the literature review it can be affirmed that the students find the information attractive and interactive and are satisfied with the content for their learning experience.

Table 9 Frequency table for participants choice to further recommendation

<i>Participants choice to further recommendation</i>	<i>Frequency</i>	<i>Percentage</i>
Not at all likely	0	0%
Not likely	2	11%
Likely	12	22%
Very likely	4	67%
Extremely likely	0	0%

Figure 6 Participants choice to further recommendation

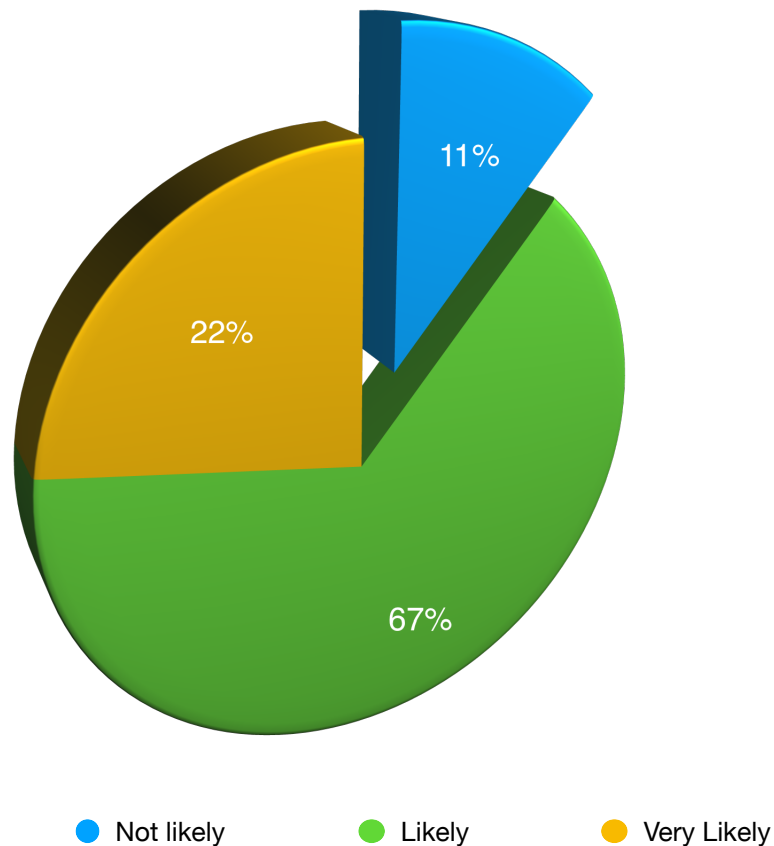


Table 9 indicates that the participants did not select the answer “not at all likely” which would have excluded a further recommendation of UWTSD Moodle. A percentage of 11% said that they are not likely to recommend it, selection which can be negative, but it does not have the fully exclusion of the previous answer. And 22% are likely to recommend it and 67% are very likely. This are positive figures that could indicate students satisfaction with UWTSD e-learning courseware provision.

Figure 6 enhances that whilst a majority of 89% of participants are highly impressed with the service, there is a segment of 11% that should be assessed and further research should be made.

Chapter 5 Conclusions and recommendations

The findings from the primary data are aligned with the secondary data related to virtual learning environment development which adds more value through instigating the imagination and creativity of the teachers and students.

The analysis of primary data findings registered positive results, meaning that the usage of UWTSD VLE Moodle produces a positive impact of the learning experience of the students involved in the study. The evaluation of the results showed high levels of engagement among students and that confirms the conclusion.

The recommendation for the organisation is to acknowledge the primary data findings and take on board the aspects related to the students that were not very satisfied with UWTSD Moodle platform. Considering that the number of respondents was relatively small, it should be executed more research and further analysis.

References

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Appendices

Appendix 1

Questionnaire on The impact of VLE Moodle on students learning experience at the University of Wales Trinity Saint David

**VLE - Virtual Learning Environment*

This questionnaire is used for data research only and not other purposes.

Please if you can answer the following questions

1. What is your gender?

☐ Male

☐ Female

2. What is your age?

☐ Less than 20

☐ 21-30

☐ 31-40

☐ 41-50

☐ More than 50

3. What is your employment status ?

☐ Unemployed

☐ Employed

☐ Self employed

4. Do you use the VLE Moodle of University of Wales Trinity Saint David ?

☐ Yes

☐ No

5. Is it easy to access it?

☐ Yes

☐ No

6. How many times per week do you access the VLE Moodle of University of Wales Trinity Saint David?

- ☐ Up to 3 times
- ☐ 4 times
- ☐ 5 times
- ☐ 6 times or more

7. How many hours per week do you spend on VLE Moodle of University of Wales Trinity Saint David?

- ☐ 0 - 2 hours
- ☐ 2 - 4 hours
- ☐ 4- 6 hours
- ☐ more than 6 hours

8. How satisfied are you with the quality of information found on VLE Moodle of University of Wales Trinity Saint David?

- ☐ Very dissatisfied
- ☐ Dissatisfied
- ☐ Neutral
- ☐ Satisfied
- ☐ Very satisfied

9. How likely are you to recommend VLE Moodle of University of Wales Trinity Saint David?

- ☐ Not at all likely
- ☐ Not likely
- ☐ Likely
- ☐ Very likely
- ☐ Extremely likely

10. What is your highest educational achievement?

- ☐ Primary school
- ☐ Secondary school
- ☐ College diploma
- ☐ Bachelor's degree

☐ Master diploma

☐ Doctor

Thank you

Appendix 2

Table I Primary data records

No	Gender	Age	Employment status?	Moodle user?	Easy to access?	Access per week?	Hours per day?	Satisfaction levels	Further recommendation	Education Level
1	M	31-40	Employed	Yes	Yes	Up to 3 times	4-6	S	L	S School
2	M	21-30	Employed	Yes	Yes	4 times	4-6	S	L	S School
3	M	31-40	Employed	Yes	Yes	4 times	4-6	S	L	S School
4	M	21-30	Employed	Yes	Yes	Up to 3 times	4-6	S	L	S School
5	M	41-50	Self Employed	Yes	No	Up to 3 times	4-6	S	L	S School
6	M	31-40	Employed	Yes	No	Up to 3 times	4-6	N	L	S School
7	M	31-40	Employed	Yes	Yes	Up to 3 times	4-6	S	L	S School
8	M	21-30	Employed	Yes	Yes	4 times	4-6	S	L	S School
9	F	<20	Employed	Yes	Yes	5 times	4-6	S	L	S School
10	F	31-40	Employed	Yes	Yes	Up to 3 times	4-6	S	L	S School
11	F	21-30	Employed	Yes	Yes	4 times	4-6	S	L	S School
12	F	21-30	Employed	Yes	Yes	5 times	4-6	V S	L	S School
13	F	21-30	Self Employed	Yes	Yes	Up to 3 times	4-6	S	L	S School
14	F	31-40	Employed	Yes	No	Up to 3 times	4-6	D	N L	S School
15	F	41-50	Employed	Yes	No	Up to 3 times	4-6	N	L	S School
16	F	31-40	Self Employed	Yes	No	Up to 3 times	4-6	D	N L	S School
17	F	21-30	Employed	Yes	Yes	Up to 3 times	4-6	S	L	S School
18	F	31-40	Employed	Yes	Yes	4 times	4-6	S	L	S School

M- male

F- female

VD- very dissatisfied

D- dissatisfied

N- neutral

S- satisfied

VL- very satisfied

NL- not likely

L- likely

VL- very likely

S- School- secondary school