



Digital Skills and Research Methods
BMSW4003

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

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Introduction

The title of this research is “The impact of Virtual Learning Environment- Moodle on students learning experience at the University of Wales Trinity Saint David”.

The objectives of this research are *to establish what is a virtual learning environment, to find out what are students thoughts on the online learning experience, and to analyse the efficiency of the online tools offered by the University.*

Literature Review

The development of the digital technology contributed to the development of the online learning and changed the distance learning as it provided new ways of sharing information. The Virtual Learning Environment (VLE) is defined as the educational system created to support the distance learning. This type of learning takes advantage of the new technological resources and creates new functionality and interactive communication for students and teachers (Domingueti, Dias, Darlington, 2020).

All the learning resources are available online, where teachers and students can have easy access to a variety of materials, power point presentations, documents, worksheets, videos, podcasts etc. It is an efficient way to have all the resources organised, even the library, which can be accessed at any time. This way of learning is very flexible for students who are not bound to travel to a physical location or time bound as they can access the resources at any time for their individual learning (Lumen Learning, 2020).

The Virtual Learning Environment has the same teaching elements of a physical class, with scheduled learning sessions and module descriptor, in-class activities, homework, the conversations and debates, the feedback from the teacher. Having all this information organised and shared contributes to the creation of a social space that also exists in a physical class which make the teachers and students

feeling at ease, as it can encourage discussion threads, surveys, polls. Feedback is realised in the online, which can be during the learning class or written through email, but it helps the student to submit their work more easier (FireFly Learning, 2020).

Whilst in traditional learning the communication is a trivial element, in the online environment the communication has to be more elaborated to deal with the physical or temporal distance between teachers and students. Alexander (2006) question the levels of implication and motivation of the parts involved considering that the technology can be constraint.

Ribeiro et al (2007) state that in the virtual Learning Environment students and teachers can contribute to the content of the information and that can improve the collective learning. For example Moodle allows offering distance learning courses where the students and teachers can communicate through a variety of tools, but it is up to the educational provider to offer attractive and integrating information to stimulate the learning process. The tools used can be categorised in coordination tools, used by teachers to create and manage the course, communication tools used by all the parts involved such as emails, forums, group chats, students production tools used to submit assignments and organise students resources and administrative tools used by the educational providers to manage the online system.

The current pandemic situation determined many educational institutions to go online. Many of the institutions were forced to align their IT capabilities to develop the provision of online learning which for some was long overdue due to various reasons (Harvard Business Review, 2020).

The University of Wales Trinity Saint David (UWTSD) had also to implement a distance learning system using VLE Moodle. Moodle is the system employed by educational providers made available to the students to “access course materials, gain feedback, contact tutors, upload work, see grades and much more all by logging in to their very own online account” (Online Learning College, 2015).

UWTSD VLE Moodle contains a home section where the student can find all the modules, the calendar, the email, the library, MyTSD, Hwb and Service Desk. To facilitate the access in the platform it has a module search engine (UWTSD, 2020).

Methodology

The plan of action

This research analyses the VLE - Moodle at the University of Wales Trinity Saint David. In order to achieve the research objectives it will be investigated the students learning experience whilst using UWTSD Moodle and it will be conducted primary data research and analysis. For primary data collection will be used the questionnaire as the research instrument, which will provide quantitative data for the research.

Sampling refers to the selection of the participants for primary data collection and it can be realised in a non-random way or generated randomly through a software that can generate random lists. This research will use a non-random way of selection of the sample as it involves only the students from the University of Wales Trinity Saint David and more precisely the Cert HE Skills for the Workplace course students.

The data collection process

The collection of primary data was realised through a questionnaire and it was permitted by the lecturer from the Digital Skills and Research. The questionnaire was addressed to a sample of 25 participants, UWTSD students at the course. It is considered that the sample was relevant for the research as it involved all the students from the Cert HE Skills for the Workplace course. The questionnaire was sent through email to all the 25 participants, but it was only obtained a number of 14 responses. The respondents replied to their emails and provided their answers to the researcher. The first question was an opening question and asked the participants if they are using the VLE Moodle for their learning. The second question asked the participants if they consider that is a useful platform for their learning and the third question asked if they considered that it needs improvement. The fourth question wanted to identify how often are the students using Moodle for their learning in a selected time interval. The next questions used likert answers to identify the students levels of satisfaction with Moodle content, how easy is to access it and how likely are to recommend it to fellow students. The last three questions referred to demographic and status questions in order to portray the type of participants. The questionnaire can be found in the Appendix 1.

Analysis of findings

Illustration of the findings

The questionnaire cumulated quantitative data and a summary of the data collected through questionnaire can be found in Appendix 2. The selected sample involved 25 participants, but the research registered only 14 respondents. The respondents answered the questionnaire by replying through email, but the answers were accounted anonymously. Below in *Table 1 The response rate*, it is highlighted the percentage value that represents the number of respondents. It can be observed that a percentage of 56% responded to the questionnaire, which is more than half of the selected sample and can be considered representative for the research.

Table 1 The response rate

No. of questionnaires given	Number of respondents	Rate of response
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25	14	14
		56%

The opening questions that aimed to identify students perception over VLE-Moodle are illustrated in Table 2. The respondents were asked if they use the VLE Moodle for their learning and if they find it useful. All of the respondents answered that they use VLE Moodle and that is useful for their learning. When asked if it requires improvement 6 respondents said that it does, whilst 8 said that it does not.

Table 2 Students perception over VLE- Moodle

Answers	Question 1	Question 2	Question 3
Yes	14	14	6
No	0	0	8

The fourth question aimed to see how often the respondents access VLE Moodle and is illustrated in Table 3 below. 4 respondents said they access it daily and ten respondents said they accessed it every other day.

Table 3 Students access on VLE Moodle per month

Website traffic	No of Students
Daily	4
Every other day	10
Once a week	0
Once a month	0

In Table 4 below there are illustrated the answers obtained to question 5, 6 and 7. One student selected answer 2 which was a low value on the scale and 13 respondents selected 3, 4 and 5 for their level of satisfaction. For question 5 again only one respondent selected a low value on the scale of 2 when asked if they considered that Moodle is easy to access, whilst 13 selected 3, 4 and 5. For question 7 when asked if they would recommend Moodle one respondent selected 3 and 13 selected 4 and 5 which are at the highest scale

Table 4 Levels of satisfaction regarding VLE Moodle usage by the students

Likert Scale	1	2	3	4	5
Q5	0	1	6	6	1
Q6	0	1	7	5	1

Q7	0	0	1	10	3
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Table 5 and 6 below illustrate aspects related to the profile of the respondents. One respondent is under 21 years old, whilst 8 are between 21 and 30 years old, 4 are between 31 and 40 years old and only one respondent is in the age interval 41-50. Half of the respondents are working part time and half are working full time.

Table 5 Demographic status

Age interval	Under 21	22-25	26-30	31-40	41-50	51-50 (or more)
Male	0	1	0	2	1	0
Female	1	3	4	2	0	0

Table 6 Employment status

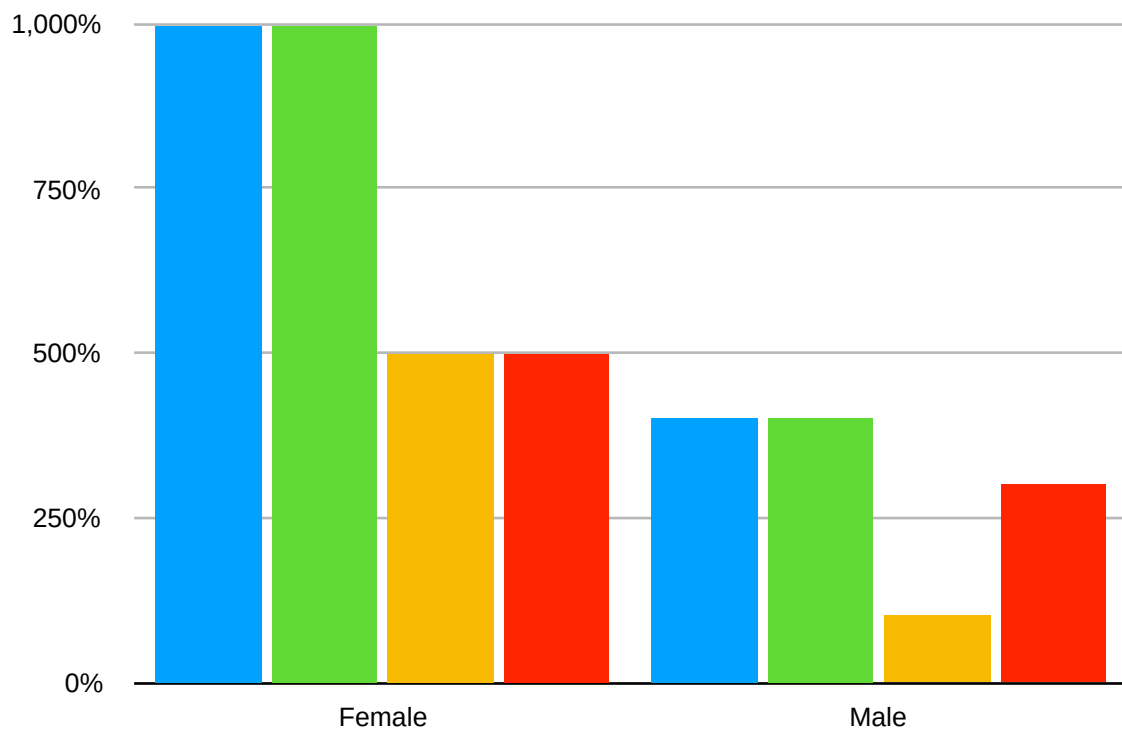
No. Of respondents	Q 10
Unemployed	0
Volunteering	0
Part time	7
Full time	7

Interpretation and evaluation

Table 7 Frequency table for students perception one VLE Moodle

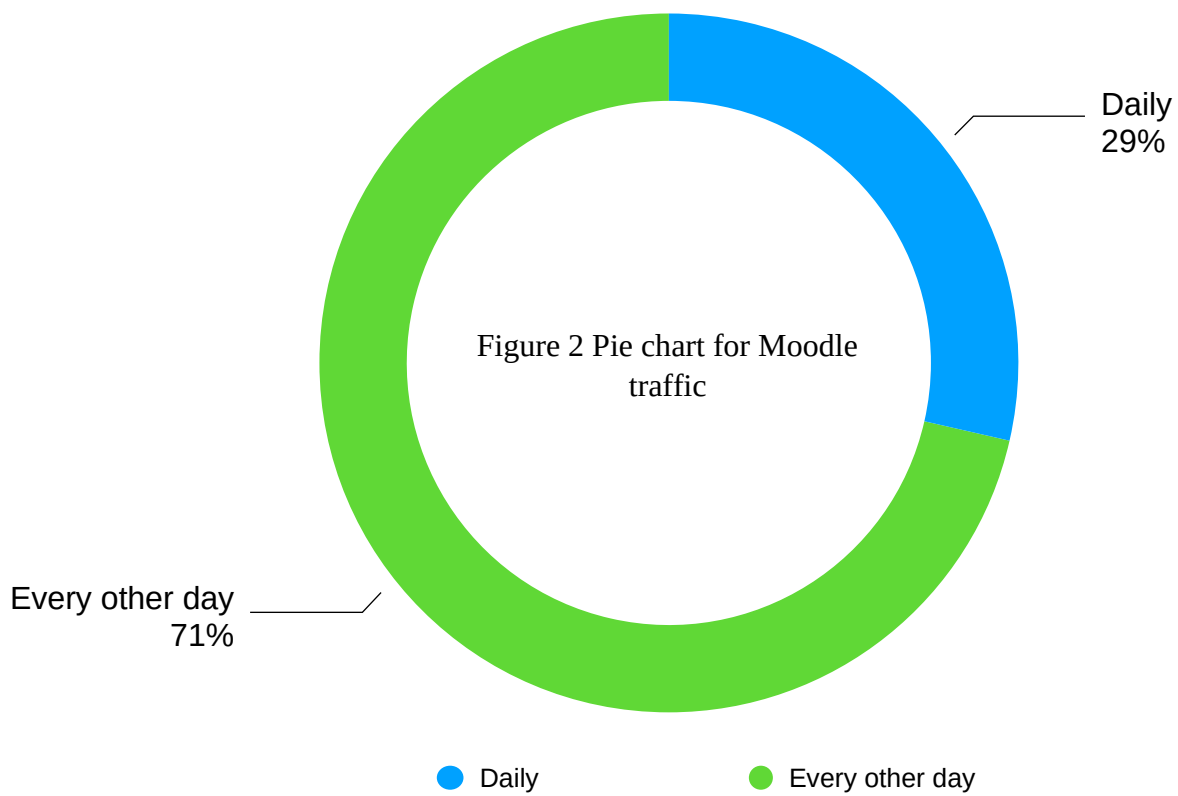
Students perception on VLE Moodle	Frequency	Percentage
Access	14	100%
Importance for learning	14	100%
Need for improvement	6	43%
No need for improvement	8	57%

Figure 1 Bar chart for Students perception one VLE Moodle



■ Access
 ■ Importance
 ■ Need for improvement
 ■ No need for improvement

It can be evaluated that a maximum percentage of respondents access their VLE-Moodle and consider it important for their learning experience, females and males. This is a positive response which adds value to the UWTSD VLE-Moodle. A percentage of 43% said that it requires improvement whilst more than half 57% said that it does need improvements. It means UWTSD students appreciate this online learning experience and consider it efficient.



In Figure 2 above it can be evaluated that a majority of students access VLE Moodle every other day 71% and 29% daily which are very positive findings for the learning experience using Moodle and that highlight the efficiency of the development of technology for distance learning as identified by Domingueti et al (2020) in the secondary data.

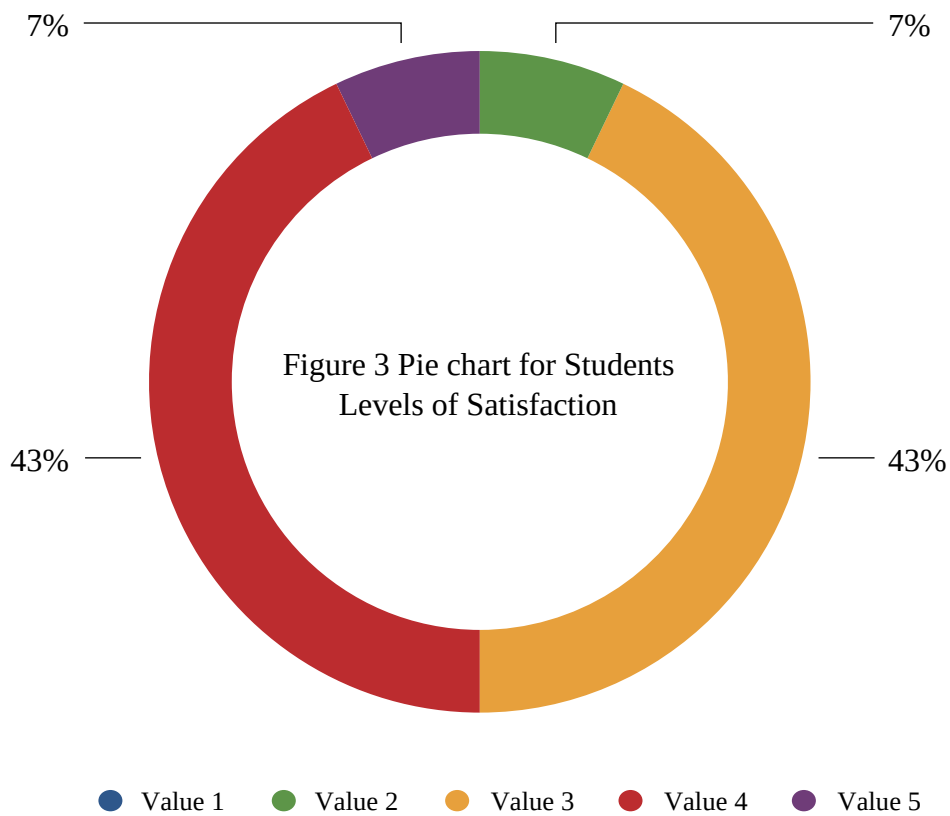


Figure 3 above highlights that 7% gave a low value of 2 in their satisfaction levels over VLE Moodle and 7% gave a maximum value. A majority of 86% gave 3 and 4 value which represent high value regarding students level of satisfaction with UWTSD Moodle content. According to secondary data, UWTSD (2020) state that their platform is very organised and complex to enhance the learning experience which is in correlation with the findings from primary data.

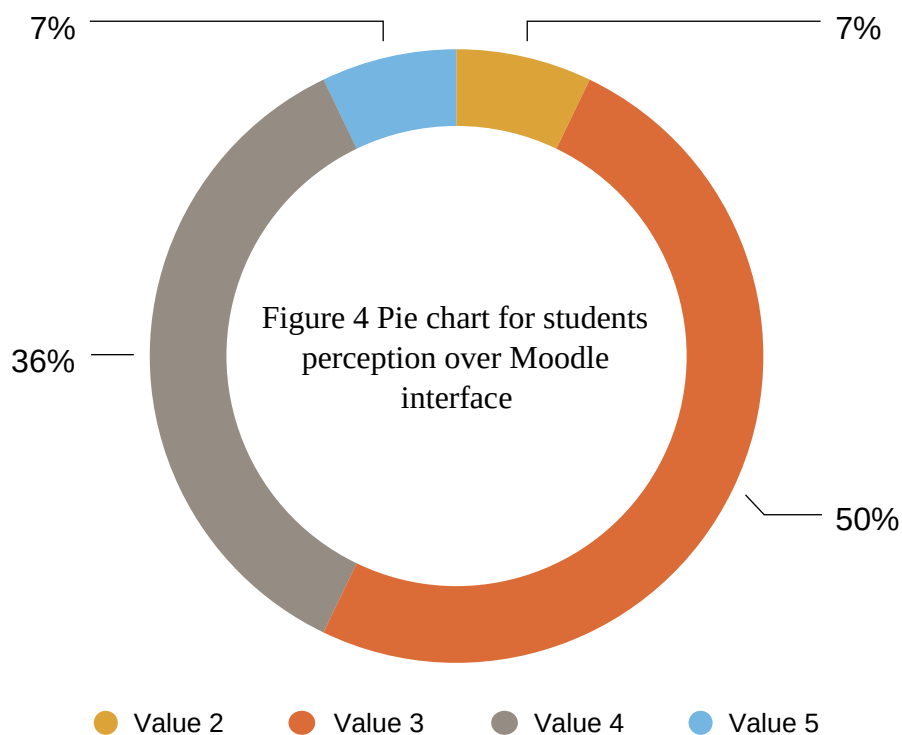


Figure 4 above identifies that 50% selected a value of 3 which is in the middle of the scale, when asked if is easy to access UWTSD Moodle and 43% gave higher values on the scale. This results enhances that students consider UWTSD Moodle easy to access which adds value to their learning experience and correlates with the secondary data that highlighted the university efforts to offer a easy to use interface which has a searching engine to facilitate the finding of the modules (UWTSD, 2020).

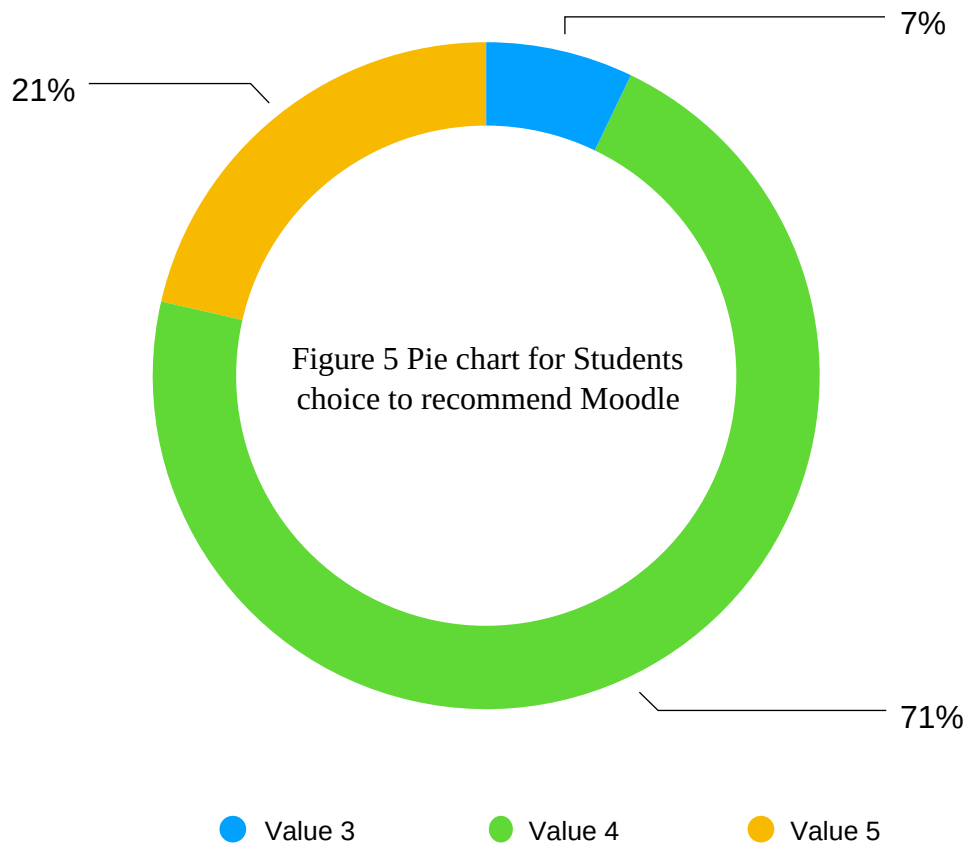
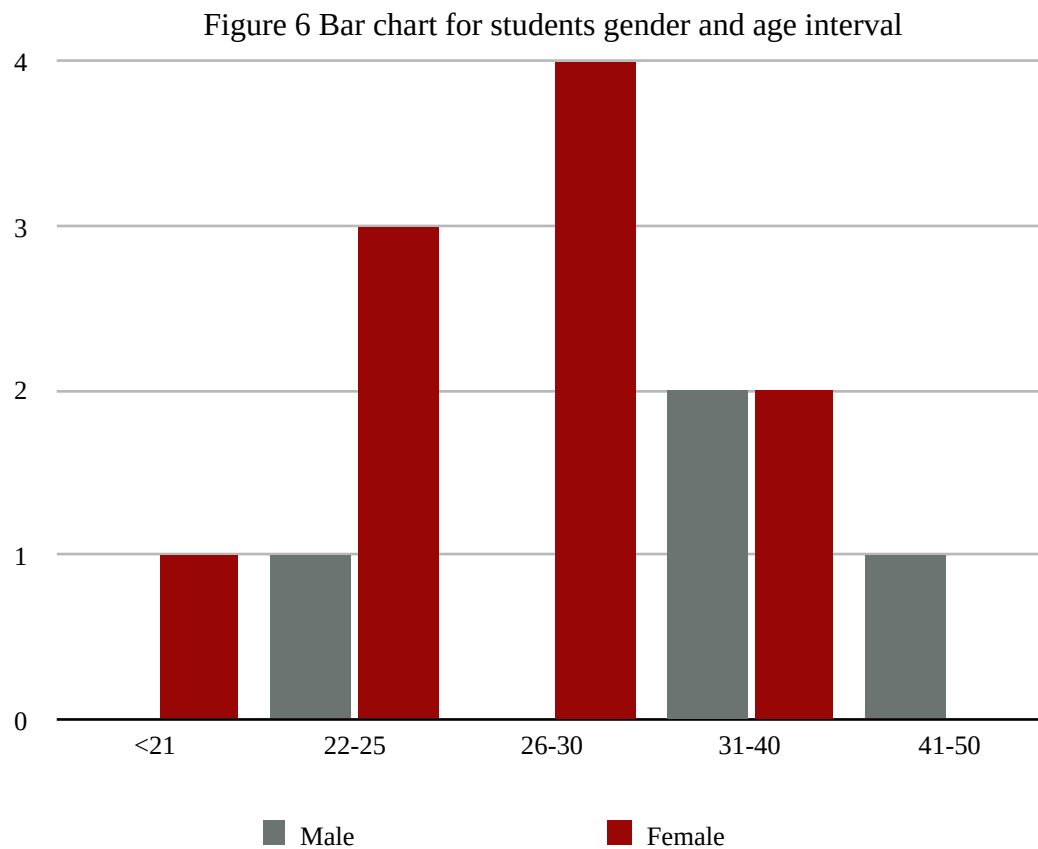


Figure 5 above highlights that respondents only selected answers with value 3, 4 and 5 in the likert scale which represent high appreciation from the students. Majority of respondents of 71% selected the value 4 on the scale which means that UWTSD is doing a great job with their Moodle and all the students are highly likely to recommend it to others.

Table 8 Frequency table on respondents demographic status

Gender	Age interval <21	Age interval 22-25	Age interval 26-30	Age Interval 31-40	Age Interval 41-50	Frequency
Female	1	3	4	2	0	71%
Male	0	1	0	2	1	29%



The Frequency table 8 highlights that 71% of the respondents are females and 29% are males. Figure 6 identifies that there is no male respondent under 21 and no male respondent under 26-30. Majority of respondents belong to the age interval between 20 and 40 which means that the students are young and that can influence their learning experience using VLE Moodle as young generations are more familiar with technology.

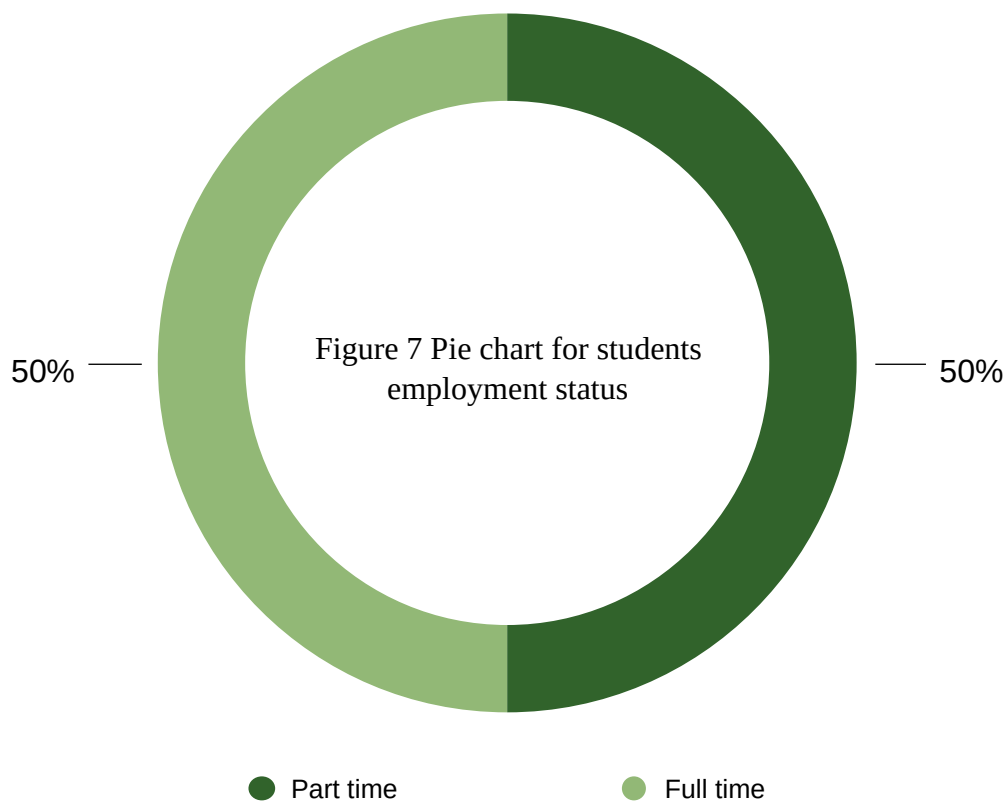


Figure 7 above has only two sections part time and full time, as the respondents belong to one of this category. There is a balance with 50% employed parttime and 50% employed full time. This findings can be evaluate as the profile of the students does not influence their involvement in the studies. Every one of the respondents is employed, but invests time in their studies and distance learning is facilitates their learning experience.

Conclusion

In conclusion UWTSD has an efficient VLE Moodle that enhances the student learning and primary data correlates with the secondary data. The students consider that is an efficient platform for learning. The recommendation for the university is to pay attention at the analysis of the findings related to the number of students that consider that it needs improvement and improve the interface to make it more easy to access as it was identified only a percentage of 7% with maximum satisfaction and a 7% gave a low value of 2 on the likert scale.

The research achieved its objectives considering the limitations of the research related to time and pandemic regulations.

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Appendices

Appendix 1- Questionnaire

The impact of Virtual Learning Environment (VLE)- Moodle on students learning experience at the University of Wales Trinity Saint David (UWTSD)

(This research is conducted for the Digital Skills and Research Methods course)

Please select one of the answers:

1. Are you using The Virtual Learning Environment (VLE)- Moodle for your learning?

☐ Yes ☐

No

2. Do you consider VLE- Moodle a useful platform for your learning? ☐Yes ☐No

3. Do you consider it needs improvement?

☐ Yes ☐

No

4. How often do you access The Virtual Learning Environment (VLE)- Moodle for your learning?

☐Daily

☐Every other day

☐Once a week

☐Once a month

5. On a scale from 1 to 5 (where 1 is the lowest and 5 is the highest) how satisfied are you with VLE- Moodle content?

☐1

☐2

☐3

☐4

☐5

6. On a scale from 1 to 5 (where 1 is the lowest and 5 is the highest) how easy is to use The Virtual Learning Environment (VLE)- Moodle?

☐1

☐2

☐3

☐4

☐5

7. On a scale from 1 to 5 (where 1 is the lowest and 5 is the highest) how likely is that you would recommend to fellow students to use The Virtual Learning Environment (VLE)- Moodle?

☐1

●2

●3

●4

●5

8. What is your gender?

● Male

● Female

9. What is your age?

● Under 21

● 22-25

●26-30

●31-40

●41-50

●51-60 (or more)

10. Are you working?

●No

●Volunteering

●Part time ●

Full time

Appendix 2

Sum of the

questionnaire

answers

No.	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	Yes	Yes	Yes	B	4	4	4	F	26-30	Full Time
2	Yes	Yes	No	B	5	4	5	F	26-30	Full Time
3	Yes	Yes	No	B	4	3	5	F	>21	Part Time
4	Yes	Yes	No	B	3	3	4	M	41-50	Part Time
5	Yes	Yes	Yes	A	4	3	4	F	22-25	Full Time

6	Yes	Yes	Yes	B	3	3	4	M	26-30	Part Time
7	Yes	Yes	Yes	A	3	3	4	M	22-25	Part Time
8	Yes	Yes	No	A	3	4	4	F	31-40	Full Time
9	Yes	Yes	No	B	3	5	5	F	31-40	Full Time
10	Yes	Yes	No	B	3	3	4	F	31-40	Part Time
11	Yes	Yes	Yes	B	2	2	3	F	26-30	Full Time
12	Yes	Yes	No	A	4	4	4	M	31-40	Part Time
13	Yes	Yes	No	B	4	3	4	F	22-25	Part Time
14	Yes	Yes	No	B	4	4	4	F	22-25	Full Time

Where:

A- Daily

B- Every other day

C- Once a week

D- Once a month

F- Female

M- Male