

University of Wales Trinity Saint David

Digital Skills and Research Methods

BMSW4003

*An investigation 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 Research title **An investigation on the impact of the Virtual Learning Environment- Moodle on students learning experience at the University of Wales Trinity Saint David.**

The aim of this research is to define the Virtual Learning Environment (VLE), to analyse how is Moodle used and to assess the impact of it on students learning experiences. It will assess the the learning experience of the students from University of Wales Trinity Saint David from the course Cert HE Skills for the Workplace.

This research is constructed around four main questions that will support the topic to be investigated.

What is Virtual Learning Environment? This questions intends to define the concept, why is used and by whom.

What is Moodle? This question refers to establishing what is Moodle and what are its components.

What is the impact of Moodle on the learning experience? This question involves an investigation of the impact observed in e-learning.

What is the impact of Virtual Learning Environment- Moodle on students learning experience at the University of Wales Trinity Saint David? This question will focus on a selected organisation and it will be assessed the impact of Moodle on the learning experience of the selected participants.

Literature Review

The information technology (IT) developed greatly in the last decades and led to innovation in the educational industry through original learning and teaching models. IT contributed to the drastic change in the way of teaching and learning. The learning process is realised though learning management systems (LMS) and majority of universities have adopted it (Horvat et al, 2015).

A virtual learning environment (VLE) is based online and it is a platform through which professors and students can experience learning making use of digital solutions. A VLE is not a virtual teaching session, but it supplements the in-class sessions. Through VLE it can be realised digital communication, interaction, quizzes and activities, polls, assignments and teaching materials. The

digital based solutions are used by teachers to create active learning environments, content specific to the course provided, plan the lessons, use email for communication with student, organise debates and discussions (Tophat, 2020).

VLEs such as Moodle or Blackboard are the most used by universities in order to make possible the e-learning. There are learning management systems that reunite a variety of tools which enhance the learning experience (Open Edu, 2020).

The term Moodle comes from modular object-oriented dynamic learning environment. It is an established system with more than 63000 installations and more than 8 million courses in over 200 countries. It is a learning management system through which universities publish content related to their course, facilitates student-teacher communication and realise the students assessment. It is an open source software with a high degree of flexibility and that helps teachers to create the desired content and customise it to ensure any distance learning projects. This flexibility also allows the the organisation to create their own layout and organise it as they wish in order to benefit their services. It is up to the university what choices they make to make it more functional and not least more attractive (Costa et al, 2016).

University of Wales Trinity Saint David vision is “the promotion and embedding of a dual-sector educational system which educates learners of all ages and backgrounds”. It operates in multiple locations with campuses even in London and offers a wide range of courses. In 2020 it was ranked with first position in the Whatuni Student Choice Awards United Kingdom. UWTSD uses Virtual Learning Environment Moodle for their courses. UWTSD Moodle interface has sections such as Home, My Modules, Moodle Archive and even the possibility to select another language out of 4. On the right corner it has a chat and notification section. In the middle of the page it has a Module Search section to help students to find their modules easier and faster. It also includes a calendar icon, email, library, MyTSD, Hwb and Service Desk. Further down the pages the student can find all the modules (UWTSD, 2020).

Methodology

The research Title **“An investigation on the impact of the Virtual Learning Environment- Moodle on students learning experience at the University of Wales Trinity Saint David”** is very current to the educational system due as it is adopted by majority of the high education providers.

This research will collect primary data in relation with the research objectives towards the VLE concept and its application at the University of Wales Trinity Saint David.

The sampling process is the process that selects the participants for the research randomly or non randomly (Buckler and Walkman, 2016). The last method can be more subjective and it was selected for this investigation as imposed through the assignment scenario, but the researcher will ensure an unbiased approach of the primary data analysis. The size of the sample is considered to be representative for the research as the target participants are students at Cert HE Skills for the Workplace course who can express their learning experience whilst using VLE Moodle.

The research method for primary data collection is the questionnaire which was sent to the students via email. The questionnaire has 10 questions that are based on the literature review findings, intending to measure the impact of the Virtual Learning Environment- Moodle on students learning experience at the University of Wales Trinity Saint David. The questionnaire ask for single choice selection and some questions use likert scale answers, but one question asks for a descriptive answer for a more detailed perspective.

First question asks the participants if they use UWTSD Moodle. The second question asks if they received training for using it. This were opening questions. The next questions are more related to the content of UWTSD Moodle. The third question enquires the students acknowledgement of the The Student Hub team that can offer them help and advice. The next questions refer to the learning materials available on UWTSD Moodle and use likert scale answers. The fourth question asks if is easy to access the learning materials, whilst the fifth question asks if they are useful. The sixth question intends to find out how often are the students accessing their learning materials and the seventh question if they are satisfied with UWTSD Moodle. Question eight is a closing question that aims to obtain a descriptive answer from the students in relation to their learning experience using UWTSD Moodle. Question 9 and 10 ask gender and age of the participants. The questionnaire can be find in Appendix 1.

Analysis and evaluation

The research instrument used for primary data collection was the questionnaire and it was addressed to a sample of 25 students and sent via email. There were 15 students that replied to the email and gave complete answers to the questionnaire and in the Appendix 2 are illustrated the total answers in Table 1. Data collected is illustrated in tables and for analysis and evaluation will be used different types of charts.

Table 2 Rate of response

No. of questionnaires	Respondents	Rate of response (%)
25	15	60%

Table 2 Rate of response illustrates that they are 15 respondents and the rate of response is 60% which represents more than half and is considered to be relevant to the investigation.

Table 3 Frequency distribution table for using UWTSD Moodle

	Affirmative answer	Frequency (%)
Question 1	25	100%
Question 2	25	100%

Table 3 Frequency distribution table for using UWTSD Moodle illustrates the answer from the first two questions. There were no negative answers given to the questions and that is why there were not illustrated in the table. It was obtain an 100% value for students using UWTSD Moodle and 100% value for students receiving training towards using Moodle. The significance of this findings indicates the university involvement in making sure that their students know how to use Moodle and can benefit of all the information provided. This can be one of the reasons why UWTSD is an awarded university as identified in the literature review.

Table 4 Frequency distribution table for Student hub awareness

	Respondents awareness	Frequency (%)
Yes	10	67%
No	5	33%

Figure 1 Students awareness of the Student hub team

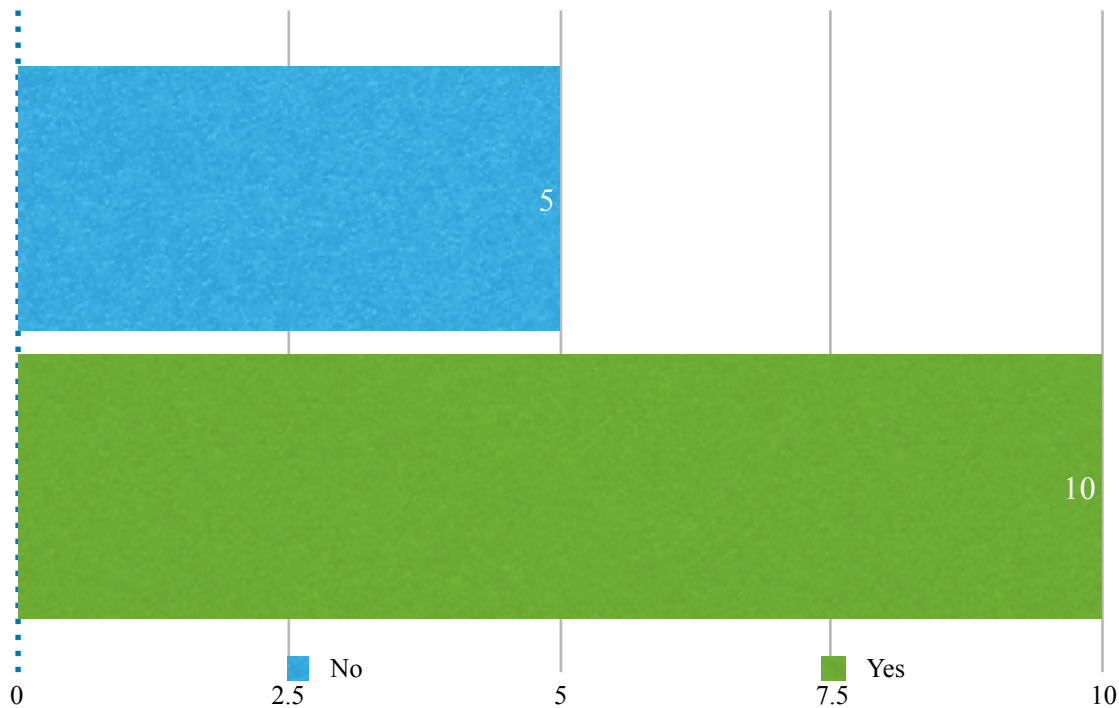


Table 4 and Figure 1 illustrate the values for the primary data collected for question 3 that identifies students awareness of the help provided by the university through Student Hub team. 67% know about it, whilst 33% stated that they do not know about it. For the university activity this figures represents positive results as the majority of students are well informed of the digital technologies used by them as highlighted in the literature review, but there is a 33% that they do not know about the service.

Table 5 Frequency distribution table for Student feedback on UWTSD Moodle interface

Respondents feedback		Frequency (%)
Very easy	3	20%
Quite easy	10	67%
Not easy	2	13%
Very difficult	0	0

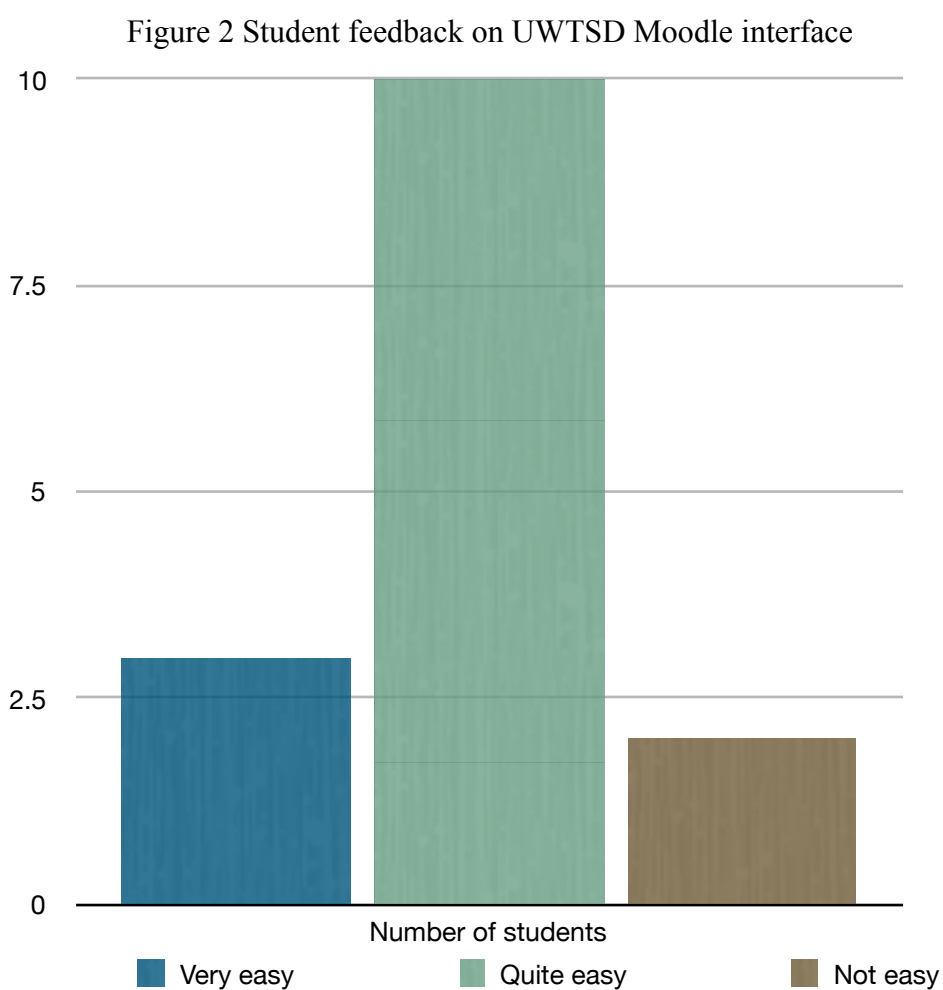


Table 5 and figure 2 illustrate that 67% of the students find quite easy to access UWTSD Moodle and 20% find it very easy and only 13% do not find easy to access the materials on Moodle. This results indicate the positive activity of the university for creating an easy to use interface which is in correlation with the literature review because a majority of 87% have no problems accessing the learning materials from Moodle.

Table 6 Frequency distribution table for Student feedback on the UWTSD online learning materials

Respondents feedback		Frequency (%)
Quite useful	8	50%
Useful	5	31%
Very useful	3	19%

Figure 3 Students feedback on the UWTSD online learning materials

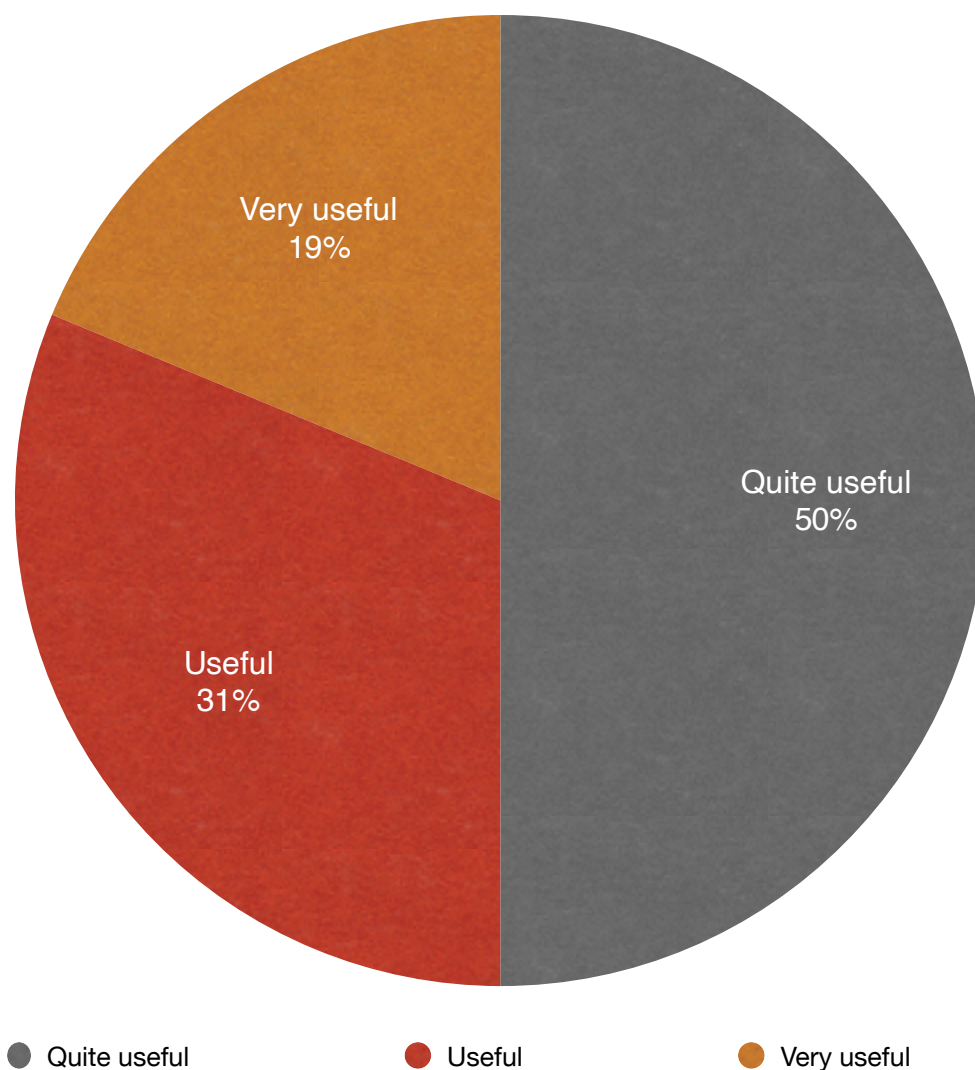


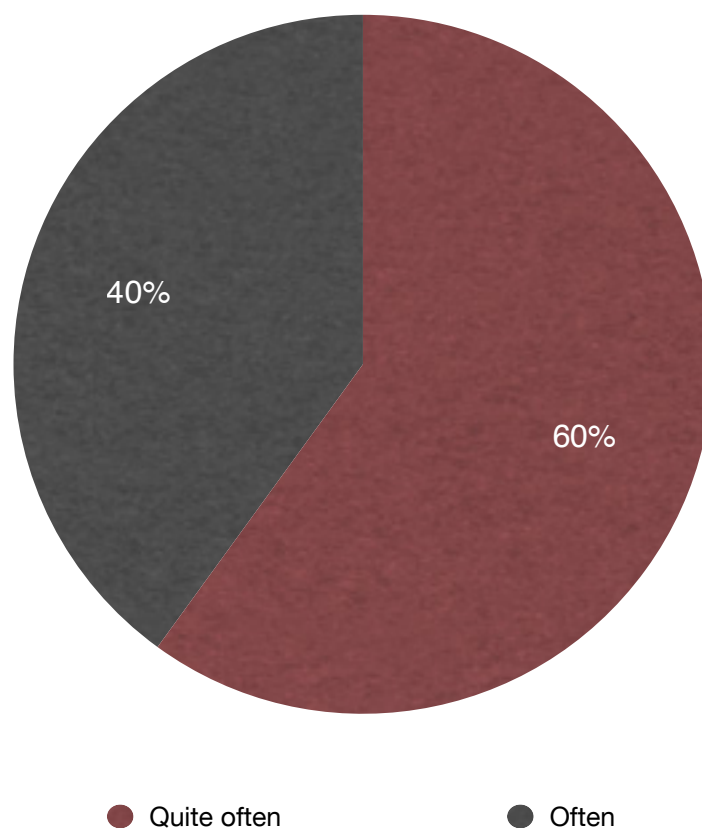
Table 6 and Figure 3 enhance the students feedback on the learning materials from UWTSD VLE Moodle. All the students consider that the learning materials provided are useful for their learning experience, some selected different levels than others, 50% considered to be quite useful, 31% considered to be useful and 19% selected the highest value from the scale: very useful. According

to the literature review (Costa et al, 2016) Moodle gives flexibility that helps teachers to create the desired content and customise it to ensure any distance learning projects. This flexibility also allows the the organisation to create their own layout and organise it as they wish in order to benefit their services. The primary data is in correlation with the secondary data from the literature review.

Table 7 Frequency distribution table for Students access on UWTSD Moodle

	Respondents feedback	Frequency (%)
Quite often	9	60%
Often	6	40%

Figure 4 Students access on UWTSD Moodle



The evaluation of this findings highlights that there is very high access from the students and that enhances students commitment to the course as observed in Figure 4. This represents good outcome for the university as their efforts to create an attractive and efficient VLE are successful.

Table 8 Frequency distribution table for students levels of satisfaction

Levels of satisfaction	Respondents feedback	Frequency (%)
Not satisfied	2	13%
Satisfied	12	80%
Very satisfied	1	7%

Figure 5 Students levels of satisfaction

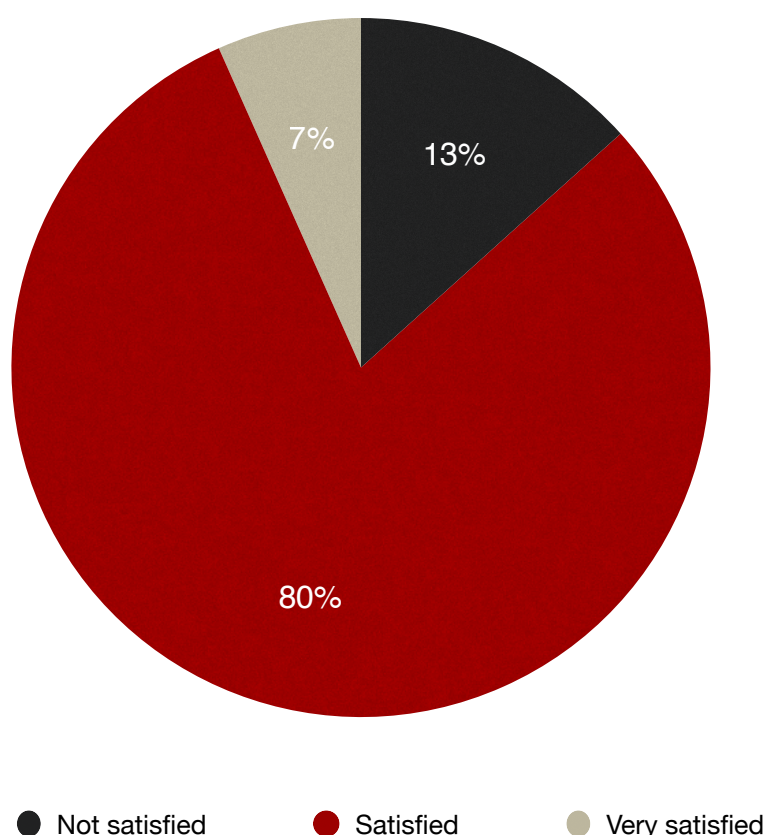
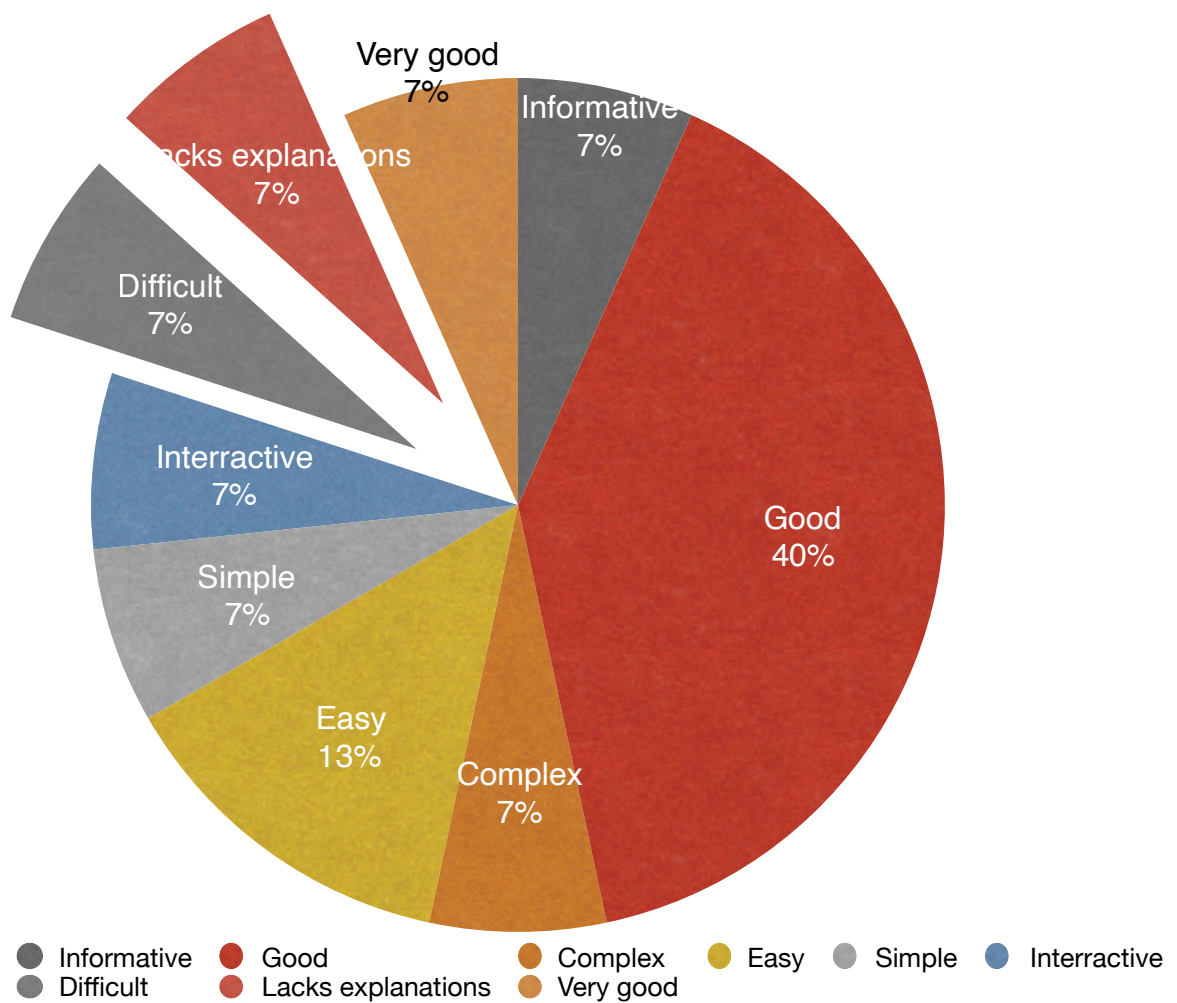


Table 8 and Figure 5 illustrate the levels of satisfaction regarding UWTSD Moodle. In the pie chart it was selected a strong colour red to highlight the large percentage that indicates students answer. This represents positive levels of satisfaction among the students and 7% selected the highest value on the scale: very satisfied. Only 13% represented with black colour stated that are not satisfied with it, and because of the small number of respondents this should be enquired further. It is not a negative value, but considering the high levels of satisfaction UWTSD Moodle has great potential and it suggests that it can be achieved 100% satisfaction levels among the students.

Table 9 Descriptive words for general feedback

Descriptive words	Respondents
Informative	1
Good	6
Complex	1
Simple	1
Easy	2
Interactive	1
Very good	1
Lacks explanations	1
Difficult	1

Figure 6 Students general feedback

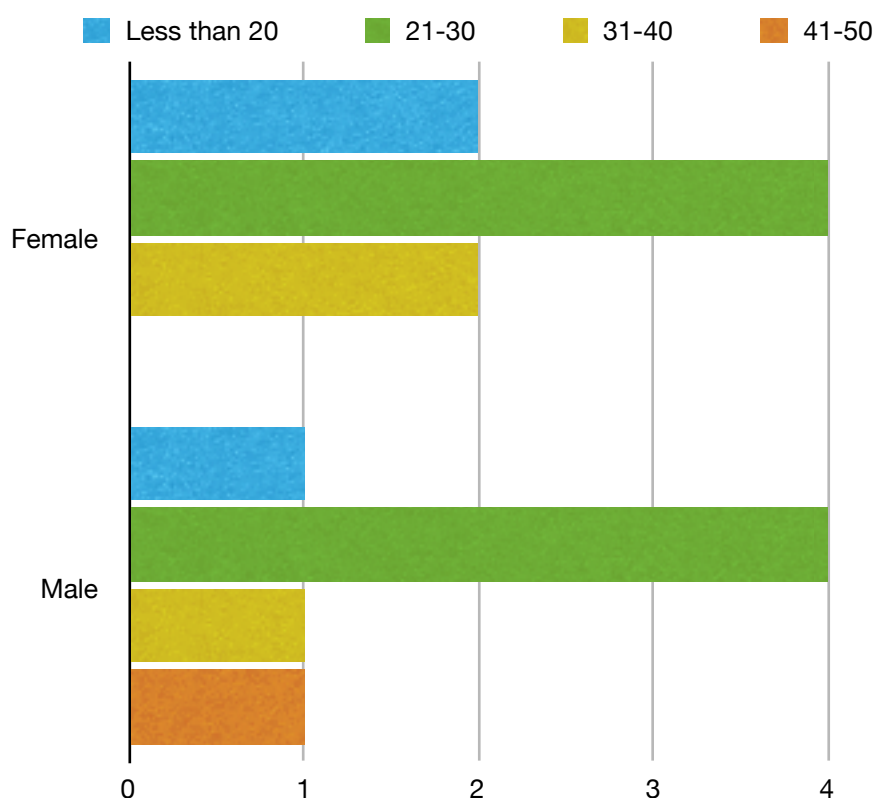


As observed in Figure 6 there are only two segments with negative connotation and all the other segments imply positive meaning with a 40% value of good experience. This question gave students the opportunity to describe in one word or two their experience with UWTSD Moodle. There were six students that gave the same answer “good”, two students that described as “easy” and other 5 student describe using similar meaning words, positive words such as “informative”, complex”, “interactive”, “simple”, “very good”. There were two describing words that gave negative feedback “lacks explanations” and “difficult”. In the evaluation of this question it appears that two students consider that their learning experience using VLE Moodle was not what helping them as expected. There are many reasons that could be behind their feedback, one of them could be related to different learning styles or further training provided as they might not be very familiar with e-learning and it would have been too much information at once.

Table 10 Age and gender of the students

Students	Female	Male
Less than 20	2	1
21-30	4	4
31-40	2	1
41-50	0	1

Figure 11 Age and gender



As it can be observed in Figure 11 most student females and males are between 21 and 30 years old. This means that there are young students, although as identified in the literature review the university “educates learners of all ages and backgrounds” and that can be observed in the other segments from figure 11 (UWTSD, 2020).

Conclusion and recommendations

The investigation identified positive outcomes for the university in relation with their work with VLE Moodle. The investigation showed that UWTSD VLE Moodle has a positive impact on the students learning experience.

The recommendation are related to the less positive feedback received. There were several improvements that could be realised in order to improve the learning experience and that would be related to more efficient training for students to teach them how to use Moodle in the most favourable way and approach all the learning styles.

The investigation achieved the research objectives, but it is recommended further investigation to other courses provided by the university.

References

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Appendix 1

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

Please answer the following questions by selecting one answer

1. Are you using UWTSD Moodle ?

◆ Yes

◆ No

2. Have you been shown how to use UWTSD Moodle?

◆ Yes

◆ No

3. Are you aware of the help provided towards using UWTSD Moodle: the Student Hub team?

◆ Yes

◆ No

4. How easy it to how access the learning materials on UWTSD Moodle?

◆ Very easy

◆ Quite easy

◆ Not easy

◆ Very difficult

5. How useful are the learning materials on UWTSD Moodle?

◆ Not useful

◆ Quite useful

◆ Useful

◆ Very useful

6. How often do you access the learning materials on UWTSD Moodle?

- ◆ Not very often
- ◆ Quite often
- ◆ Often
- ◆ Very often

7. How do you find the learning experience using UWTSD Moodle?

- ◆ Not at all satisfied
- ◆ Not satisfied
- ◆ Satisfied
- ◆ Very satisfied

8. Please describe in one or two words your experience using UWTSD Moodle

◆

◆

9. What is your gender?

- ◆ Male
- ◆ Female

10. What is your age interval ?

- ◆ Less than 20
- ◆ 21-30
- ◆ 31-40
- ◆ 41-50
- ◆ More than 50

Appendix 2

Table 1 Primary data collection using the questionnaire

Student/ Question	I	II	III	IV	V	VI	VII	VIII	IX	X
1	Y	Y	Y	Q.E.	Q.U.	O.	S.	Informative	F	21-30
2	Y	Y	Y	Q.E.	Q.U.	Q.O.	S.	Good	M	21-30
3	Y	Y	Y	Q.E.	Q.U.	Q.O.	S.	Complex	F	31-40
4	Y	Y	Y	Q.E.	U.	O.	S.	Simple	F	Under 20
5	Y	Y	Y	V.E.	Q.U.	Q.O.	S.	Easy	M	21-30
6	Y	Y	N	N.E.	Q.U.	Q.O.	N.S.	Difficult	F	31-40
7	Y	Y	Y	Q.E.	Q.U.	O.	S.	Good	F	31-40
8	Y	Y	N	Q.E.	U.	Q.O.	S.	Good	F	21-30
9	Y	Y	N	Q.E.	V.U.	Q.O.	S.	Easy	F	Under 20
10	Y	Y	Y	V.E.	V.U.	O.	V.S.	Interactive	M	21-30
11	Y	Y	Y	Q.E.	Q.U.	Q.O.	S.	Good	M	21-30
12	Y	Y	Y	V.E.	V.U.	O.	S.	Very Good	M	31-40
13	Y	Y	Y	Q.E.	U.	Q.O.	S.	Good	F	21-30
14	Y	Y	N	N.E.	Q.U.	Q.O.	N.S.	Lacks explanation	M	41-50
15	Y	Y	N	Q.E.	U.	O.	S.	Good	F	21-30

Abbreviations:

Y- YES

N- NO

Q.E.- Quite easy

V.E.- Very easy

N.E.- Not easy

Q.U.- Quite useful

U.- Useful

V. U.- Very useful

S.- Satisfied

V. S.- Very satisfied

N.S.- Not satisfied

F- Female

M- Male