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Research report on utility of virtual
learning at University of Wales Trinity
Saint David

Executive summary: This is a research report that has been prepared to assess ¹ the impact of Virtual Learning Environment at the University of Wales Trinity Saint David. The report has been divided into the following parts - The beginning of the research report starts with the abstract which explains the concept of digital learning and Moodle. The second topic is literature review about discussion on previous research works on the same subject. The third topic is on the research aims and the objectives to reach the aim. The fourth topic is on the research method and design. Fifth topic is graphical presentation of the research results. The sixth topic is discussion and comparison with literature review. Seventh and last is conclusion.

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Introduction –

Moodle is an online learning platform which enables students to complete their courses through digital tools. It is a learning management system (LMS) suite or a Virtual Learning Environment (VLE) application. It gives an opportunity to students and learners to pursue their studies in a robust internet based learning environment. For teachers, it is an opportunity to be part of a personalised learning method through cloud based content. Moodle is developed on open source and it is free. It has user friendly features. VLE. is implemented by many universities around the world to support their training and courses (Vaganova et al., 2017).

The purpose of this research is to find out the impact level of migrating to a Moodle learning environment by the students of University of Wales Trinity Saint David (UWTSD). The difference is that under the current Covid -19 lockdown scenario, Moodle has become a necessity for the university rather than an option. While many eagerly latch on to such digital learning platforms there is a still hesitation by others. Legacy based classroom training is always preferred as the best way for interaction. By means of this research through direct

interaction with the students the research looks at their preferences and opinions (Rienties et al., 2016).

2.0 Background (Literature review) –

According to Sunesh Hettiarachchi and Samanthi Wickramasinghe (2019), higher education is set to become “learner centred” and move away from being “teacher centred”. The trend of e-learning through VLE and LMS is the way forward. According to them, a virtual learning environment is an extension of classroom learning through technology. It should not be looked as something totally different. A research was conducted by Sunesh and Sarmanthi which has been presented at the International conference of education and distance learning. It covered the impact and features of VLE and LMS platforms (Hew and Kadir, 2016).

As per the research results, it was a wrong notion that students took to online training to escape from the rigour of classroom sessions. In fact, they wanted to be equally creative in online or VLE classes. The features used most commonly are sharing material – Files 95%, assignments – 50%, URL’s – 45%.

In another research paper published by Sandra Lyndon and Beverly Hales (2019), they evaluated the impact of VLE in a particular module rather than entire course. The research was conducted to understand the effect of blended learning – classroom and online learning combined. The college was based in UK and imparting many higher degree courses. It was a level 6 module and part of the BA (Hons) syllabus. The teaching part was for three hours every week for a period of 12 weeks. The online part used DVD recordings of short sessions. There was total of 47 students as part of the research survey that was carried out. The platforms used were Lino and Moodle. The survey found that 80% of the students were overall positive about Moodle online forums. About same percentage favoured Lino as well. About 70% were of the view that it definitely increased engagement and quality (Songkram, 2015).

Christopher Chua¹ and Jessie Montalbo (2014) published a research paper on – “¹²Assessing Students’ Satisfaction on the Use of Virtual Learning Environment (VLE)”. According to them, educational institutes worldwide have understood the many benefits of having VLE as part of their learning. The research efforts of Christopher and Jessie analysed the satisfaction

level of students on the use of VLE for graduate school programs. The survey was carried out on a total respondent size of 67 MBA and information system students. The course period was from 2011 to 2013. The platform was Moodle It was a time, when the concept was relatively new.

The statements in the questionnaire obtained a weighted mean score of between 3.04 and 3.27. It shows an overall good level of satisfaction and agreement in most of the aspects. Three features were strongly supported. The total weighted mean of 23 questions was 3.16. The just-about-ok satisfaction was only in terms of the learning community features. This means the need to bring in more activities in this aspect. The research findings were very similar to another research carried out even before at the Al-Khalifa university (2010).

Another study in this direction has been taken by measuring the effect of gamified learning. It is a system wherein the educational courses are carried out through the integration of games or related aspects into the learning. These include video games as well. The main purpose is make the concept of online learning interesting through creative means. According to Yang Tang, Alexander Kofinas, Smitha Trivedi, Crystal Han-Huei Tsay (2019), online learners who go make the use of gamified learning systems go through a novelty effect. It starts with a high level of activity in the beginning and the novelty effect slowly wears off as the usage grows more frequent. The research was conducted on a total of 333 students for a period of two years.

The results proved that students always perform better in a gamified environment as compared to a non-gamified one. Furthermore, students in second year had a higher level of engagement (Annansingh, 2019).

In their research about effects of computer education, Francois Blin and Morang Munro (2008), the coming of internet technologies would forcefully change the pattern of learning and teaching practices. It would be evident in universities or institutions across the world. But so far it has not impacted in a major way. There is no doubt that VLE applications are implemented but it is more towards administrative improvements rather than aimed at teaching betterment. The research is centred around a preliminary analysis based on the activity theory relevant to teaching practices. It studied the impact or lack of it in the author duo's university. However, the era, 2008 was a too early to be considered as ripe for digital learning (Penjor, and Zander, 2015)..

3.0 Aims and Objectives –

Aims:

To understand the impact of using VLE platform for the higher studies by the graduate students of UWTSD campus. It will analyse the percentage impact to what extent the students feel more comfortable or negative about the features of VLE as compared to classroom training. In short - would they want to go online or continue with legacy classroom system. It should analyse this from all aspects including technological awareness, ease of learning, openness to digital learning (Dresch et al., 2015).

Objectives –

Select the sample size for the research from the students of UWTSD.

Design an effective questionnaire which in an objective manner with multiple choice questions. It should give accurately measurable answers and avoid any errors. Only then, research results will be fruitful and in tandem with the aim (Lempriere, 2020).

Deriving the primary data from the questionnaire from survey conducted as part of the research process. It includes the selection of the survey method also. Since the Covid 19 Pandemic is going on, it is not possible to meet the respondents directly. Hence survey was done via telephonic interview.

Once data is collected, then it will be presented through bar graphs or charts. It will show the percentage for each response.

List out the findings of the research based on the survey.

Make the presentation of the secondary data for the research. It will be based on the literature review as mentioned earlier - VLE platforms in universities The research findings and the latter has to be compared.

Conclusion of the entire research and possible suggestions.

5.0 Method –

A total of 50 students were selected for the survey. All of them were undergoing their graduation in UWTSD. Out of this, 14 students were in the final year and the balance 36 students were from first and second years. The sample included both the genders.

Out of these 50 students of UWTSD, 31 students were from within the country and balance 19 students were from different parts of the world – East Europe, Asia and Central America. Only two students were from Latin America.

The sample size was selected through random sampling. The reason for selecting this method was to give equal probability to every student of UWTSD to be constituted as part of the sample. This avoided bias in collection of primary data. The sample size consisted of both the gender. The reason was that research topic is not gender specific (Research Guides: Research Methods Guide: Research Design & Method, 2020).

All the primary data was collected through telephonic interview at pre-decided times. The timings were given by the students so that they could devote maximum time in answering of the questions. Due to the Covid – 19 pandemic face to face meeting was ruled out.

The questionnaire had five questions in total and all were multiple choice.

Question 1 – Are you aware of the technology features of VLE?

Response	Total Number of respondents	Number of respondents	Percentage %
Yes	50	29	58
Somewhat	50	7	14
No	50	3	6
To a large extent	50	11	22
Not interested	50	0	0

Question 2 – Does the engagement level in VLE go to the same extent as before?

Response	Total Number of respondents	Number of respondents	Percentage %
Completely as	50	14	28

before			
Somewhat	50	19	38
Not much idea	50	2	6
Not at all	50	6	12
Mostly yes	50	9	18

Question 3 –

Moodle VLE is user friendly and easy to navigate

Response	Total Number of respondents	Number of respondents	Percentage %
Agree	50	40	80
Strongly agree	50	9	18
Disagree	50	0	0
Strongly disagree	50	0	0
Don't know	50	1	2

Question 4 – Moodle VLE has updated course content

Response	Total Number of respondents	Number of respondents	Percentage %
Agree	50	38	76
Strongly agree	50	8	16
Disagree	50	2	4
Strongly disagree	50	1	2
Don't know	50	1	2

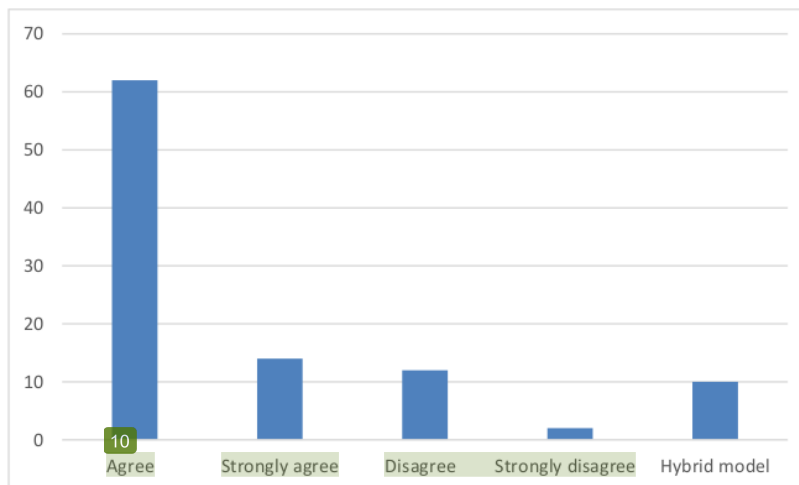
Question 5 – Do you think UWTSD should totally shift to online learning?

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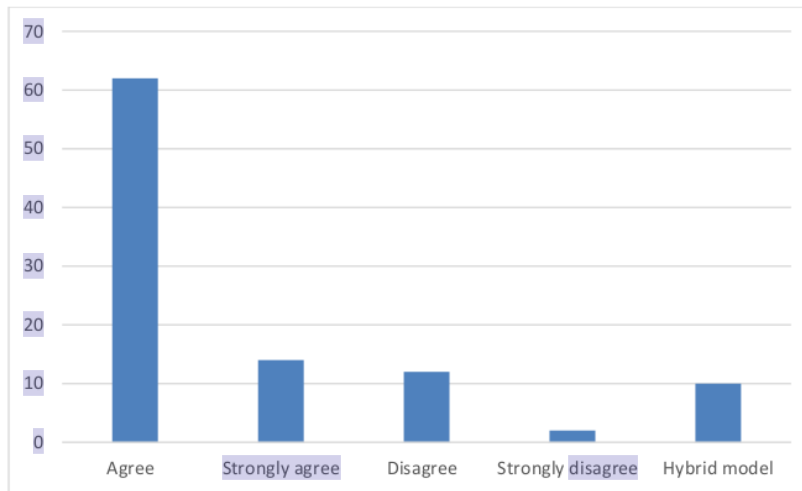
Response	Total Number of respondents	Number of respondents	Percentage %
Agree	50	31	62
Strongly agree	50	7	14
Disagree	50	6	12
Strongly disagree	50	1	2
Hybrid model	50	5	10

5.0 Results - (Bar Graph)

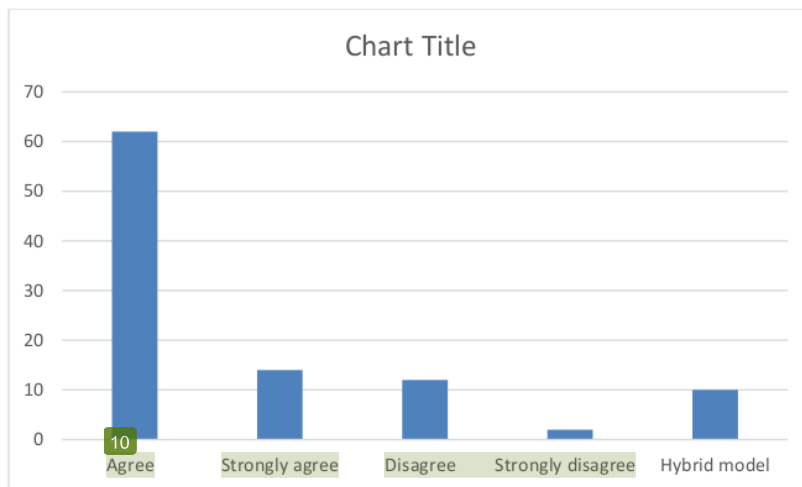
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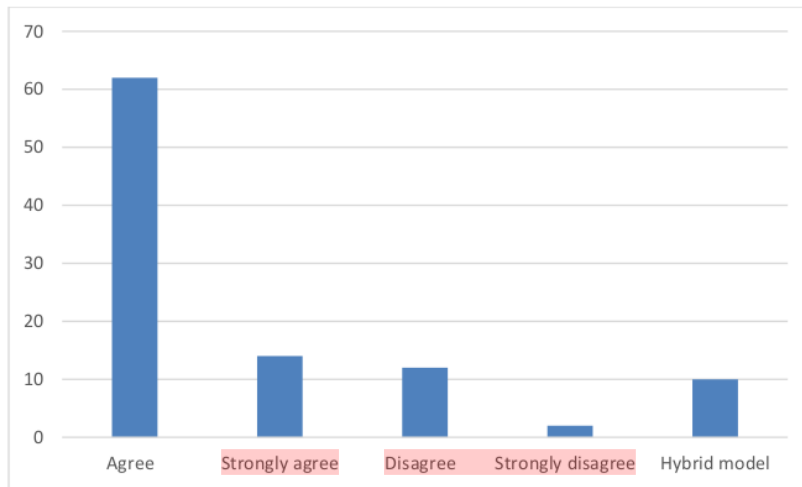
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Question 2 -



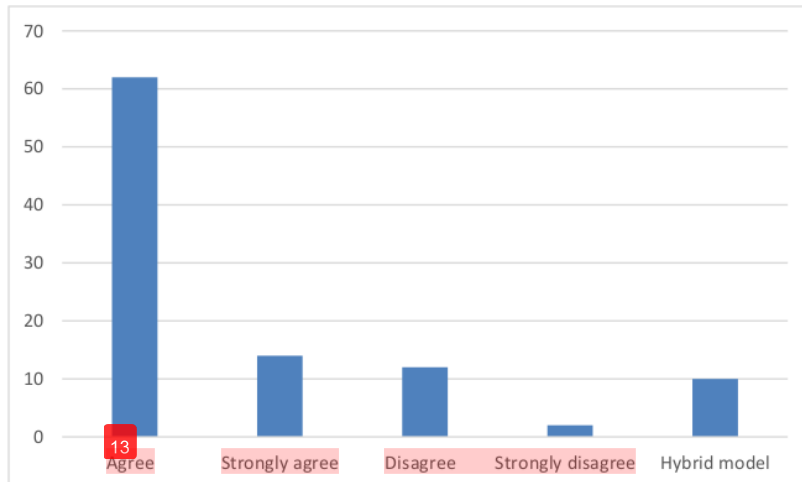
Question 3-



Question 4 –



Question 5 –



6.0 Discussion –

The data collected from the first question clearly shows that 80% of sample size are aware of VLE technologies and its usage. It matches with the research studies of Sunesh Hettiarachchi and Samanthi Wickramasinghe, (2019), a Lyndon and Beverly Hales (2019), Christopher Chua1 and Jessie Montalbo (2014). In all these three researches, minimum of 70% and above were approving of VLE or LMS platforms. The research on gaming platform does not have much validity to the question.

As regards to the engagement level, only 28% agreed that VLE offers the same as class in terms of interaction. About 18% were more or less agreeable as far as interaction goes. About half of the respondents were not very much enthusiastic on the engagement part via online platforms. This contrast with all the other research finding except that of Francois Blin and Morang Munro (2008) wherein technologies had not made any impact as such.

As regards to third question, almost 99% of the respondents were agreeing to the fact that Moodle as a VLE has very friendly features and was easy to navigate. This was in total conformity to all the research findings of Sunesh Hettiarachchi and Samanthi Wickramasinghe, (2019), a Lyndon and Beverly Hales (2019), Christopher Chua¹⁵ and Jessie Montalbo (2014) and Yang Tang, Alexander Kofinas, Smitha Trivedi, Crystal Han-Huei Tsay (2019). The research of Francois Blin and Morang Munro (2008) was also emphatic on the technology features of the VLE environment. In that sense, the findings confirm to the last research as well.

As to the results of the updated course content in Moodle, almost 85% were of the view that it is very much helpful for all their further studies. Only 8% were of a contradicting opinion in terms of either total dissatisfaction or partial. This results also matched with the findings of in the literature review. All the research results except that of Francois Blin and Morang Munro (2008) gave the same level of opinion about the features of Moodle including the courseware.

The last question about the University of Wales migrating into VLE based environment for all its courses has majority of the students in the survey agreeing for it. About 85% of the sample participants are approving to have a future learning environment that is online. This is in total conformity to the research findings of the literature review. The only exception is again that of Francois Blin and Morang Munro (2008) wherein VLE was seen more as a tool of administrative efficiency/

7.0 Conclusion –

The findings of the research dispel any notion that students of UWTSD are shifting to VLE due to the Covid -19 lockdown compulsion. It proves very clearly that students have a positive outlook towards Moodle based online learning platforms and are very much eager to embrace e-learning. The impact of online learning is now being seen as something helpful

and also flexible for course completion. The only point is more of tutor engagement and discussion modules needs to be incorporated.

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