

The Impact of Virtual Learning Environment on students at University of Trinity and Saint Davis

Analysis of Primary and Secondary data

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Introduction

Due to COVID 19 pandemic, Virtual Learning environments (VLE) are now widely used in education and also in the professional field. The purpose of this report is to analyse the impact of virtual learning environment (VLE) on students enrolled on a Higher Education course using the online platform 'Moodle'. The students are from different age ranges.

This research reports on an anonymous online survey involving 50 subjects on their first year in a Higher Education course. The survey is designed to collect information on the following topics:

1. Whether the design of the courses on the Virtual Learning platform 'Moodle' is effective to the students learning process.
2. Whether VLE increases the level of independent learning.
3. Whether VLE increases student's motivation to learn.
4. Whether VLE interferes with personal life during studying hours.

Background

This literature starts with a brief review of the history of VLE followed by analysing the strengths and weaknesses of VLE and its long term impact.

Origins of Virtual Learning Environment

The use of computers for learning purposes can be dated as far as 1970's according to The UK's Open University. In 2000 a system called 'Blackboard' was developed and patented for this purpose. In only 10 years the system was widely used around the globe with more than 3700 institutions in more than 60 countries (Blackboard, 2011).

Currently the most popular VLE platform used is 'Moodle'. It was introduced in 2001 (Ofsted, 2009) and by 2011 was globally extended to more than 212 with almost 50,000 active sites and available in more than 75 languages (Moodle, 2011).

In the UK more than 90% of Higher Education Colleges use VLE (Sero, 2009).

Ofsted reported results on a study carried out on 34 schools investigating the impact of VLE on student's learning (Becta, 2009).

The results concluded that VLE has a positive impact on more than 50% of the schools surveyed.

Positive impact of VLE is supported by other studies conducted around the world in other countries. A study carried out in an Upper-grade elementary school in West Virginia, USA, concluded that students that used software to communicate with teachers online for support on understanding and analytical skills had better grades on reading, language and vocabulary tests (Scardamalia & Bereiter, 1996).

Strengths and weaknesses of VLE

Strengths

- Mobility.

It allows students and teachers to take part on high quality learning programs from anywhere in the world. Users just need a computer or any other smart device and an internet connexion. This format also offers more comfort and flexibility to students and teachers with any disability.

- 24 hours availability

Users have access to the course materials 24 hours a day. All files and documents are available to download and review any time. This is specially useful for those that need to review materials several times.

Flexibility to combine family and work is one of the biggest advantages of accessing course materials at any time.

- Creation of community.

Students and teachers can share content and ideas, get involved in discussions in forums and support each other. Students can reflect on the comments and work of educators and other students.

- Access to resources.

Guests, educators, experts and other students from other institutions can be invited to attend online classes. Materials from all over the world can be accessed on line, something that would be impossible with the more traditional education system.

- New teaching possibilities.

A new opportunity to create a different learning environment is opening through the creation of self-direction and critical thinking. Traditional lectures and classes can be remodelled and have more innovative ideas. The educator and the student collaborate more closely and actively than before creating a more dynamic interaction.

The implementation of new technologies will leave behind bad habits that were not productive.

Educators must reflect on the creation of course content (structure, timing and resources available to students), and teaching methods.

Weaknesses

- Technology issues.

Not everyone will be able to have access to the internet or electronic devices either due to economic or logistic reasons. This will leave out potential students for the course. Rural and economically less favoured parts of the world are prone to this situation.

Technology servers that hold the programs can crash or brake down, the course materials can be lost or put on hold and programs not completed.

Students individual devices can fail to work properly and limit the access to the courses.

- IT and Computer Literacy.

A minimum level of computer literacy is required to access online materials and courses, write and send emails, work with the different document formats, presentations and video conferences. Students that do not have these skills will not be able to complete the programs and be able to work in a team or alone.

- Younger students need more supervision since they do not have the discipline and focus of adult students. Even for mature students, they must be well organised and focused.

- Educators-Instructors need the appropriate training and knowledge in online teaching programs. Good communication skills are essential for educators.

Innovative and creation of attractive content for the online classes are essential to keep students engaged and focused.

- Subjects that require hands-on approach cannot or should not be taught in an online environment. Examples of these are; surgery, dentistry, sports and other similar subjects.

Long term impact of a Virtual Learning Environment

Some Colleges and Universities have plans in place to continue online learning for the rest of the academic course. Students are now facing almost a year of distance learning. How will this affect the well-being of students enrolled in this courses?

This research report has shown that students enrolled in distance learning courses can accomplish good academic results although thousands of students still applying for in-person classes and the long term impact on mental, emotional and academic results is yet to be seen.

According to Amy Bintliff, psychologist and professor in the University of California, *'it is difficult for students to properly distinguish between expectation and reality'* (Bintliff, A, 2020). Most students have preconceived ideas about how the educational live experience would be, including their own graduation, and now, because of the new reality, changes can have a negative impact on their psychology and experiences. She points out that these new changes due to the pandemic are having a negative impact on the motivation and focus of the students she surveyed. Students say that they miss the human interaction in the campus with their friends.

Another voice on the subject of isolation is the associate director of the firm Ithaka S+R, Mr Rayane Alamuddin who said *'our research shows that students have struggled with social isolation'* (Alauddin, R, 2020).

Finding a suitable space for studying at home is also an issue. Factors such as; financial and health difficulties or having children around to look after make VLE even more difficult for some students.

According to the researchers it is too early to draw any final conclusion on the long term effects of VLE. Institutions, educators and students are trying hard to find synergy. Only time will tell.

Aim and objectives

The aim of this research is to evaluate the impact of a Virtual Learning Environment on mature students engaged in a Higher Education Program using the online platform 'Moodle'.

The steps to obtain the information are:

- An anonymous on line questionnaire focusing on 4 areas.
 1. Whether the design of the courses on the Virtual Learning platform 'Moodle' is effective to the students learning process.
 2. Whether VLE increases the level of independent learning.
 3. Whether VLE increases student's motivation to learn.
 4. Whether VLE interferes with personal life during studying hours.
- Interpretation of the data obtain from the questionnaire represented on graphic charts for its study and evaluation.

Method

Fifty students were asked to participate on an anonymous online questionnaire related with their experience studying at the University of Trinity and Saint Davis using the online platform Moodle. The questionnaire was based on eight questions to evaluate whether VLE had a positive impact on teaching and learning.

The online questionnaire used quantitative data to be interpreted with charts on an Excel document. The questions were organised to cover the four main topics described:

1. Whether the design of the courses on the Virtual Learning platform 'Moodle' is effective to the students learning process.
2. Whether VLE increases the level of independent learning.
3. Whether VLE increases student's motivation to learn.
4. Whether VLE interferes with personal life during studying hours.

All the 50 students at The Certificate in Higher Education for the Workplace weekend study were invited to complete the questionnaire. Sample size calculation was done at a confidence level of 95%. To generate representative results a response of a minimum of 40% was required. The participation was very high and the totality of students (100%) completed the questionnaire after they were informed of the details for this research.

The questionnaire was designed in two parts using closed-ended questions. Each question consisted of multiple choice answer to which respondents selected a point on a Likert scale (**A.** Strongly agree. **B.** Agree. **C.** Disagree. **D.** Strongly Disagree. **E.** N/A).

The first questions 1 to 4, focused on access to online course materials, design of the course, teachers performance and organisation support.

The questions 5 to 8, focused on how VLE affected personally to the students.

Calculations of scores were automatically calculated by Excel software to create the charts.

Results of the questionnaire were anonymous and students informed consent was given before the study commenced. The time to complete this research was four weeks.

Results

50 questionnaires were completed by the participants within four weeks from different age groups making 100% response rate from a group of 50 first year students:

- 10 students age group 16 to 24.
- 33 students age group 25 to 35.

- 7 students age group 36 to 45.

Of these respondents 75.8% accessed the VLE without any problems, 20.6% with 'some' problems and 3.6% had not tried to access Moodle. With regard to the use of SFC Moodle as an integrated part of student learning, 43.2% of respondents (63 female and 32 male) use Moodle to a small extent and 35.9% of respondents (49 female and 30 male) use Moodle to a large extent. A relatively small figure of 4.1% did not use Moodle at all. 13.6% used Moodle to a very small extent, whilst conversely 3.2% use Moodle to a very large extent.

Conclusion

The findings of this research report revealed that access to the courses through internet connexion is achieved with no issues by the majority of the students. There is a balance in opinion between 'agree' and disagree' about the design of the courses and the support the students are having from the University.

On the personal effects that VLE is having so far, the research shows that the students generally notice a positive impact when it comes to flexibility to combine life and studies but there seems to be a tag of war when it comes to comfortability and human interaction studying from home. This is in line with the review of literature revealing that family, economic factors and lack of face to face interaction in some cases affect negatively to focus when studying at home.

More research is needed on this subject specially now more than ever. COVID 19 Pandemic has forced Institutions, Governments and students to redesign the whole educational system.

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Questionnaire

The impact of Virtual Learning Environment (VLE) on students at University of Trinity and Saint Davis.

By Carlos Jimenez 1918685

This questionnaire is purely for academic purposes, as all information will be treated with confidentiality. It is intended to enable us to evaluate and analyse the impact of virtual learning environment (VLE) on student learning experience, within the perspective of University of Wales Trinity Saint David.

The interviewee's details will be kept as anonymous for the purpose of this research.

1.- What is your age group? (Circle your answers)

A. 16-24. **B.** 25-35. **C.** 36-45. **D.** 46-55. **E.** 55+.

General Questions.

1.- It is easy to access the materials online from home with my IT equipment.

A. Strongly agree. **B.** Agree. **C.** Disagree. **D.** Strongly disagree. **E.** N/A

2.- The courses are well designed and easy to follow.

A. Strongly agree. **B.** Agree. **C.** Disagree. **D.** Strongly disagree. **E.** N/A

3.- The teachers normally ask you to access Moodle every week for information about the course.

A. Strongly agree. **B.** Agree. **C.** Disagree. **D.** Strongly Disagree. **E.** N/A.

4.- I get good support to help me with my progress.

A. Strongly Agree. **B.** Agree. **C.** Disagree. **D.** Strongly Disagree. **E.** N/A.

5.- Virtual learning offers more flexibility to combine personal life and studying.

A. Strongly Agree. **B.** Agree. **C.** Disagree. **D.** Strongly Disagree. **E.** N/A.

6.- It is more difficult to focus when studying from home.

A. Strongly agree. **B.** Agree. **C.** Disagree. **D.** Strongly Disagree. **E.** N/A

7.- Virtual learning saves time and money.

A. Strongly Agree. **B.** Agree. **C.** Disagree. **D.** Strongly Disagree. **E.** N/A.

8.- Virtual learning lacks face to face human interaction.

A. Strongly Agree. **B.** Agree. **C.** Disagree. **D.** Strongly Disagree. **E.** N/A.

QUESTIONNAIRE: THE IMPACT OF VIRTUAL LEARN

[illegible]

QUESTIONNAIRE: THE IMPACT OF VIRTUAL LEARN

Question 1

It is easy to access the materials online from home with my IT equipment.

A	Strongly Agree	17
B	Agree	30
C	Disagree	3
D	Strongly Disagree	0
E	N/A	0
	TOTAL	50



Question 2

The courses are well designed and easy to follow

A	Strongly Agree	5
B	Agree	20
C	Disagree	20
D	Strongly Disagree	5
E	N/A	0
	TOTAL	50

Question 3

The teachers normally ask you to access Moodle every week for information about the c

A	Strongly Agree	7
B	Agree	40
C	Disagree	3
D	Strongly Disagree	0
E	N/A	0
	TOTAL	50

Question 4

I get good support to help me with my progress

A	Strongly Agree	5
B	Agree	20
C	Disagree	20
D	Strongly Disagree	5
E	N/A	0
	TOTAL	50

Strongly Di

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Strongly

Question 5

Virtual learning offers more flexibility to combine personal life and studying.

A	Strongly Agree	30
B	Agree	15
C	Disagree	5
D	Strongly Disagree	0
E	N/A	0
	TOTAL	50

Question 6

It is more difficult to focus when studying from home		
A	Strongly Agree	10
B	Agree	20
C	Disagree	20
D	Strongly Disagree	0
E	N/A	0
	TOTAL	50



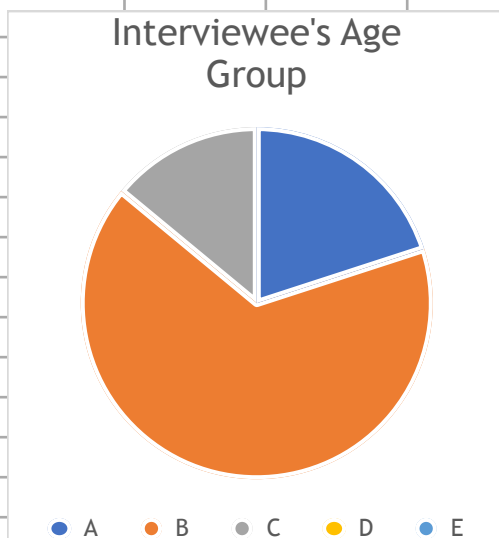
Question 7

Virtual learning saves time and money		
A	Strongly Agree	37
B	Agree	13
C	Disagree	0
D	Strongly Disagree	0
E	N/A	0
	TOTAL	50

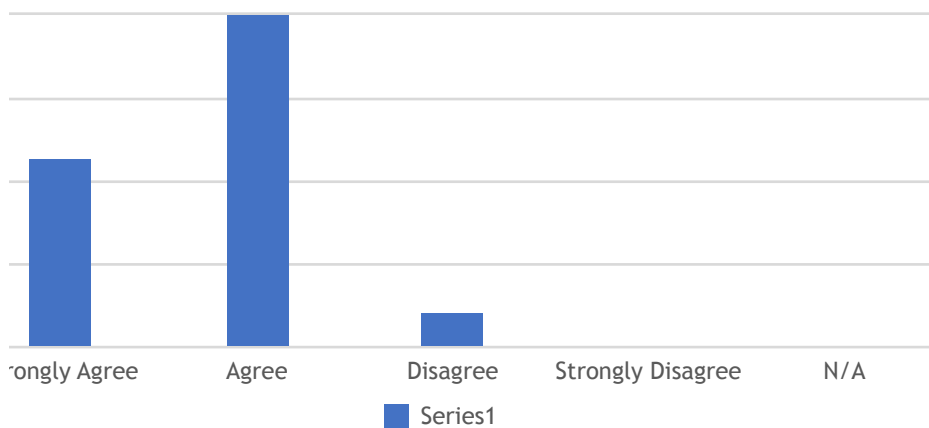
Question 8

Virtual learning lacks face to face human interaction		
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A	Strongly Agree	45	50
B	Agree	5	
C	Disagree	0	37.5
D	Strongly Disagree	0	
E	N/A	0	25
	TOTAL	50	
			12.5
			0
			Strc



Easy to access the course online from home



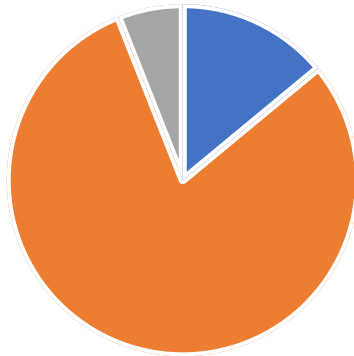
The course is well designed and easy to follow





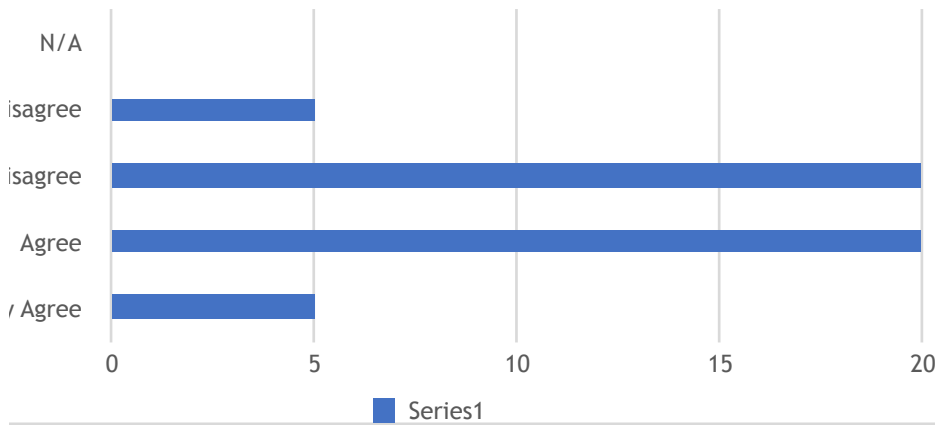
Strongly Agree Agree Disagree Strongly Disagree N/A

Teachers challenging students to do their best

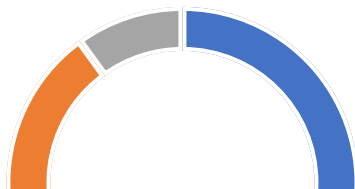


Strongly Agree Agree Disagree Strongly Disagree N/A

Good support to help with progress.



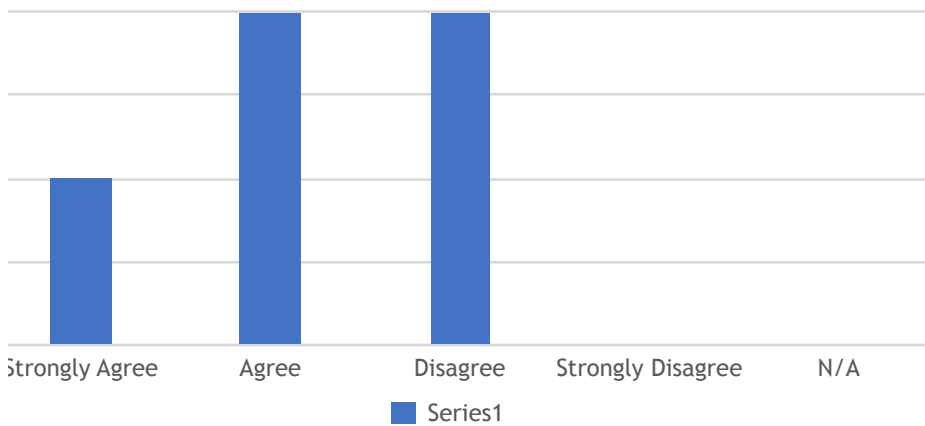
More flexibility to combine personal life and studies



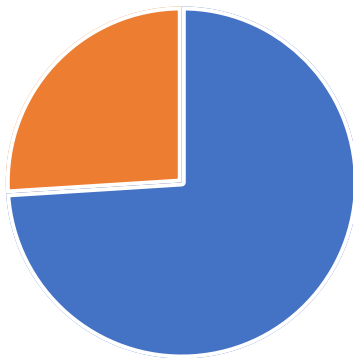


Strongly Agree Agree Disagree Strongly Disagree N/A

Difficulty to focus studying from home



Time and money saving



Strongly Agree Agree Disagree Strongly Disagree N/A

Lack of face to face human interaction

