

IMPACT OF VIRTUAL LEARNING ENVIRONMENT ON STUDENTS

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Abstract

This report is about a study carried out at the University of Wales Trinity Saint David London Campus to establish the impact of using VLE-Moodle on students' learning experience. From a sample size of $n=9$, 70% of the respondents felt that the use of VLE-Moodle motivated them to learn whereas 25 percent disagreed, 60% of the participants, in total, responded that the use VLE-Moodle promotes collaboration and teamwork among students and fosters self-directed learning, and 61% of the respondents agreed that using VLE-Moodle generally has a positive impact on their learning experience, as it improves their overall academic performance. Empirical studies already reported in the literature also complement the results of this quantitative study.

Impact of Virtual Learning Environment on Students

A. Introduction

Information technology plays a key role in the education system, supported by the adoption of the Learning Management Systems, including Moodle. Virtual Learning Environment-Moodle, is a software platform developed to facilitate learning and teaching using various tools and activities. The Moodle platform is created with several features that make it useful in education and training. The use of Moodle in higher learning is becoming more frequent. When using Moodle, students are needed to complete assignments at their own time, at any place and pace. Students can also contribute to asynchronous and synchronous to facilitate learning experience (Cassidy, 2016, p.113)). Moodle eliminates the need to meet face-to-face in classroom, due to various reasons like the current Covid-19 pandemic where social distancing is paramount. This report aims at establish how the use of Virtual-Learning Environment-Moodle impacts students' learning experience at the University of Wales Trinity Saint David London Campus.

B. Research design and methodology

In this study primary and secondary data was used to fulfill estimated requirements. Primary data was sourced from the responses given directly by students in campus. Secondary data, on the other hand, was obtained from published documents, which is used to support the results of the current research. To collect the primary data, an e-questionnaire was created to determine how the use of VLE (Moodle) impacts student learning basing on the following three research questions:

1. Does the use of VLE-Moodle motivate students to learn even more?
2. Does teaching and learning through VLE-Moodle enables students develop collaborative and self-directed learning? And finally,

3. Do you think the using VLE-Moodle has a positive impact on student learning?

This survey was introduced during tutorials and 9 students (n=9) at the University of Wales Trinity Saint David London Campus were invited to complete the survey in their own time. There were two sections of the questionnaire. The first set had closed, multiple choice question which required participants to respond how they utilize Moodle platform. The second set also had closed questions, asking participants to respond to topics relating to the four research questions. In the second part every question had composed of five sub-questions to which participants were required to select a point on a Likert scale (Strongly Agree-5, Agree-4, Neither agree nor disagree-3, Disagree-2, and Strongly Disagree-1). Percentage analysis using excel was adopted in order to understand the collected data more.

C. Ethical considerations

Prior to the start of the survey, participants gave their consent to take part in the study. The results of the questionnaires were kept anonymous and opinions of all participants were respected. They were also given sufficient information about the intent of the survey and how the data will be used and kept confidential.

Part A of the Questionnaire

(Please tick where appropriate)

The questionnaire below includes the number of respondents for each question.

1. Gender

Male (), Female (), Other, Specify ()

2. Age ()

3. Have you ever used Moodle?

Yes (), No ()

4. How often do you support your learning through Moodle outside the classroom?

Daily (), Once a week (), Twice a week (), More than twice a week (), Once a month (), Not at all ()

5. How regular does your instructor expect you to complete assignments from Moodle?

Once a week (), Twice a week (), More than twice a week (), Once a month (), Not at all ()

6. Do you think the way course content is delivered in classroom is same as on VLE-Moodle?

Yes (), No ()

7. To what extent do you rely on Moodle for your learning?

Very small extent (), Small extent (), Large extent (), Very large extent (), Not at all ()

Results

In part A of the questionnaire, 9 students completed the questionnaires (5 male and 4 female). Of the 9 respondents, 78% said to have ever used Moodle more than twice a week. Moodle supports their learning outside the classroom, and teachers regularly expect them to complete assignments from Moodle. A majority respondents also felt that the delivery of content through Moodle is like when done in classroom

PART B OF THE QUESTIONNAIRE

(The figures in the boxes represent the number and percentage of students who gave that response)

Table 1: Please indicate whether you agree or disagree with the following information on the extent to which the use of Moodle motivates you to learn (please mark in a box you find appropriate)

	Agree	Strongly Agree	Disagree	Strongly Disagree	Neither Agree nor Disagree
Overseeing my learning through Moodle motivates me to learn.	2 (22%)	3 (33%)	2 (22%)	1 (11%)	1 (11%)
Different features on Moodle such as forums, quizzes, PowerPoints, feeds among others are a source of motivation	4 (44%)	3 (33%)	2 (22%)	0 (0%)	0 (0%)
The kind of feedback teachers give upon completion of various course activities provided also motivates me to learn.	5 (56%)	2 (22%)	1 (11%)	1 (11%)	0 (0%)
Total respondents	41%	29%	18%	7%	4%

Table 2: Please respond the extent to you agree or disagree with the following statements on how Moodle promotes collaboration at college and self-directed learning (Please tick only one box as appropriate)

	Agree	Strongly Agree	Disagree	Strongly disagree	Neither Agree nor Disagree
Management of subjects/courses and availability of learning resources on Moodle motivates me to learn independently.	3 (33%)	2 (22%)	3 (33%)	1 (11%)	0 (0%)
Moodle improve my interaction with my fellow students and teachers, and the course content	2 (22%)	1 (11%)	3 (33%)	1 (11%)	2 (22%)
The ability to use Moodle at any location, time, and pace encourages me to learn independently.	6 (67%)	2 (22%)	1 (11%)	0 (0%)	0 (0%)
Total respondents	42%	18%	26%	7%	7%

Table 3: Please indicate whether you agree or disagree with the following statements on whether the use of Moodle has a positive impact on your learning experience in general (tick one box only as appropriate)

	Agree	Strongly Agree	Disagree	Strongly Disagree	Neither Agree nor Disagree

I learn better when I take courses via Moodle and I recommend this form of learning	2 (22%)	3 (33%)	1 (11%)	1 (11%)	2 (22%)
Using VLE-Moodle has positively impacted my learning, and thus improved my performance.	3 (33%)	3 (33%)	2 (22%)	1 (11%)	0 (0%)
I can present the same concepts I have learned from Moodle with much clarity.	2 (22%)	3 (33%)	2 (22%)	0 (0%)	2 (22%)
Before I started using virtual-learning environment- Moodle I was an average student, but after I started using Moodle, I am now an above average student.	4 (45%)	2 (22%)	1 (11%)	2 (22%)	0 (0%)
Total respondents	31%	30%	17%	11%	11%

D. Data interpretation and discussion

As indicated in the graphical representation-1 below, the following were the results for the question regarding whether Moodle motivates students to learn. 70% of the respondents felt that the use of VLE-Moodle motivated them to learn whereas 25 percent disagreed with the statement. Only 4% could not state their position. Generally, therefore, the use of Moodle motivates most students at the University of Wales Trinity Saint David London Campus.

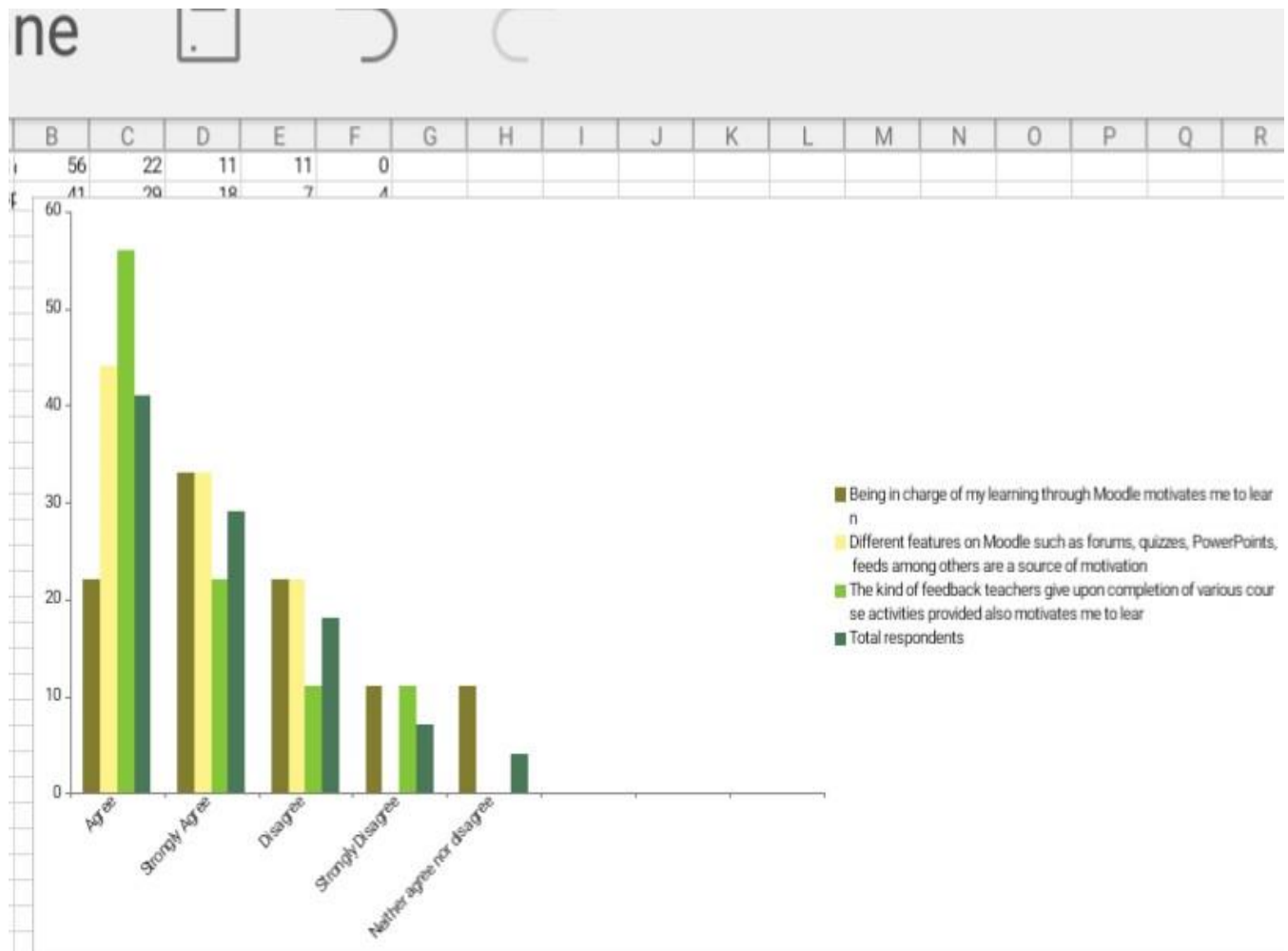
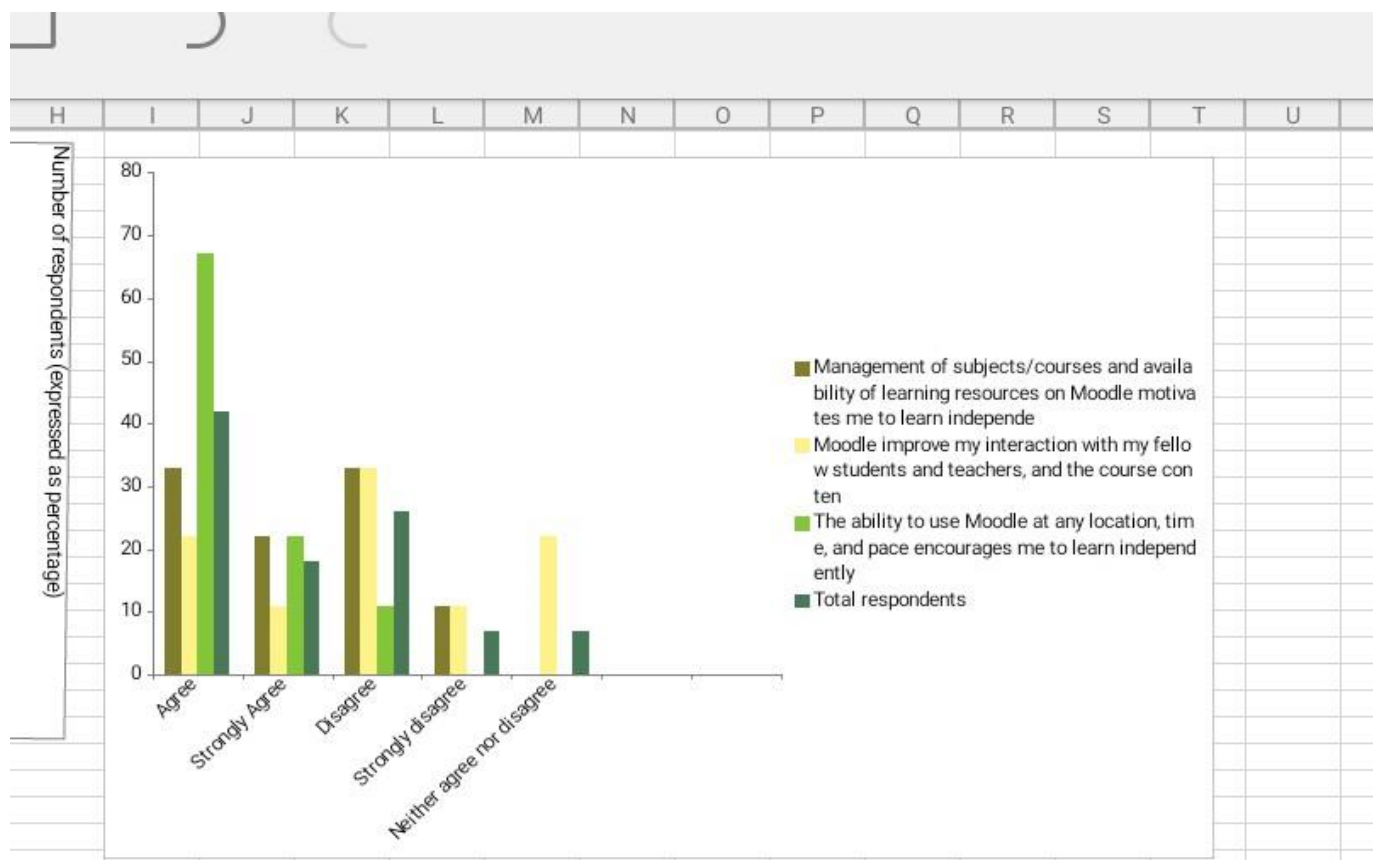


Fig. 1

In table 2, 60% of the participants, in total, felt that the use VLE-Moodle promotes collaboration and teamwork among students and fosters self-directed learning while 33% of the respondents disagreed. The ability to learn using VLE-Moodle at any location, any time and place was the primary motivating factor for self-directed learning as 89% of the respondents agreed while 11% disagreed. Regarding student interactions, 33% felt the use of Moodle enhances interactions and 44% felt use of Moodle decreased the ability to interact freely with students, teachers, and course content. This data is represented in the graph (Fig.2) below.

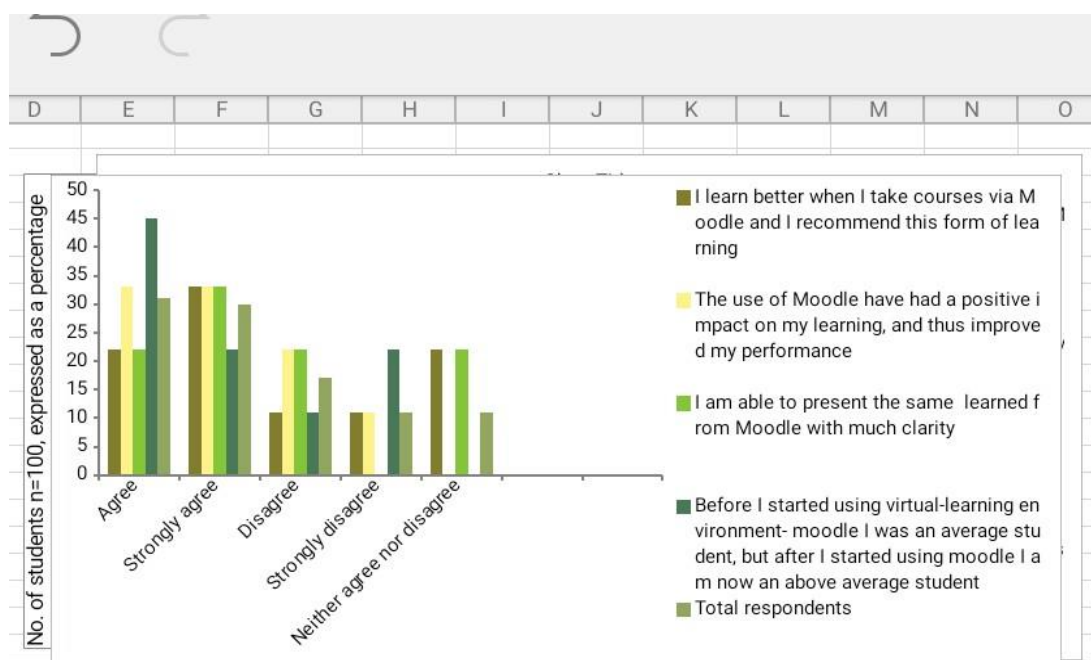
Fig.2

Table and figure 3 show the overall results for the question whether using VLE-Moodle have



positively impacted the students' learning experience. The following were the results in summary.

61% of the respondents agreed that the Moodle generally has a positive effect on their learning



experience,
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l academic performance. Of the respondents, 55% of said they learn better when they take courses via Moodle. 55% said they can present the same concepts they have learned from Moodle with much clarity.

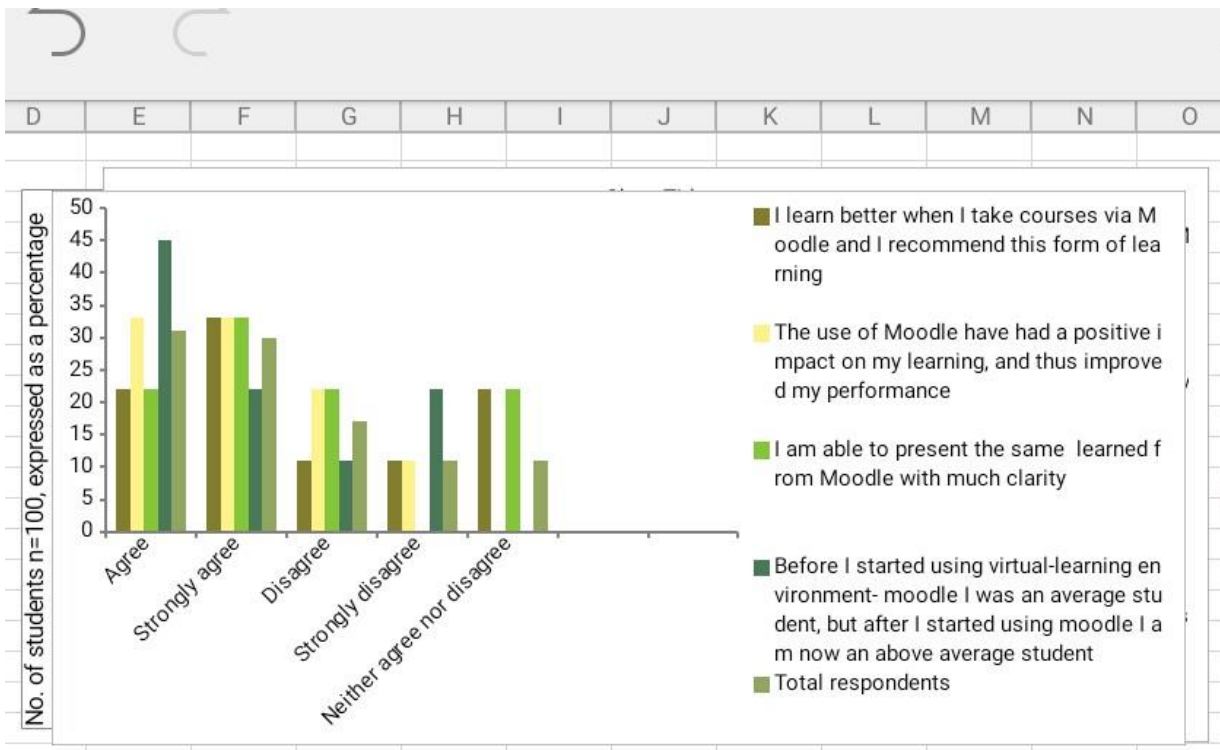


Fig. 3

Empirical studies documented in the literature strongly support the questions addressed in this study. The findings of this study are complimented by several studies already conducted to establish how the use the VLE-Moodle impact students' learning experiences. For instance, Hettiarachchi and Wickramasinghe (2015); Barker and Gossman (2013) researched on how the use of Moodle impacts student motivation to learn. The authors noted that features of Moodle platform such as PowerPoints, feedback on quizzes, forums, news feeds, and hyperlinks are a source of motivation. The current study also reported similar results (as illustrated in Fig.1).

Another study by Posese-Okeseme (2018) found out that most of the students feel the use of Moodle improves their interactions with the teach, fellow students as well as interactions with the course content, Other students in this study, however, did not feel using Moodle had an impact or negatively affected or decreased their interactions with other students. Moodle enhances teamwork and collaborative learning.

According to Akamavi, Butterfield, Roushan, and Mohamed (2015), Moodle features like forums, discussions, and messaging enable students to share ideas, work together, and ask or respond to questions when required. An older study by Amandu, Muliira, and Fronda (2013) reported that the use of Moodle gives students a chance to participate actively in the course beyond normal class hours and classroom. The authors also noted that Moodle encourages collaborative learning, increase access to the course content, which are very important practices in a university learning setting. Moreover, Moodle enhances learning experience by giving students a chance to reinforce what they have learned and they find it easier to catch up on missed contents, hence improving their academic performance (Chua and Montalbo, 2014, p.108). Moodle enhances self-directed learning as it motivates students to focus on their studies and to continue learning beyond the classroom (Amretish and Subramanian, 2019). These findings concur with the findings in the current study as illustrated above.

Tiwari and Tatiteni (2018) researched how students appreciate the courses offered via Moodle. The authors noted that Moodle e-learning environment encourages and motivates students to learn more and some do not prefer taking courses that are not offered through Moodle. Based on the study conducted by Chua and Montalbo (2014), the virtual-learning environment can be used to facilitate learning and enhance students' performance.

Conclusion

This study aimed at establishing how the use of Virtual-Learning Environment-Moodle, impacts the learning experience of students at the University of Wales Trinity Saint David London Campus. From the online survey conducted, most of the students agreed that the use of Moodle impacts their learning positively. For instance, students are encouraged to collaborate and learn independently, Moodle motivates students to learn due to the ability to learn at any time, place and at their own pace. The study was very successful; however, the main limitation was that a small sample size (n=9) was used. The data may not accurately be a represent the opinions of all students at the University

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