

**THE IMPACT OF VIRTUAL LEARNING ENVIRONMENT (VLE) – MOODLE ON
STUDENTS' LEARNING EXPERIENCE AT THE UNIVERSITY OF WALES
TRINITY SAINT DAVID LONDON CAMPUS**

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INTRODUCTION

Virtual Learning Environment is web-based system software that facilitates teaching and learning through various tools and activities. Through VLE, students can access tasks that require them to compete with their peers in class or choose to work on the tasks at their leisure. They can easily engage in asynchronous and synchronous discussions that develop their learning. Through empirical evidence, there is proof that the application of a Virtual Learning Environment impacts a student's achievements, promotes independent learning, and motivates learning. This article intends to report a study based on a specified context to further test hypothetical declarations in a positivistic way.

REPORT RATIONALE

Academic sectors have taken on Virtual Learning Environments (VLE) to deliver instructional resources and facilitate communication. This paper reports an online survey of the topic by analyzing data from two hundred and forty-eight second-year students from an English Sixth Form College (SFC). This survey reflects an investigation of the reported impact of applying the institution's Virtual Learning Environment. It relied on three research questions; does VLE positively impact student learning? Does VLE application in teaching and learning help in developing independent learning? Does VLE increase a student's learning motivation? The statistically essential findings indicate that using Moodle leads to improvement in academics and learning motivation, as expressed by the survey participants. These findings portray sectors that require attention in promoting VLE for enhanced learning, which makes them of broad interest to tutors.

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OBJECTIVES

1. To identify whether the VLE application in teaching and learning helps in developing independent learning.
2. To identify whether VLE positively impacts student learning.
3. To identify whether VLE increases a student's learning motivation.

LITERATURE REVIEW

The review discusses the historical background and the development of VLE. On historical background grounds, telling how long VLEs have been in play is yet to be defined. The United Kingdom's Open University has used computers to learn since 1970. However, the commercial computer for Virtual Learning Environment 'blackboard' got licensed in 2000. As of 2010, the blackboard application was incorporated in more than three thousand academic institutions around sixty countries. Other significant software included 'Moodle' that was developed in 2001. It mainly focused on helping teachers to online set-up courses for interactive and collaborative content creation. Moodle was adapted in two hundred and twelve countries and could translate more than seventy-five languages. However, it was not too common in colleges. VLE has continued to expand over the years. The next section discusses the impact of VLE, both positive and negative impacts.

The positive impacts of the Virtual Learning Environment are from an American study. Students from upper-grade elementary levels engaged in a software tool that allowed students to communicate with their teachers through an online platform (Scardamalia & Bereiter, 1996). In this way, they get to develop their analytical skill. VLE enables students to perform better in reading, writing, language, and vocabulary standardized tests. Furthermore, it deepens the understanding measures, enables open-mindedness to comprehend numerous perspectives, and creates independent thinking, which cannot be compared by students who

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are not subscribed to the VLE software. The study concludes that VLE maximizes reflection skills and encourages progressive thoughts.

The negative impacts of VLE are expressed by Muirhead (2001), Seabolt & Arends (2000), and Crook (2000). They all agree that web instructions do not enhance emotional and social interactions witnessed in in-person learning. Ahmad, Piccoli, and Ives (2001) made a comparison, through a longitudinal experiment paradigm, of VLE classes against the in-person classes. There was no essential difference in the performance between the two classes, a fact agreed by Robertson and Klotz (2002). They asserted that online learning students lack structured dialogue and fail to gain a sense of community that comes from in-person classroom.

Hiltz investigated the impact of VLE on motivating learners and enhancing independent learning in 1990. He did a case study in New Jersey by collecting data through pre-course and post-course questionnaires from one hundred and thirty-two high-school students who study online, ninety-six in mixed courses and eighty-nine in in-person courses. The project's evaluation goals entailed; describing the academic experiences and results to determine the negative and positive outcomes. Based on the survey's report, fifty-five percent agreed that they were motivated by other students reading their posts. Fifty-six percent felt more engaged in being active on the course through online forums, while sixty-five percent found VLE convenient. Also, most students that expressed high interest and engagement levels described it as a fun experience. The findings were reinforced by successive research that suggested that teacher-student interactions are essential in creating the senses of student autonomy and competence, which enhanced independence and motivation.

METHODOLOGY

The imperceptible research was conducted as an e-questionnaire that allowed analysis through Excel. The interrogation was organized and categorized based on three significant

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research questions; first, does using VLE positively impact student learning? Second, does using VLE develop independent learning? Third, does using VLE motivate learning? All the 650 SFC second-year students were to engage in the survey at their own time. To establish minimum representation samples, a sample size calculation with a confidence level of 95% was conducted. A 37% response rate was required at a 242 minimum sample size to acquire the representation results. The three empirical questions were rephrased into testable hypothetical claims and null hypotheses follow-ups. H1: using VLE positively impacts H0: using VLE does not positively impact student learning. H2: using VLE develops students' independent learning, H0: VLE does not boost independent learning. H3: using VLE serves as a learning motivation, H0: VLE does not serve as learning motivation. Before the actual survey, an online pilot experimented on a first-year group.

With that, one question got a wording amendment and was conducted in two sections. The first questionnaire had questions 1 to 5 with multiple and closed choice questions asking the participants about the Moodle software. The second questionnaire entailed questions 6 to 8 that had close-ended questions regarding the three research questions. Every question had four sub-queries through which the participants chose a Likert scale point; Strongly disagree, disagree, neither, agree, and strongly agree. A total score was acquired for all the questions, that is, 6 to 8 from the sub-queries' overall score. The 'neither' response, which is neutral, was rated 3. Hence, aggregated values that were higher denoted agreement while the lower ones indicated disagreement. The entire process was anonymous to which the students were made aware of before the survey. The participants were granted information sheets during the tutorial period and made available on the SFC Virtual Learning Environment. The completion of the survey was to be completed in two weeks, and I was highly encouraged to collect large samples. At the end of the two weeks, 248 questionnaires were fully complete. The statistics were 93 males and 155 females and represented 38% of the 650 initial students.

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Out of the responses, 75.8% had easy access to VLE, 20.6% experienced technical difficulties, while 3.6% did not attempt. On using SFC Moodle, 43.2% (30 male and 63 females) used it a few times while 35.9% (30 males and 49 females) used it severally, and 4.1% did not use it.

PRIMARY DATA ANALYSIS

In the first research question table of the positive impact of using VLE, the aggravated statements showed 53% agree and strongly agree that using SFC Moodle positively impacted student achievement. 16% chose to disagree and strongly disagree. In the second research question, 66.9% of respondents agreed and strongly agreed that using Moodle at one's own time, pace and place encouraged independent learning, 57.7% agreed and strongly agreed that the college's courses were the actual encouragers of independent learning, 73.8% agreed and strongly agreed that Moodle resources are only for informational purposes. In comparison, 24.6% agreed and strongly agreed that Moodle boosted communication with other students. In the third research question, 46.8% agreed and strongly agreed that they were motivated to learn because they felt in control since they learned at their convenience, 49.5% agreed and agreed that the Moodle tools were the motivational factors, 35.5% agreed and strongly agreed that the format variety on SFC Moodle motivated their learning. In comparison, 40.3% agreed and strongly agreed that getting feedback from other students was their motivation. The mean over all of the questions indicated that generally, 43% agreed and strongly agreed while 22% disagreed and strongly disagreed. The rest chose a neutral standpoint.

SECONDARY DATA ANALYSIS

The primary data analysis confirms that using VLE encouraged them to learn independently due to the choice of learning informally at a pace, place, and time that suited them best. Most of them were appreciative of how it fitted their busy lives. It also proved that

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VLE increases learning motivation boosts communication skills, and collaborative studies through emails, chats, and discussion forums. Peer feedback was highly motivational to their progressive studies. For the first research question, the primary data suggested that using VLE positively impacts students' learning. The total score of the question 8 report showed that 53% agreed that SFC Moodle bore a beneficial impact. In the second research question, the primary data suggested that applying VLE aided in enhancing independent studies. The total score for that question reported that 55% of the total agreement responders found SFC Moodle essential to their independent study push. In the third research question, the data shows that using VLE boosts the motivation to learn. This is supported by the composite score that reported 43% agreement responses that SFC Moodle motivated them to engage in learning activities for various reasons. According to Vygotsky 1978, conceptual studies is a collaboration that needs supportive dialogue; hence an assumption can be made that online discussions can encourage both conceptual enhancement and collaboration. Also, it seems offering students the chance to engage in learning at their convenience is a major motivation towards independent learning and could boost their performance because it is out of personal effort and will.

CONCLUSION AND RECOMMENDATION

Through this study's intensive research, Virtual Learning Environment improves both teaching and learning, leading to improvements in performance. The study implies that online learning and the learning convenience offered by Virtual learning offer encouragement for students to own their learning by motivating them to explore academics hence creating independent learning. The empirical research has also shown that the potential of VLEs relies on countering the pedagogical issues that come with effective studying and on the ultimate overall course design quality.

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While the study portrays, SFC Moodle is beneficial to students, establishing whether subject disciplines encounter different online learning impacts would have been best. It would also have been interesting to question the actual virtual learning tools that bear the greatest impact. Is it the course handouts? Quizzes? Or forums? The study's limitations hail from limited time and the approach being too positivistic, which fails to provide enough depth on the challenges encountered in VLE. Hence, further research should be conducted in a more neutral, inductive, and naturalistic way with both teachers and students to discover how VLE can be more engaging, motivating, and effective.

A few recommendations, mostly on management, can be applied to VLE learning for a better experience. First is providing the teachers with Continuing Professional Development (CPD) in using and developing VLE. Second, there should be better access to VLE by every student at home. Third, there should be consideration of minimum requirements for VLE use. Fourth, there should be encouragement towards non-direct use of VLE. Fifth, students should be provided with flexible options for them to gain control over their academic lives. Lastly, VLE should be made interactive rather than restricting to informational repository roles.

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Questionnaires

1. Gender?

Man/Woman

2. Any attempts to access SFC Moodle?

Yes, with no problems/ Yes, with problems/ No

3. Averagely speaking, how frequently do teachers get you to use Moodle outside the class?

Never/ once every month/ less than once in a month/ once in two weeks/ weekly/ more than twice a week.

4. Aside from teachers' instructions, how often do you get to use Moodle for your learning purposes?

Never/ once every month/ less than once in a month/ once in two weeks/ weekly/ more than twice a week.

5. How much do you use Moodle on your overall subjects?

Always/ very few chances/ few chances/ many chances/ very many chances

6. How much do you agree or disagree with the questions below about Moodle encouraging independent learning;

a. The flexible Moodle learning encourages my independent learning.

Strongly disagree/ disagree/ neither/ agree/ strongly agree

b. The set-up of the course encourages my independent learning.

Strongly disagree/ disagree/ neither/ agree/ strongly agree

c. Moodle resources are for informational reasons.

Strongly disagree/ disagree/ neither/ agree/ strongly agree

d. Moodle boosts academic communication between my peers and me

Strongly disagree/ disagree/ neither/ agree/ strongly agree

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7. How much do you agree or disagree with the questions below about Moodle increases learning motivation;

a. Being in control of my academics motivates me.

Strongly disagree/ disagree/ neither/ agree/ strongly agree

b. The course tool variety, like hyperlinks and PowerPoint slides, motivate me.

Strongly disagree/ disagree/ neither/ agree/ strongly agree

c. The format varieties like audios and podcasts motivate me.

Strongly disagree/ disagree/ neither/ agree/ strongly agree

d. Peer feedback motivates me.

Strongly disagree/ disagree/ neither/ agree/ strongly agree

8. How much do you agree or disagree with the questions below about Moodle having a positive impact on your performance;

a. Moodle has positively impacted my student effectiveness.

Strongly disagree/ disagree/ neither/ agree/ strongly agree

b. Moodle is essential in my studies.

Strongly disagree/ disagree/ neither/ agree/ strongly agree

c. I am capable of learning more with Moodle than without it.

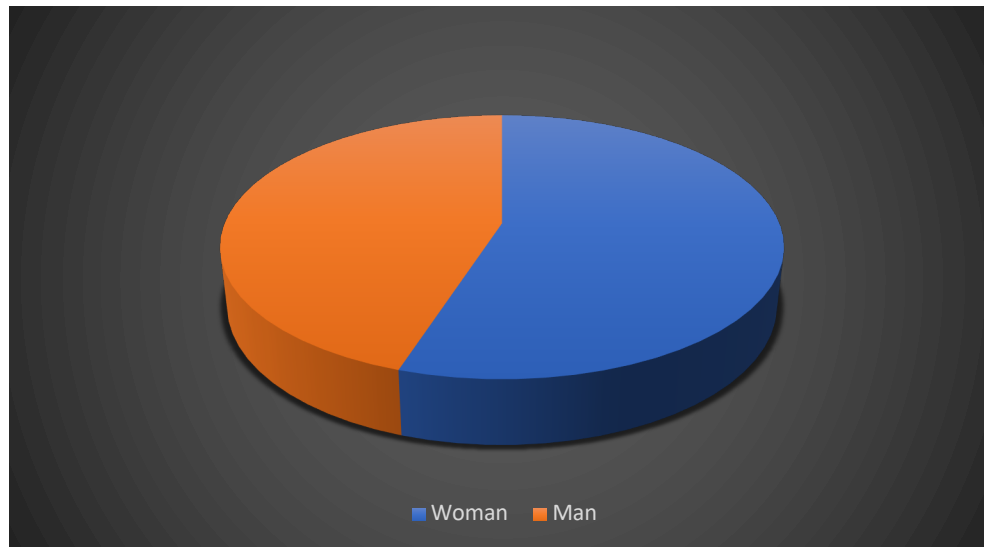
Strongly disagree/ disagree/ neither/ agree/ strongly agree

d. Moodle makes learning better

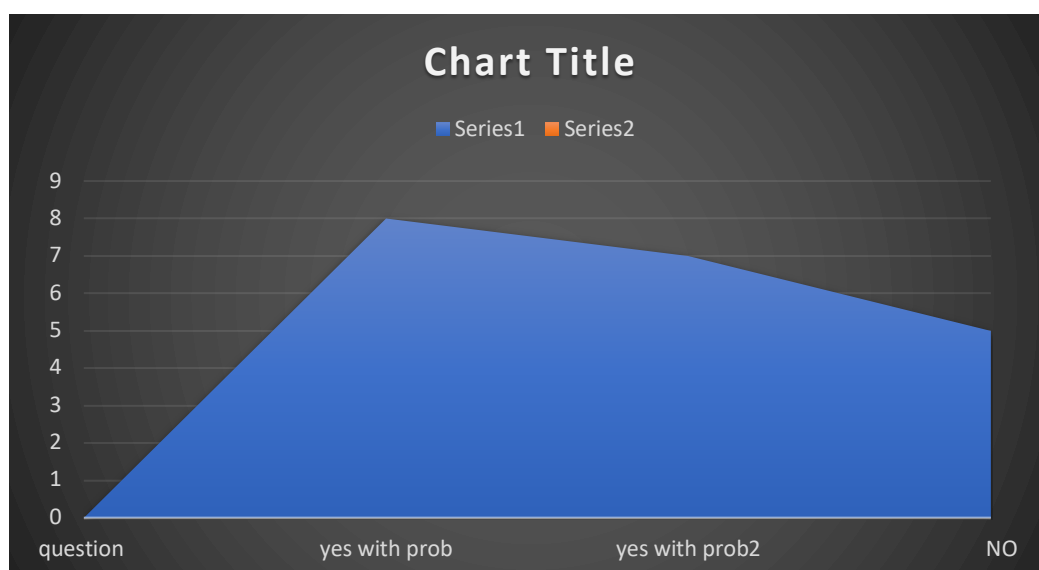
Strongly disagree/ disagree/ neither/ agree/ strongly agree

Appendix

question1	students
Woman	11
Man	9

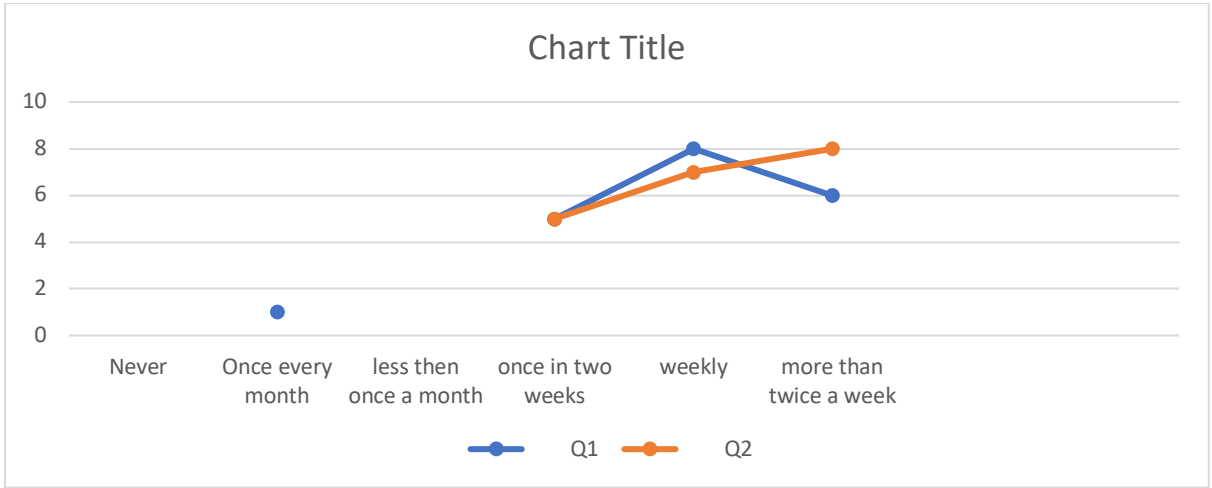


question	yes with prob	yes with prob2	NO
Q1	8	7	5

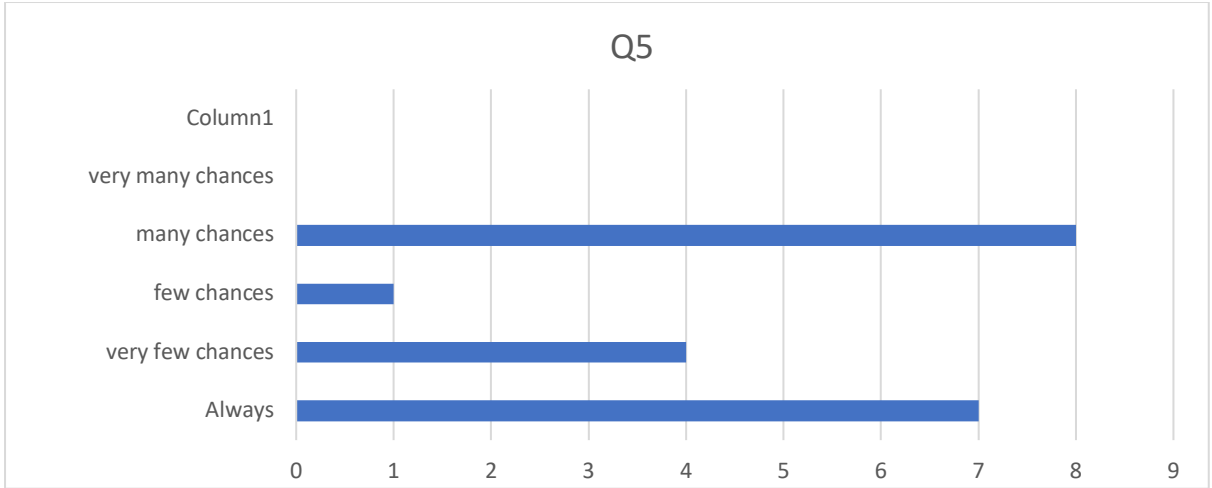


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Questions	Never	Once every month	less than once a month	once in two weeks	weekly	more than twice a week
Q1		1		5	8	6
Q2				5	7	8

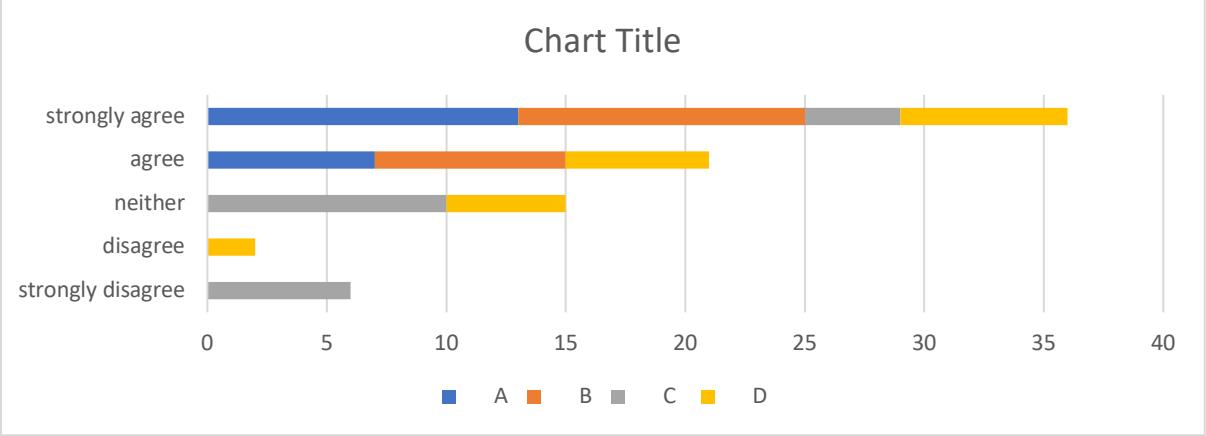


Questions	Always	very few chances	few chances	many chances	very many chances
Q5	7	4	1	8	

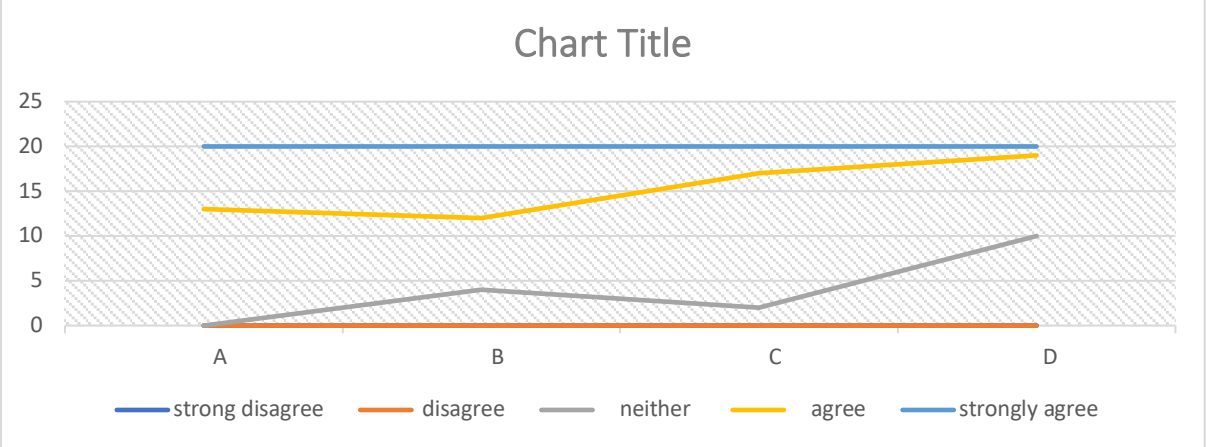


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Question6	strongly disagree	disagree	neither	agree	strongly agree
A				7	13
B				8	12
C	6		10		4
D		2	5	6	7



Question 7	strong disagree	disagree	neither	agree	strongly agree
A				13	7
B			4	8	8
C			2	15	3
D			10	9	1



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