

Impact of Virtual Learning Environment – Moodle on Students' Learning Experience at the
University of Wales Trinity Saint David London Campus

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INTRODUCTION

Background

The Virtual Learning Environment (VLE) relates to the software system that is web-based and is developed to promote the teaching and learning with the utilization of key techniques and tools. The exact timeline associated with the initiation of the use of VLEs is unknown (Goeser, et al., 2018). Dung (2020) indicated that the Open University of UK has been utilizing commercial PC for learning since the 1970s the actual computer-dependent VLE named Blackboard was patented in 2000. By the year 2010, the Blackboard software was utilized by more than 3700 educational platforms in approximately 60 nations. Another most well-known VLE-Moodle was initiated in the year 2001 and was created to assist educators in the further development of online subjects with an emphasis on interaction and collaborative creation of content. In the year 2011, Moodle's user base reached up to include 212 countries with more than 49,365 active websites in approximately 75 languages (Larmuseau et al. 2018). Keeping this view, this paper aims to assess the impact of VLE (Moodle) on students' learning experience within the University of Wales Trinity Saint David London Campus. The paper includes research purpose and objectives along with the brief review of relevant research studies in the literature. The paper then briefs on research methodology design adopted followed by primary and secondary analysis as well as conclusion and recommendations.

The Rationale of the Study

As indicated the key fundamental purpose of this research study relates to assessing the relative impact of VLE - Moodle on the learning experience of students from the University of Wales Trinity Saint David London Campus. The underlying reason associated with researching this subject relates to the considerable increase in the dependence on virtual learning platforms

for the deliverance of lectures and other relevant academic materials to students. Moreover, another reason associated with undertaking this research subject is that it is important to assess the level of contribution of VLE towards the improvement and enhancement of student learning and eventually highlight the needed changes to be adopted.

Objectives of the Study

The aim of this study relates to assessing the impact of VLE on learning experience on students from the University of Wales Trinity Saint David London Campus. Following are the main research objectives of the study;

- To study the significance of VLEs in contributing to learning and teaching
- To assess the impact of VLE on learning experience on students from the University of Wales Trinity Saint David London Campus
- To evaluate the relationship between VLE and students' performance in the University of Wales Trinity Saint David London Campus

LITERATURE REVIEW

Concept of Virtual Learning Environment

The study by Rienties et al. (2016) indicates that VLE is referred to as an educational-based technology which is a digital-based platform for the web aspects of the study courses, normally within educational institutions. VLE provides key activities, resources and interactions within a subject structure for varying phases of evaluation.

Concept of Student Learning

Xu, et al. (2014) indicates that the underlying concept of student learning relates with the broad mix of educational programs, experiences of learning and teaching techniques as well as academic support approaches which are directed towards addressing the different learning requirements, preferences, aspirations or cultural background of the students.

Impact of VLE on Student Learning

The web and digital-based tools as well as techniques tend to provide many ways that up-surge the level and degree of communication among the class members and the instructors, thus, enhancing the student learning. It has been further added that these include but are not restricted to the chats, discussion boards and emails. Moreover, by adding these factors to a subject can result in up-surging the degree of motivation and participation level of a student in an online class be it in projects or discussions, hence positively contributing towards student learning. In contrast, the study by Goeser, et al. (2018) reflected on how face-to-face teaching and lecturing has resulted in becoming less efficient in contributing to student learning.

In addition to above, another study that needs to be taken into account was carried out by Rasiah (2014) particularly and studied the incorporation of the video feedback into education teaching, learning and training. The research study suggested that there exists a significant impact on the level of interaction of a student, in addition to the networking, communication and engagement expertise as they finished the training related tasks and video-based lectures. The study carried out by Larmuseau et al. (2018) found out the team participation, grades of assignment and overall online discussion also referred as mixed methodology approach learning has provided to be a more highly efficient and successful approach for student learning, for instance particularly of the courses that necessitate the team and discussion work.

Relevant Theory - Community of Inquiry (CoI)

The Community of Inquiry is a model that is developed and presented by Garrison, Anderson and Archer, which is works on the concept of three different existences, social, cognitive and teaching and indicated in the figure below (Pedro, et al., 2015).

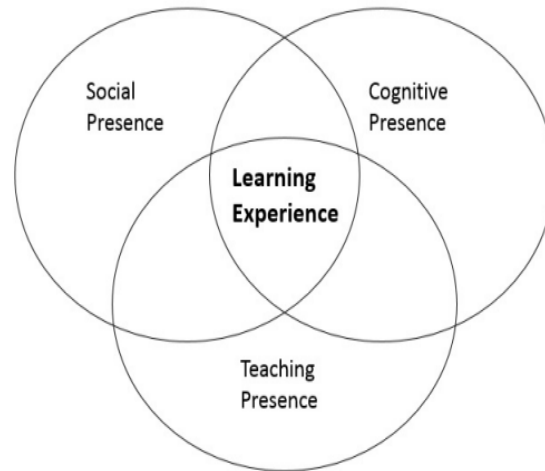


Figure 1: Community of Inquiry Model

CoI theory and model supports the idea of virtual and mix courses as VLEs or platforms relying on students and teachers sharing ideas, opinions and relevant mix of information. Pedro, et al. (2015) adds that the community of inquiry has resulted in becoming one of the most key theories and models for virtual and mix courses that are developed to be increasingly interactive among students as well as instructors utilizing the discussion boards, wikis, videoconferencing, blogs etc.

METHODOLOGY

The research methodology adopted for this study is a mixed methodology design, which by incorporating qualitative and quantitative research designs. The quantitative primary data sources used by this research include the use of a survey questionnaire which comprises of ten questions in total, out of which three are related to demographic data on research participants. The total participants for primary data were 30 students from the University of Wales Trinity Saint David London Campus, but only 16 respondents filled out the questionnaire distributed through survey monkey. These research participants were chosen based on the random sampling method. The design of the survey questionnaire was developed to assess the responses of the participants on the 5-point Likert scale which exhibited the agreeableness of the respondents in light of the close-ended survey questions. The analysis of the data collected through a survey

questionnaire was carried out with MS Excel where the tables were generated exhibiting the percentage of the responses of the participants. While on the other hand, the qualitative research data was collected through secondary data sources from literature which were analyzed based on the keywords chosen from the research objectives of this study.

DATA ANALYSIS

Primary Data Analysis

Following is the exhibition and interpretation of the findings of data collected through survey questionnaires;

Demographic Data

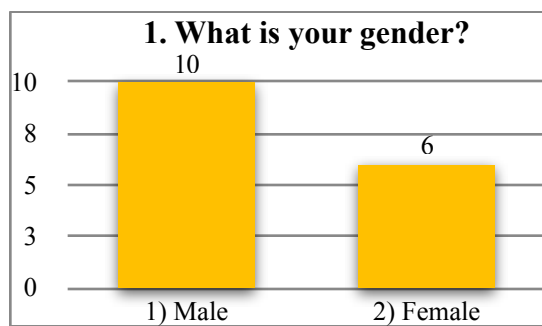


Figure 2 – Gender of Respondents

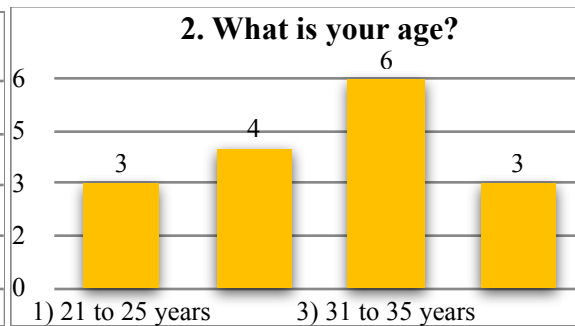


Figure 3 – Age of Respondents

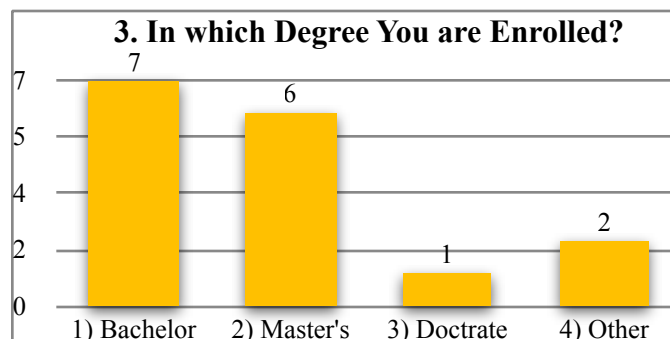


Figure 4 – Degree of Respondents

The demographic data exhibited through graphical representation (Figure 2 to Figure 3) indicates that majority of the research respondents were males and most of these students from University of Wales Trinity Saint David London Campus were pursuing either bachelors or Master's degree programs and hence the age ranged justified to fall into the category of 26 years to 35 years.

Data Findings from Survey Questionnaire

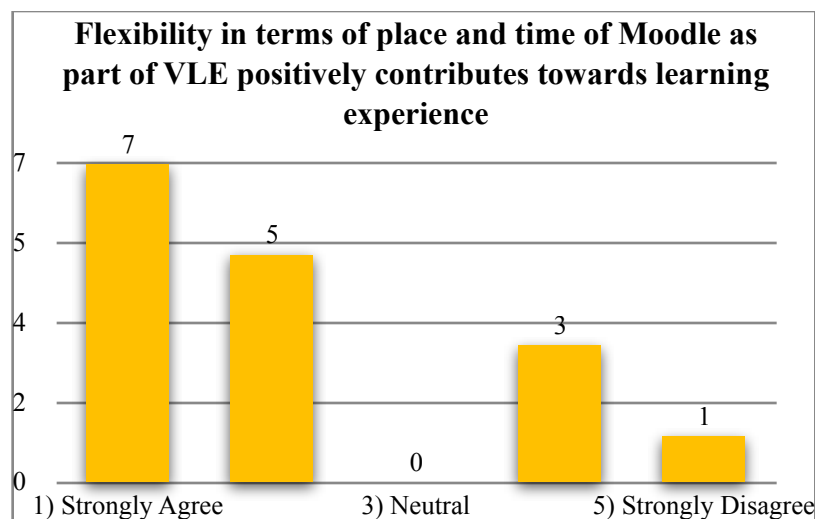


Figure 5 – Flexibility

The results in figure 5 make it evident the more than 10 respondents agreed with the idea that provision of time and place flexibility through Moodle helps improve their willingness to learn and learning experience overall.

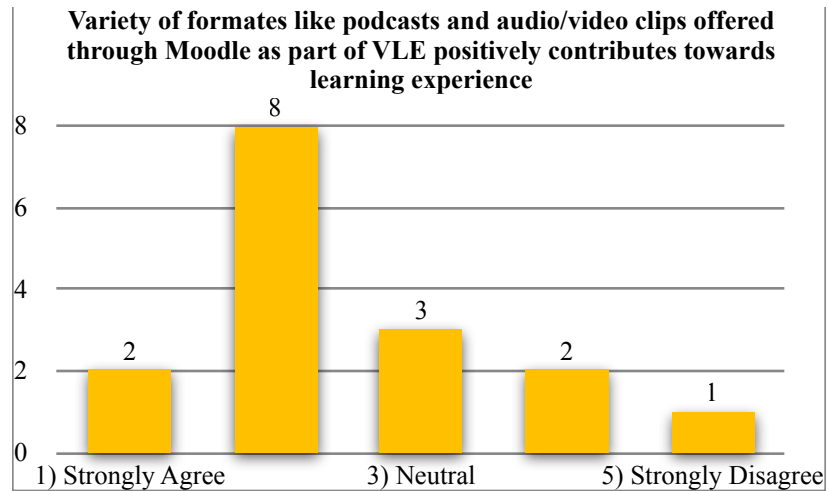


Figure 6 – Variety

Figure 6 justifies that respondents showed agreeableness with the idea that different virtually provided formats like audio/video clips help broaden horizons of understanding, hence improve students' learning experience.

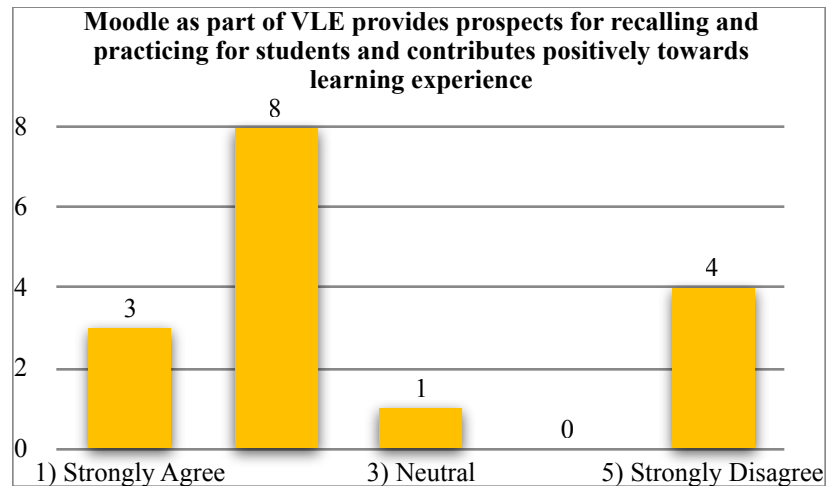


Figure 7 – Practicing and Recalling

Figure 7 makes it evident that the majority of the students exhibited agreeableness that VLE helps them in referring the learning material uploaded by teachers which they might use for last-minute practicing and memorizing, hence enhances learning experiences.

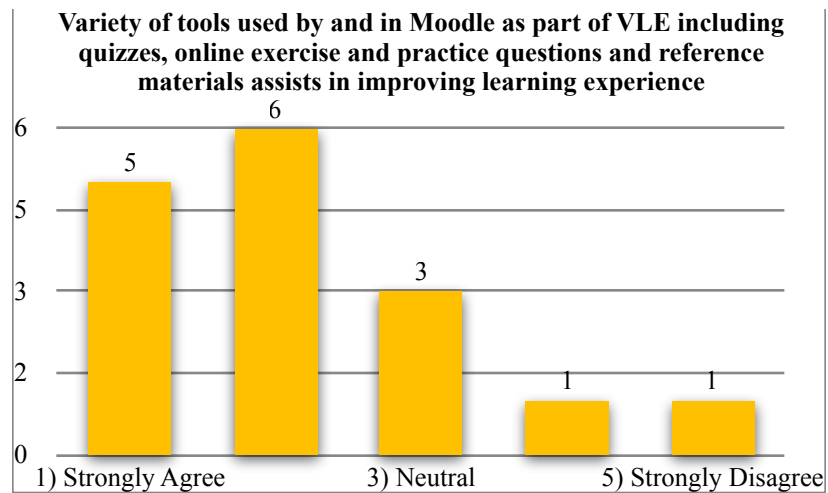


Figure 8 – Learning Tools

The respondents depicted increased agreeableness with the idea the provision of key tools facilitated to them by Moodle as part of VLE and the flexibility of accessibility of these tools in reviewing the takeaways of every lecture which is more efficient as compared to face-to-face learning experience sets the base for the development of interesting in learning and thus positively contributes towards learning experience.

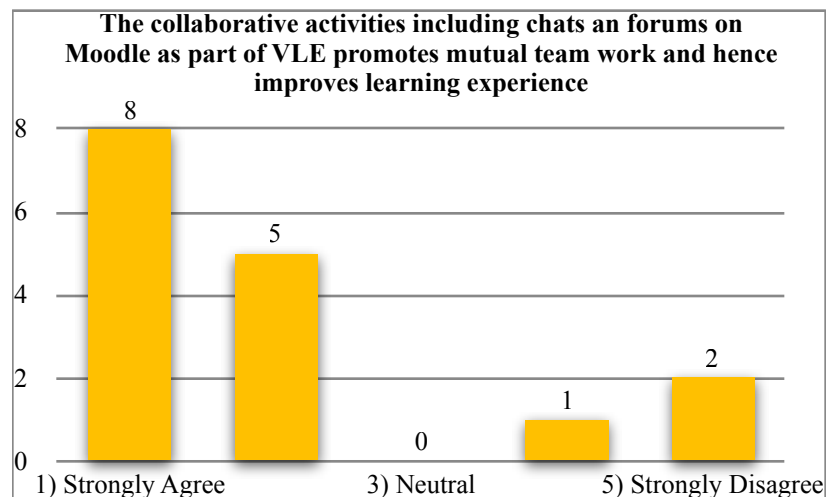


Figure 9 – Collaborative Learning

Here, majority of the students high agreed that Moodle provides chats and forums for carrying out discussions on lectures among students, where each student can help each other and hence team learning is promoted which eventually aids in improving the learning experience.

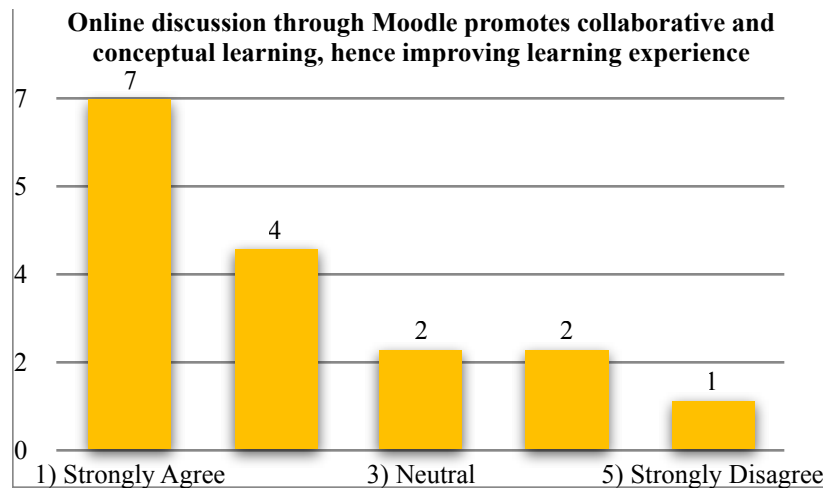


Figure 10 – Conceptual Learning

Students agreed that Moodle facilitates online discussion and learning which broadens conceptual learning hence enhancing learning experiences.

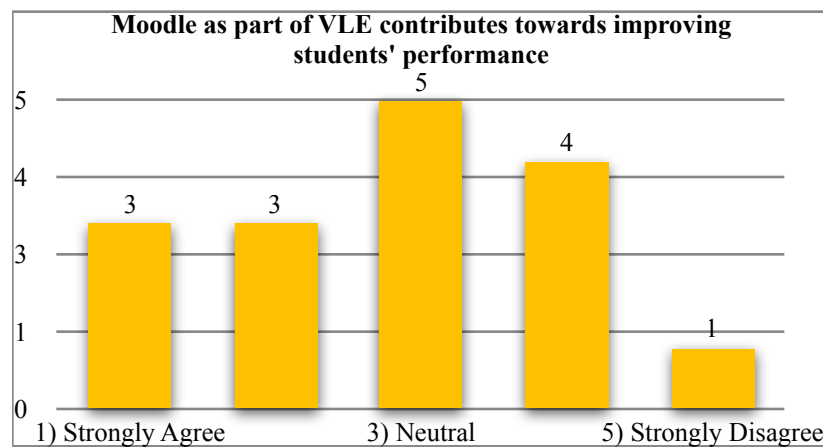


Figure 11 – Students' Performance

Students indicated a neutral level of agreeableness that Moodle eventually improves student performance, as that is dependent on the learning capacity of each student.

Secondary Data Analysis

The findings from the secondary data sources revealed that Moodle as part of VLE from a learning view ensures the provision of prospects for practice activities as well as recalling and memorizing course material along with the accommodation of the broad mix of other learning materials, for instance, multimedia. This idea appears to be in alignment with the view of the respondents as indicated in the survey results which support the direct relationship that exists

between Moodle's opportunities of practice and recalling learning & improving the learning experience. It has been cited by experiential research that the utilization of VLE (Moodle) leads towards enhancing teaching and learning which further contributes towards retention, satisfaction and attainment for a greater base of the student body. These findings are supported by the results indicated in figure 5.

Moreover, the review of the literature also reflects on the fact that the potential of VLEs relies on highlighting the academic concerns related with efficient learning and eventually on the overall quality of subject design and student support. For instance, Fisher and Newton (2014) highlight a significant point that eventually it is only the key decisions which students make about their actions, which is what affects the resultants of a learning experience. Reisoğlu, et al. (2017) further supports this idea by indicating that students are necessitated to take responsibility for their learning for assuring effective learning experiences. The findings from secondary sources reflected that classes through VLEs attained more learning resultants as compared to face-to-face classes.

O'Shea, Stone and Delahunty (2015) suggested that this affects two main areas, including, willingness for learning and incorporation of students into the educational process through flexible access to learning resources. These findings from secondary sources supported the findings exhibited above in figure 8, where flexible access to learning resources like reference materials, practice materials etc. aid in enhancing the learning experience of students. Hence, VLEs as learning mediums effects by promoting accommodation of the requirements of students, ability to reflect, up-surging level of interest and confidence, enhanced readiness for learning have overall increased student performance and learning experience.

This idea is also supported by the research respondents of this study and it has been indicated in figure 10 where student's learning interest and confidence are part of conceptual and collaborative learning that improves overall students' learning experience. Besides, O'Shea, Stone and Delahunty (2015) also claim that a tipping point has been reached in the utilization of technology and e-learning and recommends that more discovering needs are to be undertaken for assessing the insightful effect that such technologies might have on the provision of efficient learning experience through Moodle and other VLEs.

CONCLUSION AND RECOMMENDATIONS

To conclude the research findings from primary and secondary sources, it is evident that the use of Moodle as part of VLE tends to up-surge the level of learning confidence, motivation and capacity of students. To elaborate, the research findings and discussion reflected on the fact that with the help of Moodle and other VLEs the students are capable of developing their independent knowledge base by collaborative experiences with peers in other regions providing a prospect for creating employability expertise and skills. Hence, keeping in view the summary of findings, the following are some of the recommendations for educational institutions to improve the learning experience;

- The administration of educational institutions needs to assure that all students possess the needed access to the VLE software from home
- To take into account the minutest requirements for directed utilization of a VLE by students
- To ensure application of strategies for motivating non-directed utilization of a VLE

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Appendix: Survey Questionnaire

Demography

1. What is your gender?

- A) Male
- B) Female

2. What is your age?

- A) 21 to 25 years
- B) 26 to 30 years
- C) 31 to 35 years
- D) Over 35 years

3. In which degree you are enrolled?

- A) Bachelor
- B) Master's
- C) Doctorate
- D) Other

4. Flexibility in terms of place and time of Moodle as part of VLE positively contributes towards the learning experience

- 1. Strongly Agree
- 2. Agree
- 3. Neutral
- 4. Disagree
- 5. Strongly Disagree

6. Variety of formats like podcasts and audio/video clips offered through Moodle as part of VLE positively contributes towards the learning experience

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

6. Moodle as part of VLE provides prospects for recalling and practising for students and contributes positively towards the learning experience

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

7. Variety of tools used by and in Moodle as part of VLE including quizzes, online exercise and practice questions and reference materials assists in improving the learning experience

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

8. The collaborative activities including chats and forums on Moodle as part of VLE promotes mutual teamwork and hence improves the learning experience

1. Strongly Agree
2. Agree

3. Neutral
4. Disagree
5. Strongly Disagree

9. Online discussion through Moodle promotes collaborative and conceptual learning, hence improving the learning experience

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

10. Moodle as part of VLE contributes towards improving students' performance.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree