

## **Digital Skills and Research Methods**

Topic: Impact of VLE (Moodle) on the learning experience of students at the UWTSD London  
campus

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## **Abstract**

The concept of a virtual learning environment has increased significantly, especially after the Covid-19 pandemic. The research was conducted on the topic 'Impact of VLE (Moodle) on the learning experience of students at the UWTSD London campuses. The research presented an introduction to the topic which included the research rationale, aim, and objectives. A literature review section was presented for developing an understanding of the research topic. Methodology indicated the research method and techniques used by the researcher. Moreover, both primary and secondary data were evaluated for understanding the research topic.

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## **1. Introduction**

The use of VLE (moodle) is gradually increasing in today's educational scenario. A virtual learning environment is a web-based educational tool designed for enhancing the learning experience of students. It is an innovative initiative or design space implemented for enhancing learning and teaching as well (Walleit, 2021).

### ***Rationale***

The Covid-19 pandemic has affected the education system significantly. Due to lockdown as a preventive measure of the pandemic, educational institutions have shifted to online platforms. Moreover, the increasing use of technology has also influenced educational institutions to implement digital and technological tools for enhancing learners' experiences. The research will help in understanding the impact of VLE (Moodle) on students' learning experience, especially students of the UWTSD London campus.

### ***Research Aim***

The aim of the research is

- To understand the impact of Moodle on students' learning experiences at the UWTSD London campus.

### ***Research Objectives***

The major objectives of the research are

- To acknowledge the effectiveness of a virtual learning environment.
- To understand the learning experience of students regarding a virtual learning environment.
- To evaluate whether traditional learning is effective or a virtual learning environment.

## 2. Literature Review

According to Lopukhova and Makeeva (2017), a virtual learning environment or VLE is referred to as a collaborative platform that helps in delivering learning in a better manner. It has been useful for different types of educational institutions as it enables educators to perform their job efficiently as well as allows students to experience learning in a better way. A virtual learning environment features various resources such as interactions, training, assessments, activities, and many more. As per the opinion of Lopukhova and Makeeva (2017), nowadays, the concept of MOODLE has transformed due to rapid technological advancement which can be characterised by mobile as well as web applications, collaborative features, and innovative lessons, and the use of asynchronous as well as synchronous learning.

### Features of MOODLE

***An extensive array of course tools and resources:*** A VLE platform enables educators to create various contents regarding learning like lesson plans; moreover, students are able to perform as well as submit their assigned tasks through different options. Class interaction in a MOODLE platform is done through forums and classrooms (Lacka *et al.*, 2021).

***Personalised experience:*** A virtual learning experience has helped in providing customised content to learners and educators as well. Content in a MOODLE can be personalised according to the learning progress of the student throughout his/her course. This has enabled learners to constantly maintain interest in the courses offered.

***Offline features:*** Poor network or internet connection have been a major problem in online learning. However, MOODLE provides a few offline learning features as well. It has enabled educators to use modules that enable the offline creation of electronic records. These records can

be later synchronised into MOODLE after establishing the internet connection (Torres Martin *et al.*, 2021).

**Assessment tools:** A virtual learning education has enabled educators to understand ways in which learners or students are reacting to study materials. It has helped in enhancing the course content of learners and providing appropriate feedback for improving their performances (Lacka *et al.*, 2021).

#### **Effectiveness of VLE (Moodle)**

It is revealed that a virtual learning environment provides the learner and educator major benefits in order to enhance their performances.

**Tracking performance:** Electronic records regarding learners and their courses can be easily tracked by educators on a VLE platform. Assignments, quizzes, and other various types of assessments that are submitted by students on a Moodle enable educators to track their performance. This helps in tracking the overall process of a student (Alves *et al.*, 2017).

**Encouraging collaboration:** A VLE platform (Moodle) has features involving various communication tools such as message boards, forums, and many more. These tools have enabled the educator and learners to communicate effectively as well as foster collaboration. This has also helped in developing a sense of community among learners and educators as well.

**Flexible learning:** Course content available on a VLE platform (Moodle) can be easily accessible from anywhere; moreover, the platform has enabled learners to complete their courses according to their convenience and time. According to Phungsuk *et al.* (2017), it also enables students to review and revisit courses that are unclear, providing them flexibility.

### **3. Research Methodology**

#### **3.1 Research method**

Methods used in research indicate the processes, strategies, and techniques that are used by the researcher for collecting information for creating a better understanding of the research topic. Both qualitative and quantitative methods are used in this research. In simple terms, I have used a mixed research method. The quantitative method involves the collection of numerical data and expressing them through graphs. The qualitative method refers to the use of non-numerical data for understanding the research topic (Peamkar, 2022).

#### **3.2 Primary and Secondary Data**

Primary data in research refers to the information that is acquired by the researcher from main sources directly. It involves different methods such as surveys, interviews, questionnaires, focus groups, observations, experiments, and many more. Alternatively, secondary data refers to the information that is collected by the researcher through indirect sources or use information that is gathered by someone other than the researcher. It involves data that is available in newspapers, journals, books, magazines, and other similar sources (Wagh, 2022). I have used both primary and secondary data for enhancing the reliability of the research.

#### **3.3 Data Collection Process**

Data collection refers to the systematic process of acquiring information or observations regarding the research topic. I have used a survey involving both open-ended and closed-ended questions for collecting primary data. In terms of secondary data, I have used information that is provided on the official website of the UWTSD London campus, other websites, journals, and newspapers.

### **3.4 Population and Sampling**

In order to collect primary data through a survey, I have selected 10 participants. These participants represent the student population of the UWTSD London campus. Survey participants were selected through a method of simple random sampling. It is a probability sampling method used by a researcher for selecting a subset of participants randomly from a large population. Since each member has an equal probability of getting selected, the method is considered highly reliable (Voxco, 2022).

### **3.5 Ethics in research**

I have ensured that no personal information of survey participants is used in this research; moreover, the only information that is available on public platforms is used for secondary data. The GDPR was followed while collecting primary research data from participants. According to the regulation, no personal information of participants was stored or used without their permission. Moreover, information of participants was stored no longer than necessary and security was ensured against unauthorised access or processing. Additionally, participant information was not shared with any third parties.

## **4. Findings, Analysis, and Discussion**

### **4.1 Primary data analysis**

A total of seven questions were prepared for the survey out of which five questions were close-ended and two questions were open-ended. Survey data was collected from ten participants who were selected randomly from the UWTSD London campus.

*Question 1: Are you familiar with Moodle?*

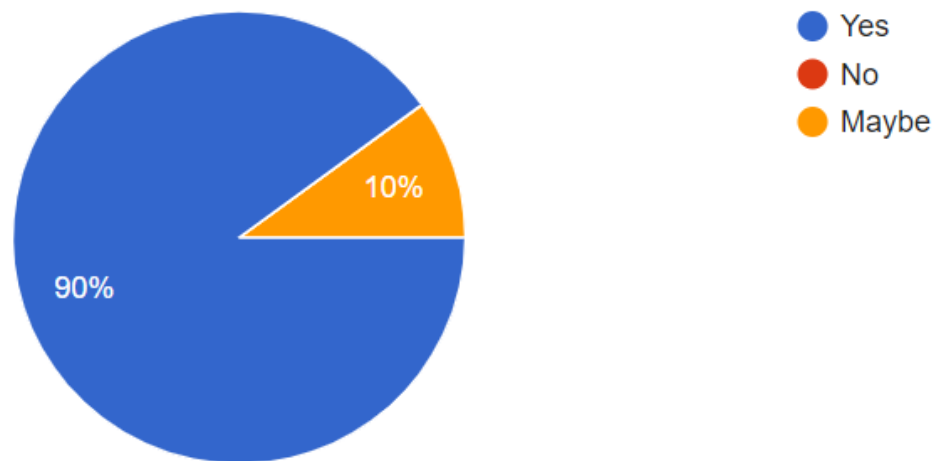


**Figure 1: Responses of Question 1**

(Source: Author)

Analysing the first question of the survey revealed that 90% participants are fully aware and familiar with the Moodle system implemented in the UWTSD London campus and 10% of them are confused that if they are familiar with Moodle or not. More or less every participant in the survey is comfortable with the virtual learning environment.

***Question 2: Do you have the access of Moodle from Home?***

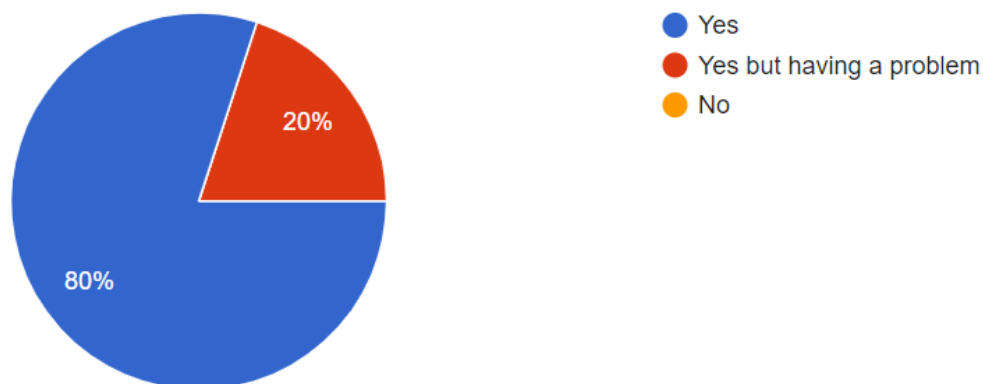


**Figure 2: Responses of Question 2**

(Source: Author)

The survey revealed that performances of about 80% of participants have the access of the Moodle from their home. However, 20% of participants answered that they also have the access of the Moodle from their home but they are facing some issues regarding the usage of the Moodle.

**Question 3: On average how often are your *REQUIRED* by your teachers to use Moodle outside the Classroom:**

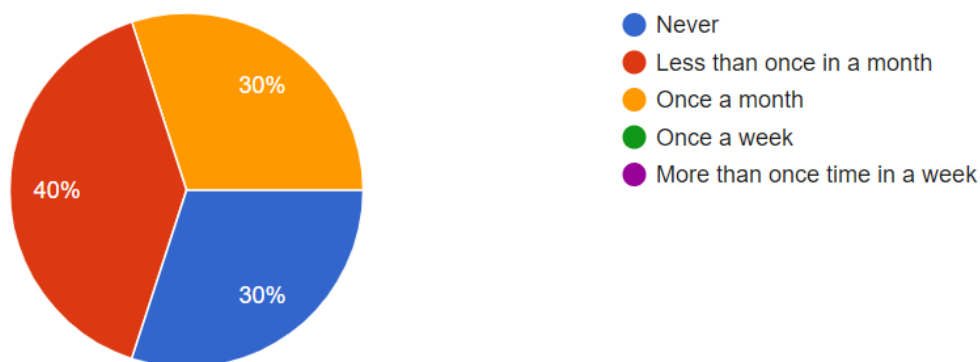


**Figure 3: Responses of Question 3**

(Source: Author)

The survey result indicated that 40% of participants required their teacher to use the Moodle outside the classroom for less than once in a month. However, 30% of them have never asked their teacher to access the Moodle to use that outside the classroom. Along with this, 30% of the participants ask their teacher once in a month to open Moodle outside the classroom.

**Question 4: When is not required by the teachers, how long the teachers ask you to use Moodle?**

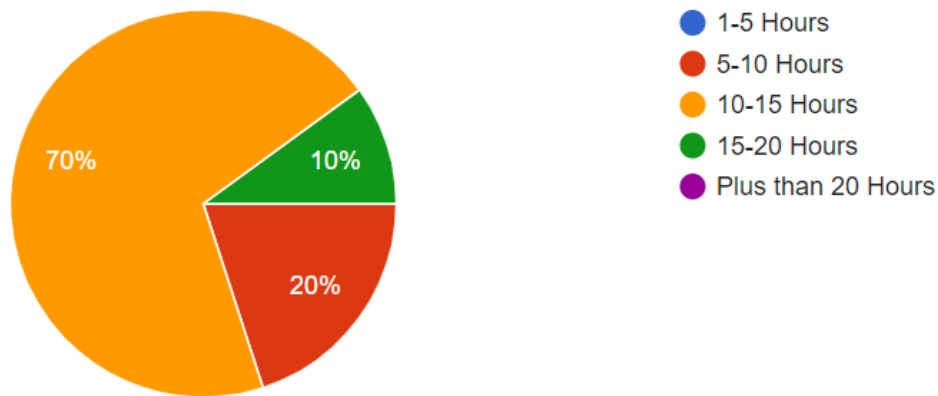


**Figure 4: Responses of Question 4**

(Source: Author)

In terms of using Moodle, 70% participants said that the teacher asked them to use the Moodle for 10-15 hours in a day. 10% of them said that the teacher asked them to use the Moodle for 15-20 hours and 20% participants said that the teacher asked them to use Moodle for 5-10 hours.

**Question 5: However, I am satisfied using Moodle.**

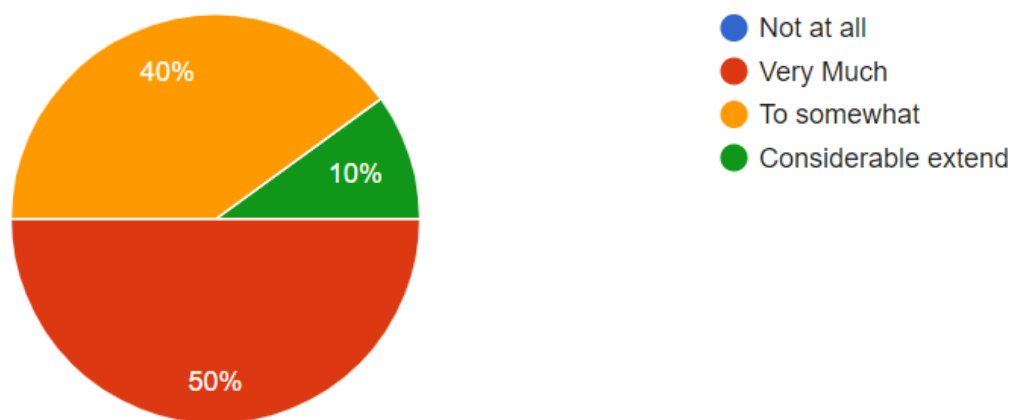


**Figure 5: Responses of Question 5**

(Source: Author)

In terms of satisfaction, 50% participants are very much satisfied by using the Moodle, 40% of the participants are satisfied to some extent by using the Moodle. Along with this, 10% participants said that they are satisfied to considerable extent by using the Moodle.

***Question 6: To what extent do you agree or disagree with the following statements about the use of Moodle to encourage independent learning.***

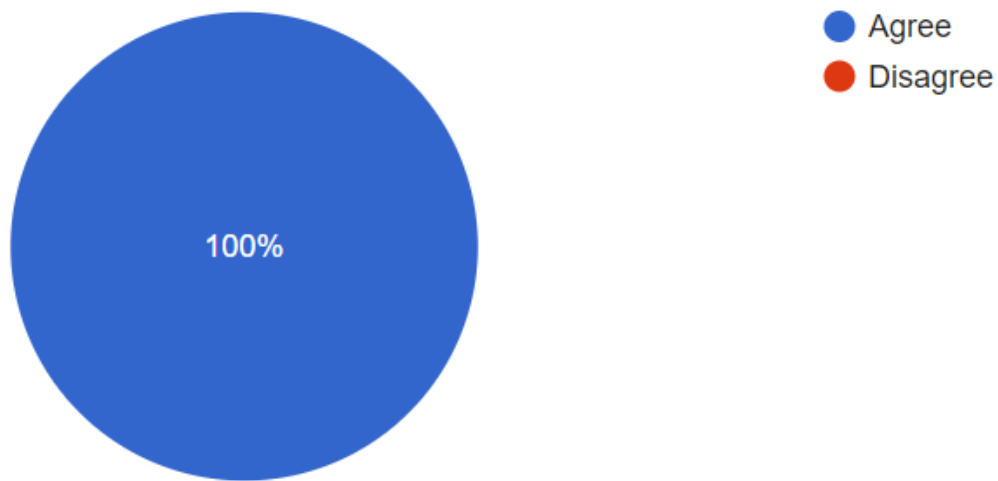


**Figure 6: Responses of Question 6**

(Source: Author)

In terms of encouraging independent learning, all of the participants agreed that the Moodle helps to encourage independent learning.

***Question 7: What is the tool you use the most on the Moodle?***

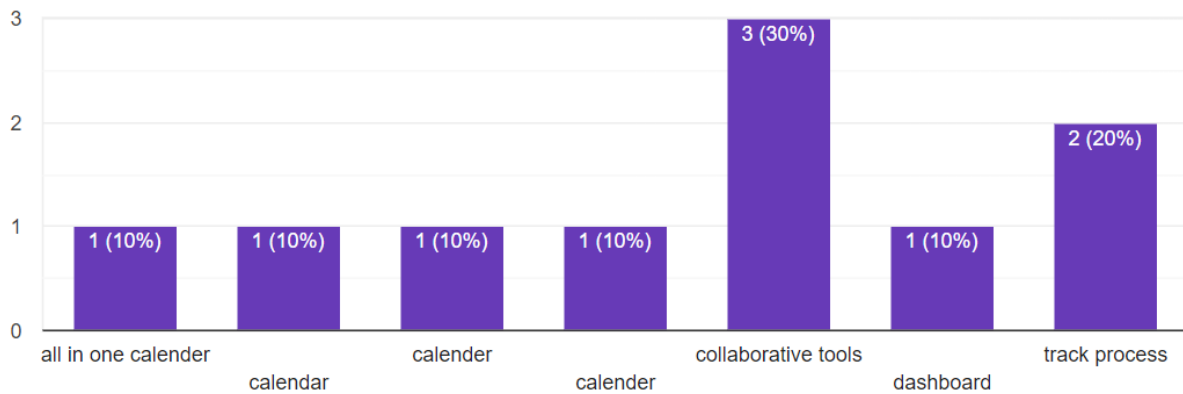


**Figure 7: Responses of Question 7**

(Source: Author)

According to the survey, it could be seen that the most useful tools in the Moodle are Shared calendar, collaborative tools, dashboard along with Track process.

#### **4.2 Secondary data analysis**

Moodle refers to the platform used by educational institutions for providing learners with the accessibility to educational content online in order to improve their learning experiences. The UWTSD London campus has also implemented a virtual learning environment. According to Davies and Harris (2016), implementation of the Moodle has enabled the university to provide necessary resources to learners in HE for supporting distance and part-time learners within a blended provision.

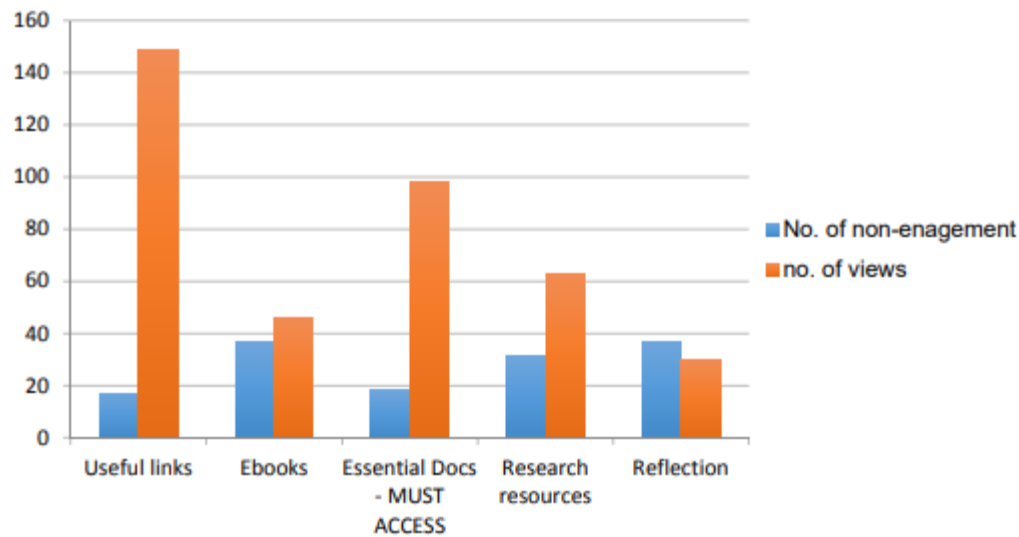


**Figure 6: Page views for key resources**

(Source: Davies and Harris, 2016)

Figure 6 revealed that the number of page views was significantly high for essential documents and useful links on a VLC platform. These key resources are mandatory for assessment tasks of learners. However, page views for other key resources are also high which indicates a higher engagement of learners on a VLC platform of the UWTSD London campus (Davies and Harris, 2016).

According to Hamutoglu *et al.* (2020), a relationship between students' experiences of Moodle and their learning satisfaction was established. Three major student perceptions were identified namely benefit, satisfaction, and guidance for understanding the advantages of the VLE system (Moodle). The study revealed that students' perceptions were similar across different levels of grade. It is indicated that satisfaction with the VLE system (Moodle) depends on the experience of students using the Moodle. Additionally, the interaction of a student and his/her course also increase the satisfaction level of using the Moodle. Hamutoglu *et al.* (2020) also revealed that most of the features of the Moodle were highly correlated with the satisfaction and benefit of

students. However, features such as blogs and reflective diaries were not correlated in terms of providing guidance to students and indicated reshaping of these features.

As per the opinion of Boulton *et al.* (2018), there is a relationship between learning outcomes and Moodle engagement at a ‘bricks-and-mortar’ university. It is revealed that the high engagement or usage rate of students at a Moodle platform is linked directly to high success. However, a low engagement rate is not linked directly to low grades or performance. It is also revealed that the use of Moodle varies based on courses. For instance, the use of Moodle is more effective in instruction-based styles of learning. Additionally, it is also evident that a virtual learning environment is quite effective for predicting the performances of a learner and his/her final grades at least weeks in advance (Boulton *et al.*, 2018). These factors indicate the effectiveness of Moodle and its relationship with learning outcomes in a ‘bricks-and-mortar’ university.

#### **4.3 Summary of findings**

Comparing both primary and secondary findings of the research indicated similarities between these findings. It is revealed from both findings that implementation of a virtual learning environment has improved the performance of learners; moreover, high grades of students are linked directly to the high engagement on a Moodle. Additionally, it is revealed that using Moodle is time and cost-efficient. The research findings also indicated that the system is more effective for instruction-based learning.

#### **5. Conclusion and Recommendation**

It can be concluded from the research that the demand for a virtual learning environment has increased significantly. The research revealed the effectiveness of a Moodle for enhancing the

experience of students, especially in the context of the UWTSD London campus. However, the effectiveness of a Moodle can be improved by including a few features. The research revealed poor internet connection, ineffective communication, and technological failure are major drawbacks of this system. Introducing more offline features and collaborative methods will help in improving the Moodle. Moreover, providing proper training to learners and educators will mitigate the technical complications regarding the system.

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