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The impact of Virtual Learning Environment on the learning experience of the students at UWTSD

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Abstract

This report of Virtual Learning Environment is focused on the impact of virtual learning, with the utilization of a combined research approach. A combination of primary and secondary data will be considered providing data research. This data will be transformed into charts and graphs and an analysis will be given. Finally, all the outcomes and findings will be shown.

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1. Introduction

A virtual learning environment is a designed information space. The virtual space is explicitly represented: the representation of this information/social space can vary from text to 3D immersive worlds. Students are not only active, but also actors: they co-construct the virtual space (Dillenbourg, P., 2002).

This definition of the virtual learning seems quite clear, but there are several crucial points such as the possibility for students to be actors inside the system. With the support of few secondary data, an analysis based on the students' point of view is also reported.

2. Rationale

As part of my course, the main purpose of this research is to test the impact that Moodle has in virtual learning on students. Gathering information with primary (questionnaire, survey) and secondary (articles, journals and conferences) data.

3. Research Objectives

From the research I went through in the past 9 weeks I wanted to achieve the real meaning of VLE, showing how it was impacted from Covid-19 and how it impacted students. Its effectiveness and the problems related to the education distance.

4. Literature review

4.1 Analyse the work of the research

The relation among these researches helps to understand the impact of virtual learning, how it was impacted from Covid-19 and how other students were experiencing the situation taking in consideration Moodle. Considering even the fact of distance learning.

4.2 Literature Review 1

This article is about how Covid-19 impacted on the virtual learning environment and it was published in January 2021. The research is focused on finding out the perception of students at the Faculty of Education Sciences of the University of Granada during the confinement, using a combined approach. The research started with spreading a satisfactorily questionnaire to 4,947 students, which 398 of them completed, about digital resources, digital pedagogy and active methodology. The result was not satisfactory on the functions, tasks and beliefs on tutoring of teachers in the e-learning. With some lack of knowledge from the teachers because they don't have the right tools to work efficiently. This brings to student dissatisfaction regarding the involvement of lecturer, specifically because there's the willing to accept the changes, but not enough tools to make them happen.

One of the improvements that can be made is to look at the opinion of the student and what is perceived by them (Torres Martín, et al., 2021).

4.3 Literature Review 2

The book called Virtual Learning: distance education in the 21st century through 3D virtual leaning environments, goes through many aspects of virtual learning, but I will focus on some of them. The issues of distance education are mainly the learning and institutional costs for the students and the geographical limits of the course. Plus, the issue of perceiving the information, as Leonard A. Annetta, et al. (2010, page 11) citing Garrison (1990) says, the active participation is needed in an educational experience. And a passive access to the information it's not enough, in this way the information would become meaningful knowledge. The author concludes with several points of improvements for the various matters, explaining how learning costs work and mentioning few 3D graphic tools to empower motivation. But still, the lack of involvement and active participation is an issue, this can affect the impact it has on students learning (Leonard A. Annetta, et al., 2010).

4.4 Literature Review 3

This article is called Effective Learning and the Virtual Learning Environment. The research is about the learning effectiveness and the educational problems. It was first published in 2000 and then updated in 2007, making as an example the creation of study environments (COSE). The organisational features are designed to facilitate active social models of learning such as cognitive apprenticeship and encourage collaborative working. Ultimately, it's been observed that issues are generated to universities when teaching online and the effectiveness of learning are reduced leaving the learner with a passive, unengaging experience. The research was conducted using a qualitative method based on a secondary data (Articles, University press and research papers). And as a final assumption, the author states that until the issue of the standards and technologies won't be solved the potential of Virtual Learning Environment will unlikely be realized (M. J. Stiles, 2007).

4.5 Literature Review 4

The learning impact of a virtual learning environment: students' views. It's focused on a primary data which is a survey sent to 650 students based on three questions. First, does VLE have a positive impact on students' learning? Does the use of VLE in learning and teaching help the development of student independent learning? And is VLE increasing students' motivation to learn?

Investigating the reported impact of using a college virtual learning environment (Moodle). The questionnaire was completed by 248 people and the result was that most of the students agreed or strongly agreed that VLE has a positive impact on their learning experience. The data gathered shows that VLE helps the independent students learning. But less than half of them think that VLE increases motivation, and this is mainly due to a potential improvement into its tools and collaboration tools that still don't impact in a positive way (Barker, et al., 2013).

4.6 Literature Review 5

The study on the e-learning platform Moodle, held in the University Teaching Process in Bucharest, is focused on a questionnaire based on a quantitative research method. The aim is to figure out how is the interaction perceived from the students about the new learning methods. In this case Moodle. The questionnaire was sent in the University of Bucharest where 52 students completed it. The result was that traditional education cannot be replaced from an e-learning platform. In university the increment of VLE is a reality and is having impacts on the processes of learning (Gabriela, C. O., 2014).

5. Research Methodology

Research methodology is intended as a collection of data and the analysis of them. They can be expressed in numerical data or graphs, collecting and expressing the data in words (descriptions, options, etc) or a combination of both (Walliman, N., 2011).

5.1 Qualitative, Quantitative and Combined Approach

- **Qualitative:** is how to analyse data in form of numbers to investigate (cases involved). It's often used to generalize a fact into a topic (Streefkerk, R., 2019).
- **Quantitative:** it's a type of data based on words (feelings, accounts) rather than numbers. It focuses on the participants, texts or documents and conversation analysis (Streefkerk, R., 2019).
- **Combined Approach:** Is a combination of the two stated above.

In this report I've been using a combine approach of qualitative and quantitative research methods. In this way the outcome can be efficiently presented.

5.2 Data, Primary and Secondary data

Research data is any information that has been collected, observed, generated or created to validate original research findings (University of Leeds, 2022).

- **Primary data:** this data is the closest that can get you to the truth, having experienced it and documented it yourself (Walliman, N., 2011).
- **Secondary data:** this data is less solid; it's data collected from different written sources and can be confused as a wrong interpretation of the authors (Walliman, N., 2011).

For this report I'm considering both, primary and secondary data.

5.3 Data collection process

A way to gather data is collecting it by yourself, like asking questions or interviewing. These are considered more reliable data. On the other hand, there is a different approach to gather data which is finding information and collecting them from researchers that already did a work about it, this is mostly used by students (Walliman, N., 2011).

In this process I collected my data giving a questionnaire to the students in our class to be completed, more research has been carried out collected from articles, journals and web.

5.4 Population, Sample and Sample size

- Population is mainly the aim of the study that is planning to consider (Majid, et al., 2018).
- Sample in your research project are the participants taken in consideration and need to be large enough to answer the question (Majid, et al., 2018).
- Sample size refers to the number of participants or observations included in a study (Institute for Work & Health, 2008).

For this report I consider as population the students at the University of Wales TSD, I took as sample my class of Digital Skills and Research Methods of 34 students, which 15 of them completed.

5.5 Ethic in data collection

All data collected have been elaborated following truthfully the main source and the author's intentions. Data have not been altered or manipulated in any sense.

The contents of this elaborate will not be shared with any external third party and will be used only for the research purposes.

6. Result and Findings

6.1 Primary Data Analysis

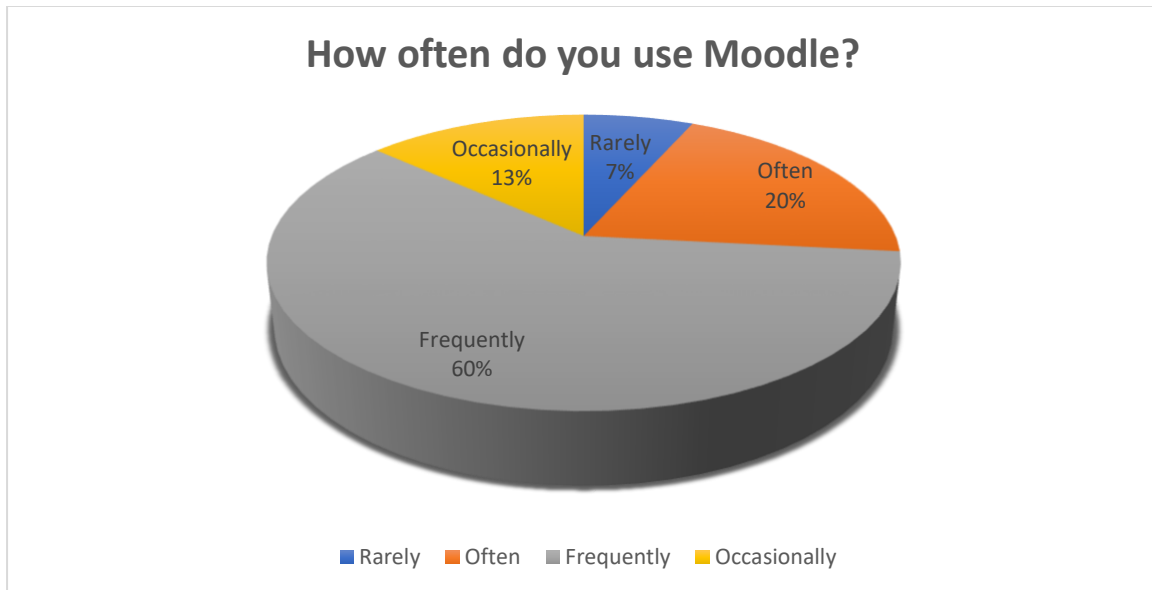


Fig.1.

Most questioned students (60%) use Moodle frequently, Often (20%), Occasionally (13%) and Rarely (7%). This figure shows that the platform is used in university. (Fig.1).

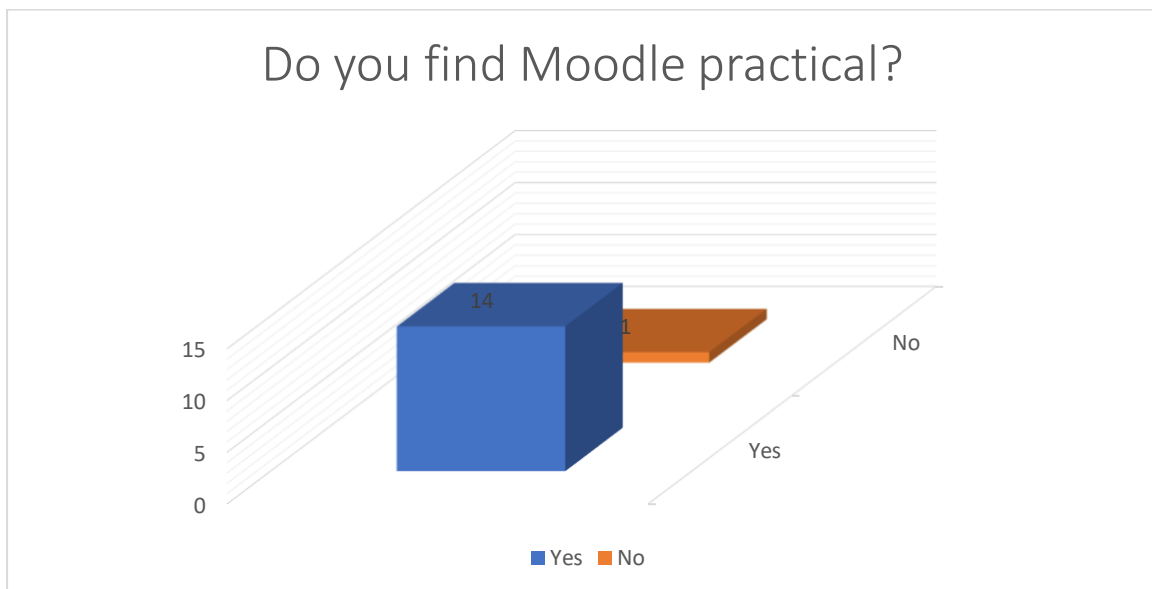


Fig. 2.

When questioned If the platform was practical most of the students 92% was agreed with the statement and the 8% wasn't agreed. (Fig.2).

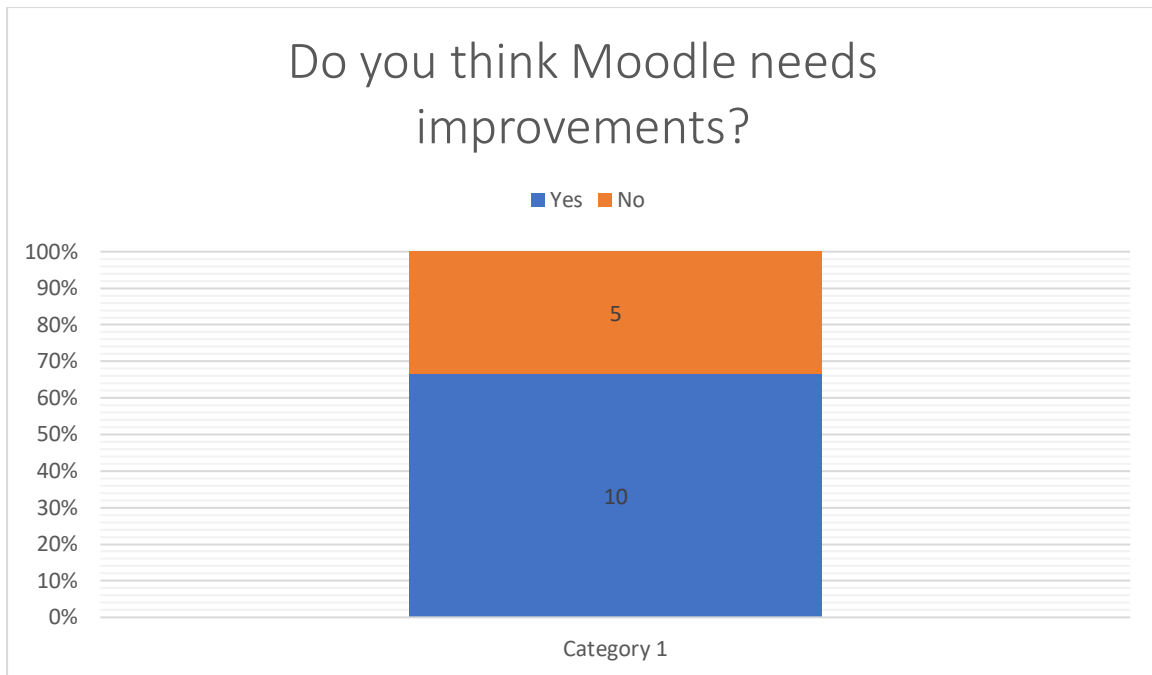


Fig.3.

When question if the platform needs improvement most of the student 68% was agreed with the statement and the 32% wasn't agreed. (Fig.3).

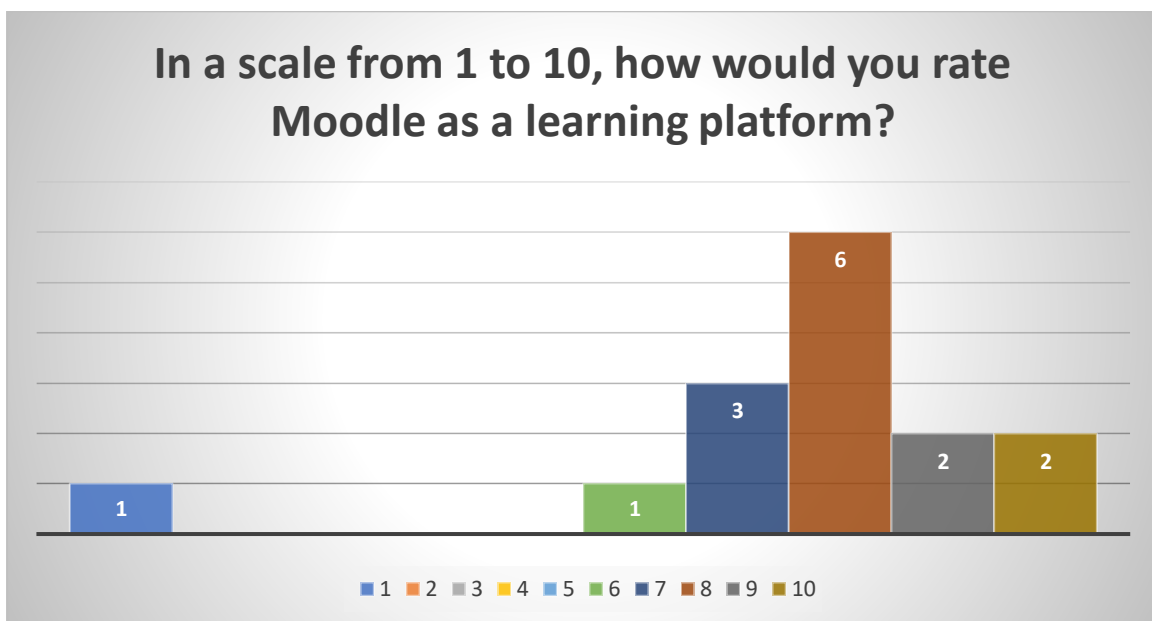


Fig.4.

When questioned to students how they would rate Moodle as a learning platform, most of the students answered 8 (40%), 7 (20%), 9 (13.33%), 10 (13.33%), 6 (6.66%) and 1 (6.66%). (Fig.4).

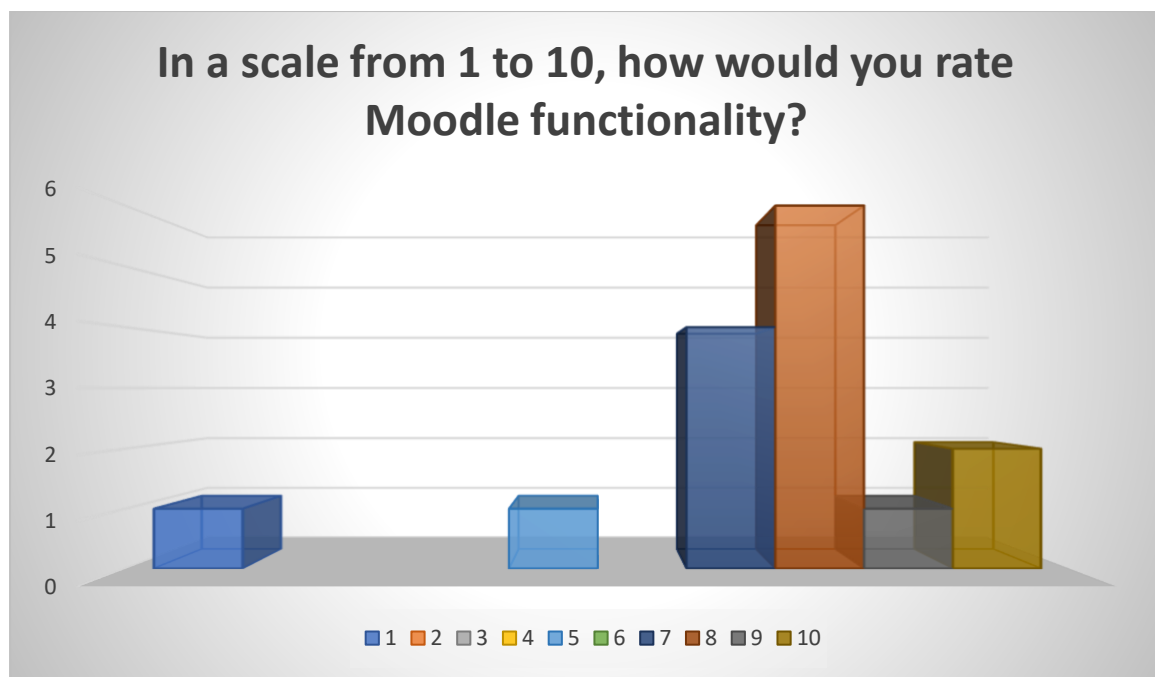


Fig.5.

When questioned to students how they would rate Moodle functionality, most of the students answered 8 (40%), 7 (26.66%), 10 (13.33%), 6 (6.66%), 5 (6.66%) and 1 (6.66%). (Fig.5).

6.2 Secondary Data Analysis

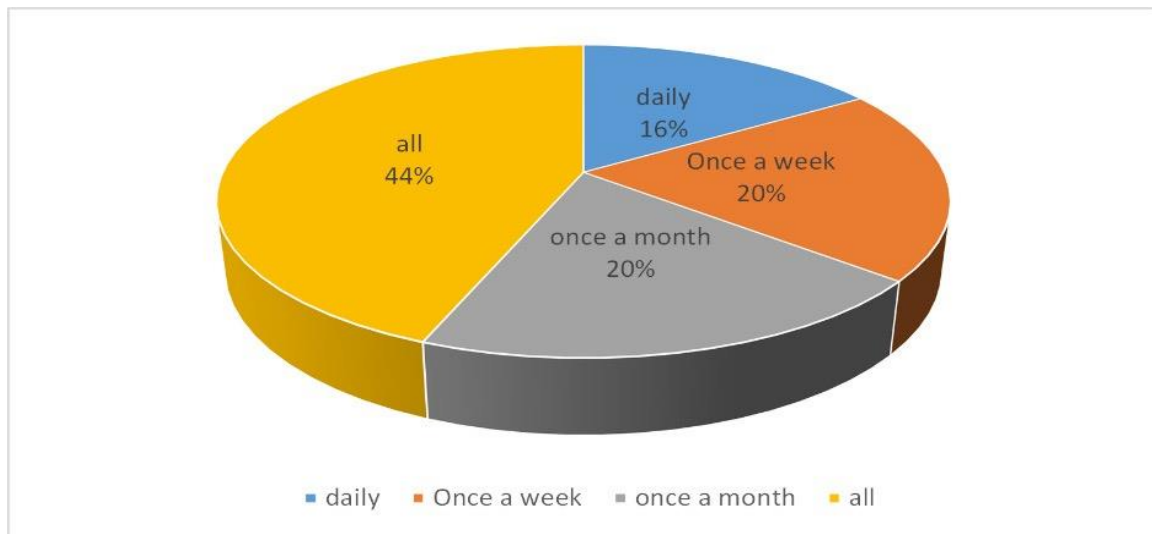


Fig.6. Frequency to use of the platform (Moodle). (Gabriela, C. O., 2014).

This represents the question in 'A Study about Using E-learning Platform in University Teaching Process' a literature I reviewed. This chart is to compare my question (Fig.1). In this case comparing with my questionnaire, I can see that there is a difference between the results. But it can be caused by different factors, like the student effort to learn or the involvement from teachers. I even need to say that my sample size was much smaller than the above. (Fig.6).

6.3 Results

After the research results, I can say that many of the students use the platform frequently and find it practical. Most of the students in a scale from 1 to 10 rated an overall of 7 to 10 Moodle as a learning platform and its functionality. But some improvements are still required, as an example the online library.

6.4 Discussion

After analysing the responses received from students, I can make the following statements:

- The students use frequently the platform, but they still have a limited awareness of the system.
- The students find it practical, but the in-presence classes are still more efficient.
- Most of the students think it does not need improvements and the functionality is constant.

7. Conclusion

Confronting the primary and secondary data I can notice the differences between them. In the University of Wales TSD, the students use more the platform even though is a small sample to refer to. Therefore, the secondary data shows me that the impact of Virtual learning Environment was different for other students, depending on their willing to learn. The methodology used allowed the research to come from different points of view, teachers who are willing to learn but don't have enough resources, and students accepting the challenge but still preferring the real in presence classes.

8. Reference List

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9. Appendix 1

In-Class exercise: Questionnaire Design

Student Name: Marco Gizzi Student ID: 2117750
Module Name: Digital Skills and Research Methods (SFTW) Group: 2

Aim: This exercise is aimed to help you in your questionnaire design. Please note, you need to use this questionnaire to conduct a survey which is also one of the important parts of your research report. You will also need to attach this questionnaire to your final report.

Please write down your questions that you are going to use for your primary data collection. Try to have different types of questions such as **open-ended** questions and **close-ended** questions like (YES/NO) question (s), multiple choice question(s) and Likert-scale question (s). All together you need to make **6-10 questions** of different types for data collection.

Question 1:

How often do you use Moodle?

- a) Rarely
- b) Occasionally
- c) Frequently
- d) Often

Question 2:

Do you find Moodle practical?

Yes / No

Question 3:

Do you think Moodle needs improvements?

Yes / No

Question 4:

Could you state one good aspect about Moodle?

Question 5:

Could you state one bad aspect about Moodle?

Question 6:

In a scale from 1 to 10, how would you rate Moodle as a learning platform?

Question 7:

In a scale from 1 to 10, how would you rate Moodle functionality?

For any further questions, please list them below.

10. Appendix 2

Q1: How often do you use Moodle?	
a) Rarely	1
d) Often	3
c) Frequently	9
b) Occasionally	2

Q2: Do you find Moodle practical?	
Column1	Column2
Yes	No
14	1
Q3: Do you think Moodle needs improvements?	
Column1	Column2
Yes	No
10	5

Q4: Could you state one good aspect about Moodle?
Most of the people answered that is easy to use with good tools like Online Library and that it can be accessed anywhere.

Q5: Could you state one bad aspect about Moodle?
Most of the people answered that it can be slow in downloading mostly on Library sources.

Q6: In a scale from 1 to 10, how would you rate Moodle as a learning platform?

1 person said	1
1 person said	6
3 people said	7
6 people said	8
2 people said	9
2 people said	10

Q7: In a scale from 1 to 10, how would you rate Moodle functionality?

1 person said	1
1 person said	5
4 people said	7
6 people said	8
1 person said	9
2 people said	10