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THE IMPACT OF VIRTUAL LEARNING ENVIRONMENT

Moodle as a VLE

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Abstract

The purpose of this study is to demonstrate the effects of our ever-growing dependence on technology and how this technology impacts our learning environment and methods of studying. Moodle is one such virtual learning environment and we are going to be using it as an example for this research. Several questions posed by this research will be answered by using different methods and research techniques.

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Introduction

Virtual Learning Environment or VLE for short is an online-based learning environment used in higher education and developed with functionality and utility in mind so that it can accommodate different learning styles and not just transfer the classroom online but work parallel to it. Its purpose is to further expand learning methods and make studying more productive and time-saving. It allows students to access materials and other useful tools like calendars, email, curriculum, syllabus, communication channels, course content, etc. (Sam, 2020)

Rationale

Human society is evolving constantly and technology is becoming an ever so important part of our everyday lives and it has become an inseparable part of everything we do. With this research paper, I am going to prove that virtual learning environments have started changing one of humanity's most important traits, learning. And with the passing of time, it will be an even bigger part of the way we study.

Research Objective

The objective of this research is to provide answers to the three questions I posed below:

- Has society shifted towards a digital learning style or does it prefer traditional and already established methods?
- What are the advantages that a VLE provides to the learners compared to traditional learning?
- What does the future hold for VLEs and does society believe this technology is here to stay?

Literature Review

This literature review will provide support for the establishment of the conclusion by providing examples and data from other researchers on topics associated with the intended purpose of this research. A paragraph summary will serve as the foundation for the answers to the questions posed by this research providing additional support to the validity of the societal shift towards the use of technology in learning, the advantages of the technological shift in learning and an analysis of its future growth.

Shift towards the use of technology in the learning environment

It is difficult to pinpoint the exact growth percentage of VLEs since their initial implementation before they were assigned a market-changing value but using a study conducted by edutechnica at the beginning of 2013 (Kroner, 2014) and still ongoing (edutechnica, 2021), we can extrapolate from the information and statistical analysis provided by their research that an ongoing trend of VLE

adaptation by different institutions in anglophone countries has arisen and more and more will start implementing it due to the advantages it has over traditional in-classroom only type of education. Additional data can be extracted for the ongoing growth and dependence on this type of educational style from Scott L. Walker's thesis on "Development and Validation of an Instrument for Assessing Distance Education Learning Environments in Higher Education: The Distance Education Learning Environments Survey (DELES)" where he describes it by giving several examples of the United States Army and Australian universities gradually implementing the method. (Walker, 2003)

Advantages of the technological shift

Putting on a scale both advantages and disadvantages the advantages are an undisputed winner since they are so many compared to the few disadvantages that a VLE has. Several advantages, pointed out by Michael Van Beek in an article, like the variety of courses, language variety, bypassing personal insecurities born from peer pressure, access to the same materials no matter your social or financial stature add to the list of many (Beek, 2012). Other advantages defined by Sina Walleit from a more recent online article from 2021 are the extensive tracking of data that allows educators to better assess the effects of their teaching methods, automated alerts on student submissions or events that require immediate attention, centralised storage of learning materials, report and analytical tools that can be used for the improvement of the learning experience, remote-friendly-work-transition that makes it easier for users to adapt faster to an online or remote only environment, assignment submission and assessment tools, integration with other databases and systems which allows for easier and faster work process, etc. (Walleit, 2021). For the direct benefits of using this type of learning, we can examine an article written by Victoria Puzhevich pointing out several of them. Being flexible and allowing the learner to have permanent access gives him the ability to study at his convenience can result in saving a lot of time. Accessibility gives the opportunity to regular, disabled or foreign students to access the content from anywhere or at any time. In addition, it makes it possible to study from top universities cheaper since you don't have to pay campus fees or foreign students no longer have to relocate to a different country (Puzhevich, 2020).

Future growth of VLEs

A study conducted by the Organisation for Economic Co-operation and Development shows that in 2017 three in four 16-74-year-olds use the internet to connect with others, look up information or use other online services (OECD, 2019). A correlation between this growing trend of becoming more digitised and using internet-based services compared to their traditional equivalent can be noticed in the statistics provided by Max Roser, Hannah Ritchie and Esteban Ortiz-Ospina on the Internet usage growth from 1990 to 2020 (Roser, Ritchie, & Ortiz-Espina, 2015). Additional support for the theory that VLEs will become a bigger part of our life is offered by Guy Posey, Thomas Burgess, Marcus Eason, Yawna Jones in a paper they have written, claiming that half of the learning experience will take place online catering more to the needs of the students than those of the faculty and also the cheaper methods provided by internet services such as teleconferences and the widespread access to personal computers or smartphones (Posey, 2010). They proceed to provide evidence of their claims by summarising data from other researchers. Further investments and implementation of VLEs have been made due to the global COVID-19 pandemic forcing people to isolate themselves and start working or studying from home. Even after the pandemic experts predict that online learning will remain part of our society (Li & Lalani, 2020).

Research Methodology

In order to carry out this research, several methods were used to reach a more conclusive resolution to its purpose. Part of the research uses filtered down information from websites, research papers and online articles dealing with the same topic and found on the world wide web. For that part of this research paper was used data from a quantitative type of approach sources. Another method used is a qualitative approach by creating a survey that had the three main questions broken down into thirteen questions that will examine different angles of the essence of the original three. The online survey was created with Google Forms and disseminated among consenting participants from a target group. No personal data was collected and all data collected is in accordance with the General Data Protection Regulation. The survey data will provide further evidence by presenting it in a form of pie charts, bar charts and a spreadsheet compilation of data. This data in its raw form can be located in the Appendixes section. All data will be destroyed following the submission of this research.

Analysis & Results

During the period of two weeks, an online survey was conducted by gathering data from a target group comprised of gender, cultural, religious and age-diverse participants. Twenty-five out of twenty-six participants answered the thirteen questions in the survey.

To answer the first question posed by this research, “Has society shifted towards a digital learning style or does it prefer traditional and already established methods?” we can examine the data from questions one through three (for charts please see appendix 1). When asked what type of education do the participants prefer (Q1) 60% answered that they would attend in-person, 20% would attend online and 20% prefer a combination of both. To understand why a bigger percentage chose in-person a second question was posed (Q2) if the group has used Moodle (VLE) before and 64% answered that they haven’t and 36% said that they have which as a result is closely tied to the results of the first question confirming the outcome. But in order to have a clearer picture of if there is a shift in societal preference towards a digital method of learning a third question asking if they prefer using Moodle or a traditional library (Q3) a staggering 80% of the participants chose VLEs to the 20% that chose a traditional method.

Questions five to ten are addressing the second question posed by this research, “What are the advantages that a VLE provides to the learners compared to traditional learning?”. The three main advantages of VLEs (Q10) according to the target group are: “Accessing Lectures and Materials Anytime/Anywhere” = 19 votes, “Timesaving” = 16 votes, “Possibility of Submitting Assignments From Anywhere” = 12 votes. The most picked category (Q10) is dependent on data from questions seven (Q7) and eight (Q8) which point that access to the modules and library resources is the most important advantage for the participants. The second most picked category (Q10) is supported by question five (Q5) pointing that 44% use Moodle for 1-2 hours per week, 36% use it 3-4 hrs p/w, 8% use it for 4-6 hrs p/w and 12% use it for 6-8 hrs p/w, and question six (Q6) shows us that 70.8% of those hours are spent during the weekend and 29.2% use it during weekdays.

Providing data for the third and last question posed by this research, “What does the future hold for VLEs and does society believe this technology is here to stay?”, were asked questions four, eleven, twelve and thirteen of the online survey. Of the target group, 28% use the VLE very often, 56% use it often and the other 16% use it rarely (Q4). 68% of them find it very important to their study and 32% find it slightly useful (Q11).

Ten of the participants which are 40% of the entirety of the group would rate their experience with the platform “Very good, six of them or 24% would rate it “ Good”, eight participants or 32% found their experience both good and bad and voted for “Average” and only 1 person or 4% of the total found their experience to be “Bad” (Q12). The opinion of the target group if the usage of a VLE due to the current global COVID-19 pandemic is shown in the last question in the online survey (Q13) in which slightly more than half of the participants, which is 52%, believe that it’s “Very Likely”, 28% believe it’s “Likely” for the usage to grow and the remaining 20% are “Neutral” and don’t expect any changes.

Conclusion

By cross-examining data provided by our primary and secondary research analysis, we can prove that society is slowly shifting towards a more digital approach to learning methods due to the constant growth of institutions adopting this style of learning and both learners and teachers/lecturers are also slowly but progressively moving towards it.

In the online survey and the examined data everything points that despite several disadvantages, the advantages clearly outweigh them and qualities like saving time and being available and accessible, which are currently one of the most sought after traits, clearly tip the scales in favour of VLEs.

Due to ongoing attempts by our society to be cost-effective and other factors like the global COVID-19 pandemic we can assume that VLEs will be part of the future methods of education. In addition, the growing numbers of institutions and people that are using this method can only cement our projections that VLEs are here to stay.

By providing data to answer these three fundamental questions we have proven that VLEs are clearly impacting our society and this impact brings positive change by saving us time, money and allowing us to be more productive. All of those factors contribute in a positive manner to many fields and the more useful a tool is the more use it will see.

References

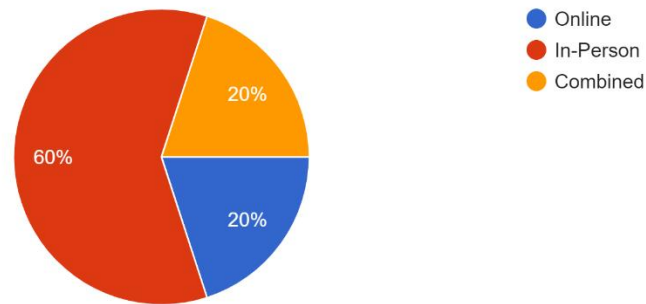
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Appendices

Appendix 1: Survey Charts

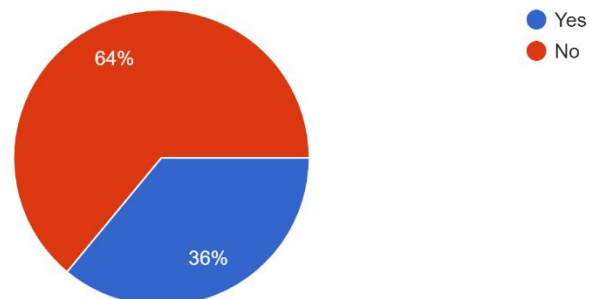
1. What method of learning do you prefer?

25 responses



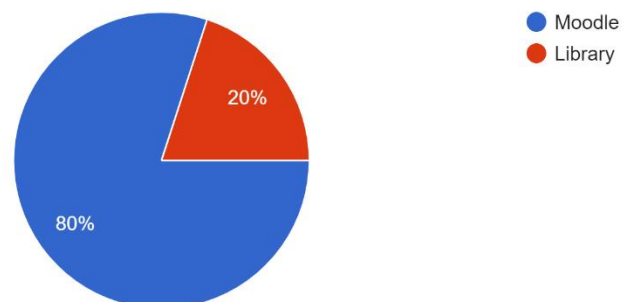
2. Have you ever used Moodle before?

25 responses



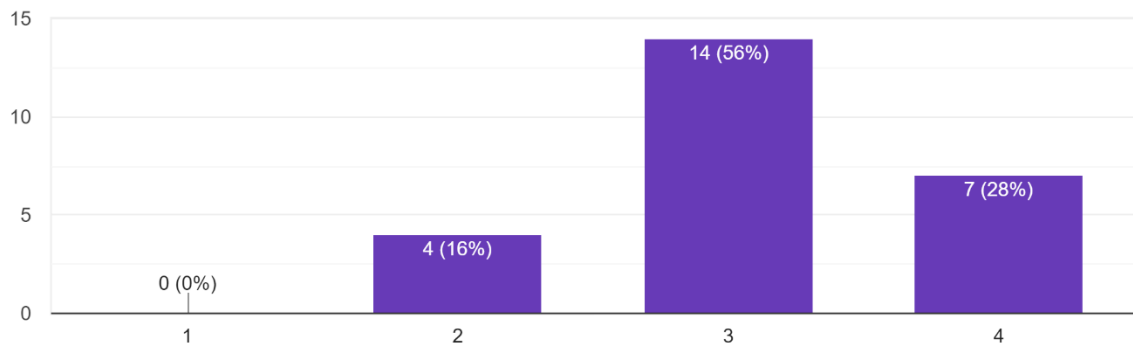
3. Do you prefer using Moodle or the library to get your resources?

25 responses



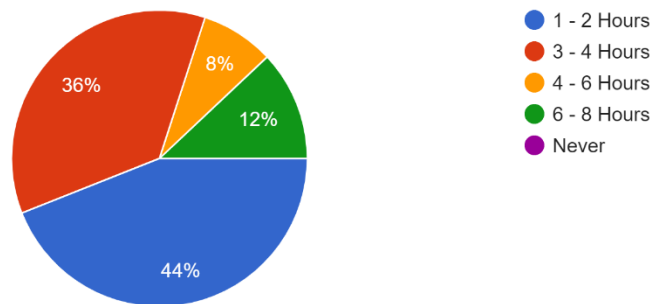
4. How often do you use Moodle? (1=Never, 2=Rarely, 3=Often, 4=Very Often)

25 responses



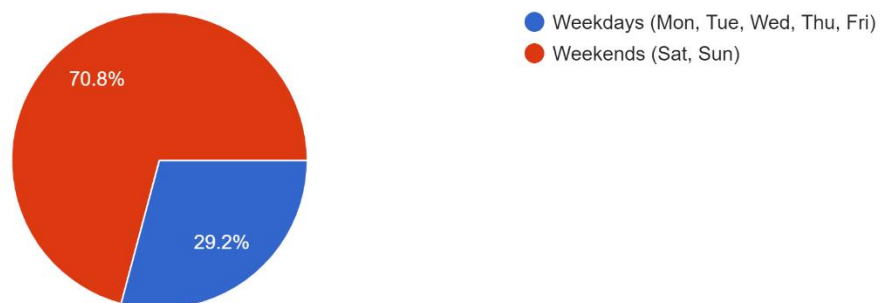
5. How many hours p/w do you use Moodle?

25 responses



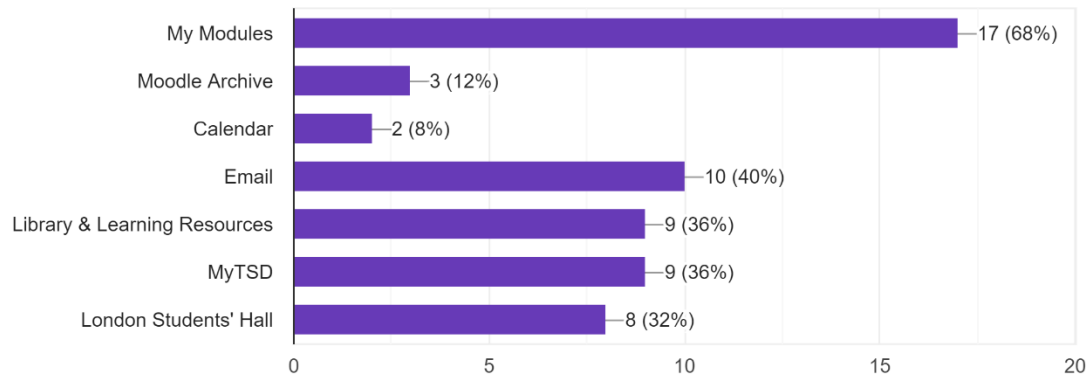
6. Do you access Moodle more often during weekdays or the weekend?

24 responses



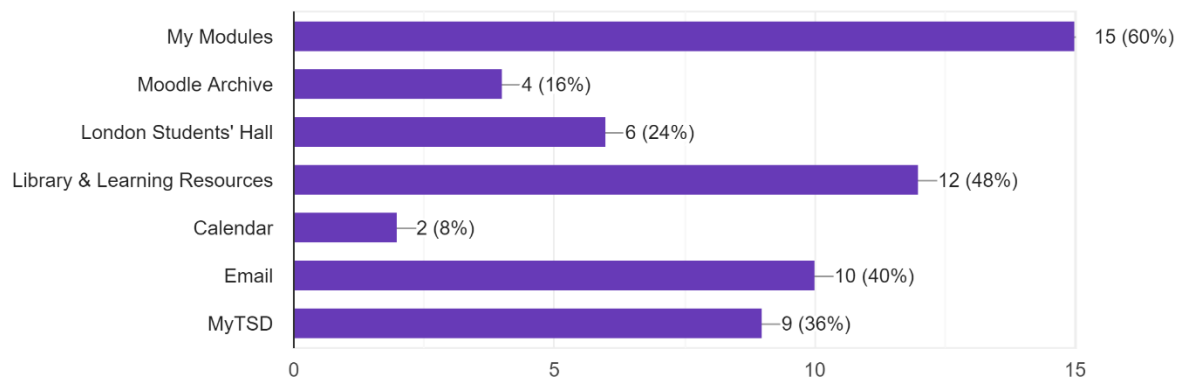
7. Which Moodle functions do you use?

25 responses



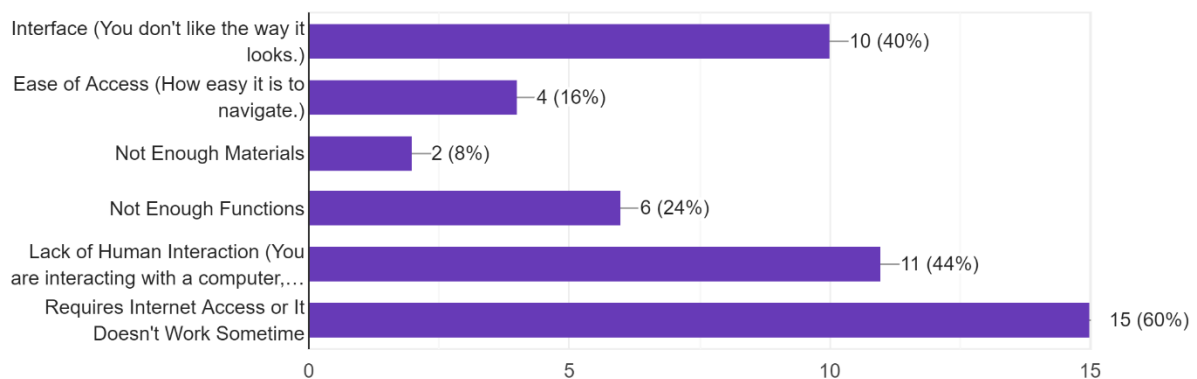
8. Which Moodle functions do you find the most useful? (SELECT ONLY 3)

25 responses



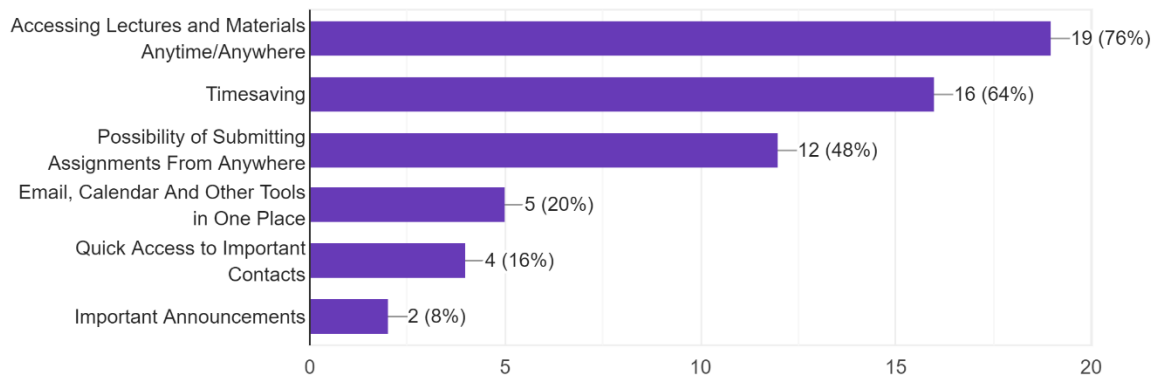
9. What do you dislike about Moodle? (SELECT ONLY 3)

25 responses



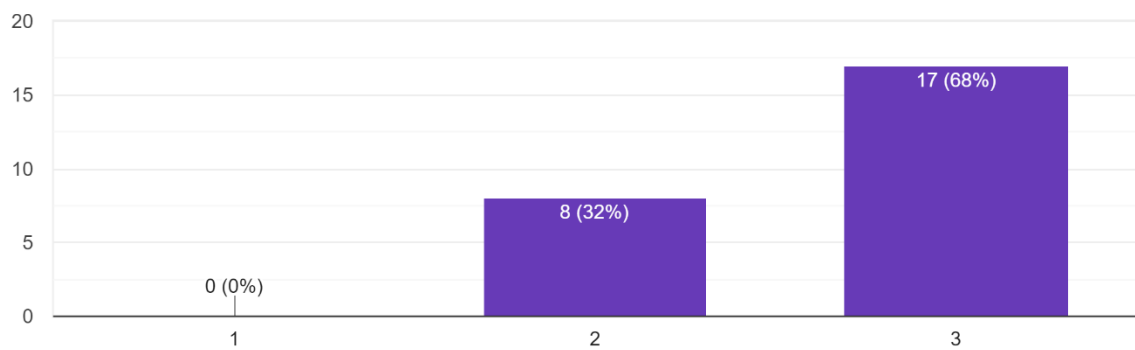
10. What are the most important advantages in your opinion that Moodle offers compared to using other methods? (SELECT ONLY 3)

25 responses



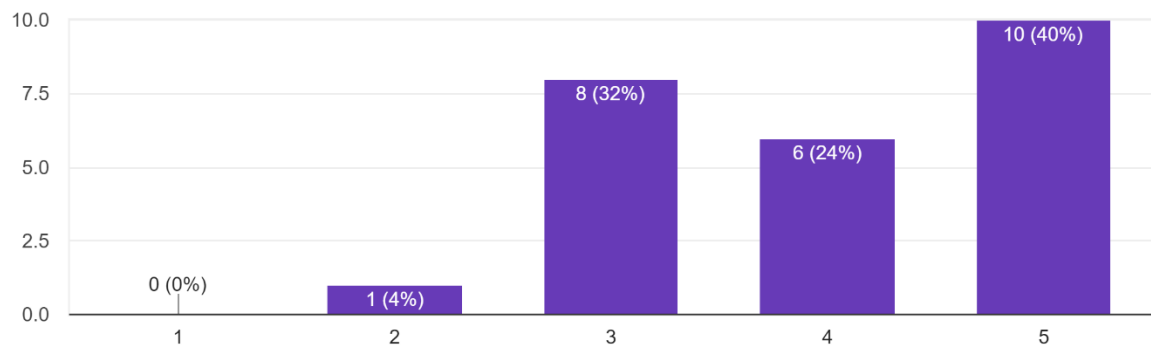
11. How important is Moodle for your education? (1=Not Important At All, 2=Slightly Important, 3=Very Important)

25 responses



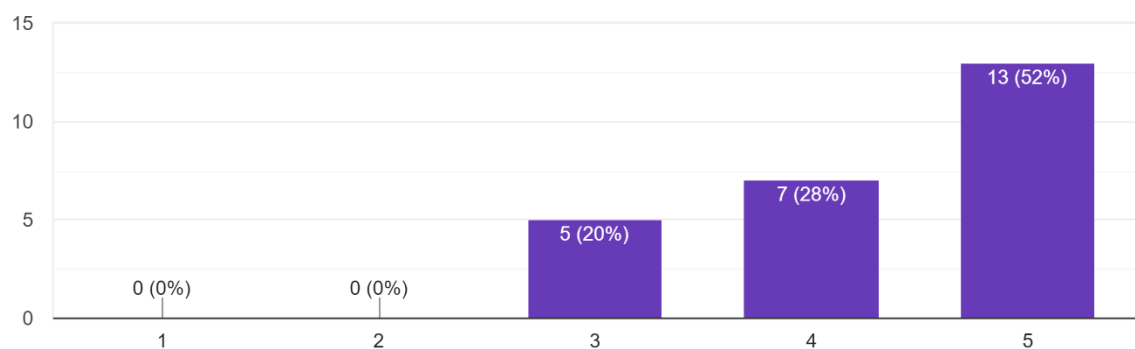
12. How would you rate your experience using Moodle? (1=Very Bad, 2=Bad, 3=Average, 4=Good, 5=Very Good)

25 responses



13. How likely is it in your opinion that schools/universities will start using Moodle as a VLE, because of the ongoing Covid-19 pandemic? (1=Very Unlikely, 2=Unlikely, 3=Neutral, 4=Likely, 5=Very Likely)

25 responses



Appendix 2: Survey Results Spreadsheet

Timestamp	1. What method of learning do you prefer?	2. Have you ever used Moodle before?	3. Do you prefer using Moodle or the library to get your resources?	4. How often do you use Moodle? (1=Never, 2=Rarely, 3=Often, 4=Very Often)	5. How many hours p/w do you use Moodle?	6. Do you access Moodle more often during weekdays or the weekend?
12/5/2021 14:01:59	Combined	No	Moodle	3	3 - 4 Hours	Weekdays (Mon, Tue, Wed, Thu, Fri)
12/5/2021 14:17:56	In-Person	No	Moodle	3	3 - 4 Hours	Weekends (Sat, Sun)
12/5/2021 14:18:48	Combined	No	Moodle	2	1 - 2 Hours	Weekends (Sat, Sun)
12/5/2021 14:21:43	In-Person	No	Library	3	1 - 2 Hours	Weekends (Sat, Sun)
12/5/2021 14:27:47	Online	No	Moodle	3	3 - 4 Hours	Weekends (Sat, Sun)
12/5/2021 14:29:11	Online	Yes	Moodle	3	3 - 4 Hours	Weekdays (Mon, Tue, Wed, Thu, Fri)
12/5/2021 14:49:10	Online	Yes	Moodle	2	3 - 4 Hours	Weekends (Sat, Sun)
12/5/2021 14:58:14	In-Person	No	Moodle	4	6 - 8 Hours	Weekends (Sat, Sun)
12/5/2021 14:58:52	In-Person	Yes	Moodle	4	1 - 2 Hours	Weekends (Sat, Sun)
12/5/2021 17:31:11	Online	No	Moodle	3	3 - 4 Hours	Weekdays (Mon, Tue, Wed, Thu, Fri)
12/5/2021 19:18:29	Combined	No	Library	4	4 - 6 Hours	Weekends (Sat, Sun)
12/5/2021 19:25:23	In-Person	Yes	Library	4	4 - 6 Hours	Weekdays (Mon, Tue, Wed, Thu, Fri)
12/5/2021 20:35:20	In-Person	No	Moodle	3	3 - 4 Hours	Weekends (Sat, Sun)
12/5/2021 21:21:34	In-Person	No	Library	2	1 - 2 Hours	Weekends (Sat, Sun)
12/6/2021 0:33:33	Combined	Yes	Moodle	4	3 - 4 Hours	Weekends (Sat, Sun)
12/6/2021 18:52:48	In-Person	Yes	Moodle	3	1 - 2 Hours	Weekdays (Mon, Tue, Wed, Thu, Fri)
12/7/2021 6:18:50	In-Person	No	Moodle	3	3 - 4 Hours	Weekends (Sat, Sun)
12/7/2021 19:38:07	In-Person	No	Library	3	1 - 2 Hours	Weekends (Sat, Sun)
12/8/2021 17:02:36	In-Person	Yes	Moodle	3	1 - 2 Hours	Weekends (Sat, Sun)
12/10/2021 17:04:48	In-Person	No	Moodle	3	6 - 8 Hours	Weekends (Sat, Sun)

12/11/2021 14:47:56	Online	Yes	Moodle	3	1 - 2 Hours	Weekdays (Mon, Tue, Wed, Thu, Fri)
12/11/2021 20:07:58	Combined	No	Moodle	3	1 - 2 Hours	Weekdays (Mon, Tue, Wed, Thu, Fri)
12/11/2021 20:39:30	In-Person	Yes	Moodle	2	1 - 2 Hours	Weekends (Sat, Sun)
12/12/2021 11:57:02	In-Person	No	Moodle	4	1 - 2 Hours	
12/16/2021 17:55:04	In-Person	No	Moodle	4	6 - 8 Hours	Weekends (Sat, Sun)

7. Which Moodle functions do you use?	8. Which Moodle functions do you find the most useful? (SELECT ONLY 3)	9. What do you dislike about Moodle? (SELECT ONLY 3)
London Students' Hall	My Modules	Not Enough Functions, Lack of Human Interaction (You are interacting with a computer, instead of a person.), Requires Internet Access or It Doesn't Work Sometime
Email	Calendar, Email, MyTSD	Requires Internet Access or It Doesn't Work Sometime
My Modules, MyTSD	MyTSD	Requires Internet Access or It Doesn't Work Sometime
My Modules, Library & Learning Resources	My Modules, Library & Learning Resources, MyTSD	Interface (You don't like the way it looks.)
MyTSD	London Students' Hall, Library & Learning Resources, MyTSD	Lack of Human Interaction (You are interacting with a computer, instead of a person.)
MyTSD	My Modules, Moodle Archive, Library & Learning Resources, MyTSD	Ease of Access (How easy it is to navigate.), Lack of Human Interaction (You are interacting with a computer, instead of a person.), Requires Internet Access or It Doesn't Work Sometime
My Modules	My Modules	Not Enough Functions, Lack of Human Interaction (You are interacting with a computer, instead of a person.), Requires Internet Access or It Doesn't Work Sometime
My Modules, Moodle Archive, Email, Library & Learning Resources, MyTSD, London Students' Hall	My Modules, Library & Learning Resources, Email	Interface (You don't like the way it looks.), Lack of Human Interaction (You are interacting with a computer, instead of a person.), Requires Internet Access or It Doesn't Work Sometime

Email, Library & Learning Resources, London Students' Hall	London Students' Hall, Library & Learning Resources, Email	Interface (You don't like the way it looks.), Lack of Human Interaction (You are interacting with a computer, instead of a person.), Requires Internet Access or It Doesn't Work Sometime
My Modules, MyTSD	My Modules, MyTSD	Interface (You don't like the way it looks.)
My Modules, Library & Learning Resources, London Students' Hall	Library & Learning Resources	Requires Internet Access or It Doesn't Work Sometime
My Modules, Library & Learning Resources, London Students' Hall	My Modules, Library & Learning Resources, Email	Requires Internet Access or It Doesn't Work Sometime
My Modules	My Modules	Not Enough Functions
MyTSD	Library & Learning Resources, Email, MyTSD	Interface (You don't like the way it looks.), Not Enough Functions, Requires Internet Access or It Doesn't Work Sometime
My Modules, Email, Library & Learning Resources	My Modules, London Students' Hall, Library & Learning Resources	Interface (You don't like the way it looks.), Not Enough Materials, Requires Internet Access or It Doesn't Work Sometime
My Modules, MyTSD	My Modules	Ease of Access (How easy it is to navigate.)
Email	Moodle Archive, Calendar, Email	Ease of Access (How easy it is to navigate.), Not Enough Functions, Lack of Human Interaction (You are interacting with a computer, instead of a person.)
My Modules, Email, London Students' Hall	London Students' Hall, Email, MyTSD	Not Enough Materials, Lack of Human Interaction (You are interacting with a computer, instead of a person.), Requires Internet Access or It Doesn't Work Sometime
My Modules, Moodle Archive, Calendar, Email, Library & Learning Resources, MyTSD, London Students' Hall	My Modules	Ease of Access (How easy it is to navigate.), Lack of Human Interaction (You are interacting with a computer, instead of a person.), Requires Internet Access or It Doesn't Work Sometime
My Modules, Moodle Archive, Library & Learning Resources	My Modules, Moodle Archive, Library & Learning Resources	Interface (You don't like the way it looks.)
My Modules	My Modules	Interface (You don't like the way it looks.)
My Modules, Calendar, Email, London Students' Hall	Moodle Archive, London Students' Hall, Library & Learning Resources, MyTSD	Not Enough Functions, Lack of Human Interaction (You are interacting with a computer, instead of a person.), Requires Internet Access or It Doesn't Work Sometime
Email	Email	Lack of Human Interaction (You are interacting with a computer, instead of a person.)

My Modules	My Modules, London Students' Hall, Email	Interface (You don't like the way it looks.), Requires Internet Access or It Doesn't Work Sometime
My Modules, Email, Library & Learning Resources, MyTSD	My Modules, Library & Learning Resources, Email	Interface (You don't like the way it looks.)

10. What are the most important advantages in your opinion that Moodle offers compared to using other methods? (SELECT ONLY 3)	11. How important is Moodle for your education? (1=Not Important At All, 2=Slightly Important, 3=Very Important)	12. How would you rate your experience using Moodle? (1=Very Bad, 2=Bad, 3=Average, 4=Good, 5=Very Good)	13. How likely is it in your opinion that schools/universities will start using Moodle as a VLE, because of the ongoing Covid-19 pandemic? (1=Very Unlikely, 2=Unlikely, 3=Neutral, 4=Likely, 5=Very Likely)
Accessing Lectures and Materials Anytime/Anywhere, Timesaving, Email, Calendar And Other Tools in One Place	3	5	5
Timesaving, Email, Calendar And Other Tools in One Place, Quick Access to Important Contacts	3	4	4
Accessing Lectures and Materials Anytime/Anywhere	2	3	3
Accessing Lectures and Materials Anytime/Anywhere	2	3	4
Accessing Lectures and Materials Anytime/Anywhere, Timesaving, Possibility of Submitting Assignments From Anywhere	3	5	5
Accessing Lectures and Materials Anytime/Anywhere, Timesaving, Possibility of Submitting Assignments From Anywhere	3	4	4
Accessing Lectures and Materials Anytime/Anywhere, Timesaving, Possibility of Submitting Assignments From Anywhere	3	5	5

Accessing Lectures and Materials Anytime/Anywhere, Timesaving, Possibility of Submitting Assignments From Anywhere	3	5	5
Accessing Lectures and Materials Anytime/Anywhere, Timesaving, Possibility of Submitting Assignments From Anywhere	3	3	5
Timesaving	2	3	5
Accessing Lectures and Materials Anytime/Anywhere, Possibility of Submitting Assignments From Anywhere, Quick Access to Important Contacts	3	5	4
Accessing Lectures and Materials Anytime/Anywhere, Possibility of Submitting Assignments From Anywhere, Quick Access to Important Contacts	3	5	5
Accessing Lectures and Materials Anytime/Anywhere	3	4	3
Accessing Lectures and Materials Anytime/Anywhere, Timesaving, Possibility of Submitting Assignments From Anywhere	2	3	5
Accessing Lectures and Materials Anytime/Anywhere, Timesaving, Possibility of Submitting Assignments From Anywhere	3	4	5
Accessing Lectures and Materials Anytime/Anywhere	2	3	4
Accessing Lectures and Materials Anytime/Anywhere	3	4	3
Email, Calendar And Other Tools in One Place, Quick Access to Important Contacts, Important Announcements	2	3	3

Timesaving, Possibility of Submitting Assignments From Anywhere, Email, Calendar And Other Tools in One Place	2	2	3
Accessing Lectures and Materials Anytime/Anywhere, Timesaving	3	5	5
Accessing Lectures and Materials Anytime/Anywhere	2	5	4
Accessing Lectures and Materials Anytime/Anywhere, Timesaving, Possibility of Submitting Assignments From Anywhere	3	5	5
Timesaving	3	3	5
Timesaving	3	4	4
Accessing Lectures and Materials Anytime/Anywhere, Timesaving, Possibility of Submitting Assignments From Anywhere, Email, Calendar And Other Tools in One Place, Important Announcements	3	5	5