

BMSW4003 : Digital Skills and Research Methods- *A research on
the impact of Virtual Learning Environment (VLE) – Moodle on
students' learning experience*

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Table of Contents

1. Introduction	3
2. Research Aim	3
3. Primary data analysis	3
3.1 Questionnaire and responses	3
3.2 Analysis	4
4. Secondary data analysis	8
5. Conclusion	10
Reference List	11

1. Introduction

The growth of technology has contributed to all the major sectors throughout the world. It has also made a major contribution to the educational sector in terms of the virtual learning environment. The primary purpose of it is to provide more effective services to the learners and help them to achieve their learning objectives easily. However, there is a necessity of understanding the actual impact of heat on the performance and mindset of individual learners. It is for identifying if they are really enjoying the benefits of a virtual learning environment or if it is acting in the other way (Mogus et al. 2012). There is a requirement for both primary and secondary data analysis for getting the best possible information for this research. This research report consists of primary responses of some chosen sample populations and secondary sources as well for analysis.

2. Research Aim

The aim of the research is to find out the impact of Virtual Learning Environment (VLE) – Moodle on students' learning experience.

3. Primary data analysis

3.1 Questionnaire and responses

Total number of respondents: 10

Question 1: Do you think the implementation of a virtual learning environment is necessary for providing an effective learning experience to the learners?

Yes	No
8	2

Question 2: According to you, which one of the following advantages of VLE you have liked the most during your learning experience?

Transparent goal setting	Proactive communication	Real-time feedback plan	Time and flexibility
2	4	1	3

Question 3: Have you found any weaknesses in the virtual learning environment?

Yes	No
5	5

Question 4: What is the weakest area of the virtual learning environment according to you?

Sense of isolation	Possibilities of technical issues	Strong requirement of self-discipline	Strong requirement of time management
4	2	1	3

Question 5: Which of the following benefits/harms have you received from VLE as of now?

Improvement of self-discipline	Improvement of time management skills	Lack of intention and confidence towards study	Lack of concentration during classes
2	3	3	2

3.2 Analysis

The first question is regarding the identification of awareness of VLE among the learners. It is to check if they are really aware of the definition of it and the purpose behind the implementation of it. 8 out of 10 respondents have said that the implementation of a virtual learning environment has positively impacted their learning. This response will allow this research to get a context behind the further analysis and evaluation. There is always the possibility of getting negative responses because of different perceptions of different learners. It also is not that the educational institution is able to keep its learners aware about the specific components and features of VLE. Without this awareness, it is not possible to get positive comments from the learners.

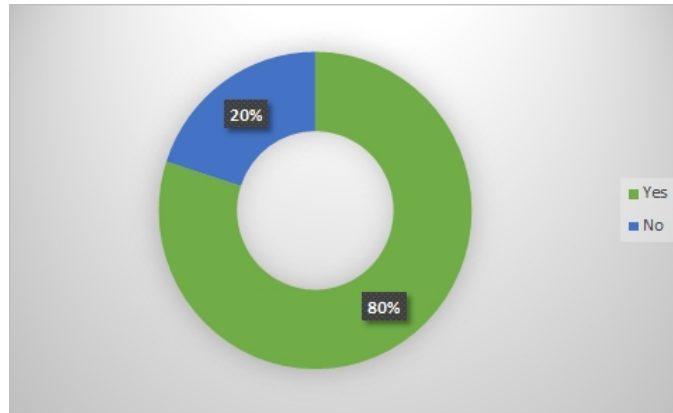


Figure 1: Effectiveness of VLE on the learning experience of learners

(Source: Self-created in Excel)

The second question is regarding the identification of advantages that the learners are going to receive through the application of VLE. The maximum number of responses is for the options of proactive communication and flexibility. It means the learners get better opportunities to communicate with each other and it is also flexible for making educational decisions for them. This benefit is expected as it is one of the primary purposes of VLE. The learners are able to ask questions to the teachers and other learners as per the requirement from anywhere. It makes it flexible and allows faster completion of learning activities. The other options like transparency in goal settings and real-time feedback are also beneficial for a few learners. If the learners get feedback in real-time through the digital medium then it creates opportunities for them to make faster improvements. In this way, there will be more possibilities for making gradual progress as per the curriculum of specific subject areas.

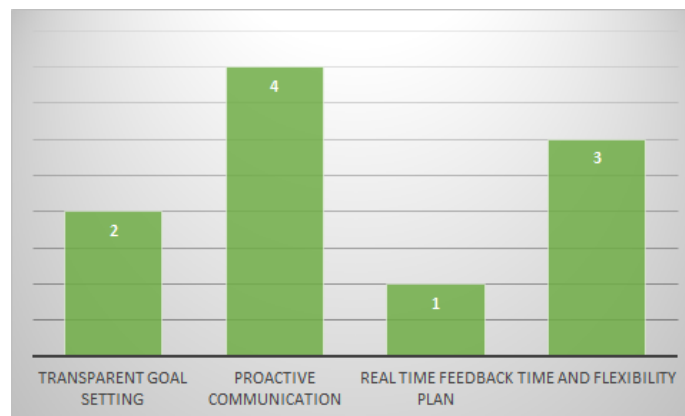


Figure 2: Advantages of VLE for the learners

(Source: Self-created in Excel)

The third question is for checking if the learners are aware of both positive and negative impacts of the virtual learning environment or not. This question has received 50-50 responses as five

of them have gone for 'Yes' and the rest five have gone for 'No'. In many cases, the students are not aware of the negative psychological impact on their behavioral characteristics as a learner. It also happens because of improper awareness. However, in this case, it is found that there is appropriate awareness and it is good for their development of them.

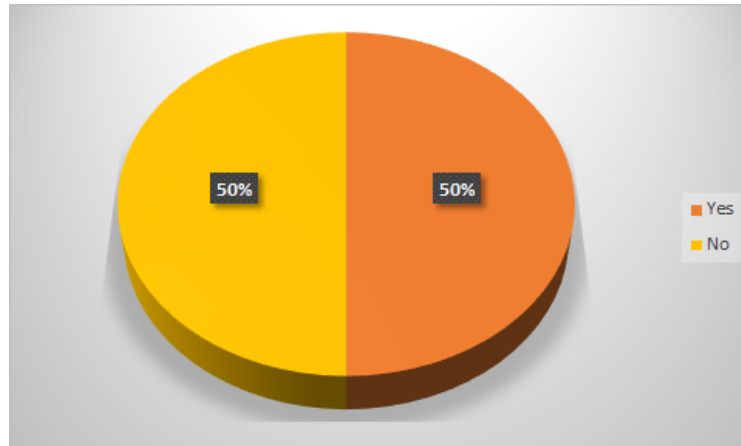


Figure 3: Awareness of the weaknesses of VLE

(Source: Self-created in Excel)

The following question is asked for checking the specific negative impacts that the learners have faced on their own. There are multiple options and the maximum responses have been received for the option of 'sense of isolation'. It is quite common for individuals to go through isolated learning experiences as virtual learning environments are not able to provide an equal experience similar to offline learning environments. The establishment of positivity is a little tougher here and it is not under the control of the teacher as well. Another negative impact is that there is not any specific time regarding specific classes in most cases. It causes problems regarding improper management of time. These two are the primary negative areas as per the responses of the learners. The remaining learners have also gone for the other options like technical issues, and lack of control over self-discipline. These two are good points as well as if the learners are immature then there are possibilities of negative impact on them because of the virtual learning environment. In VLE, there is not anyone to look over the student and it makes the student fearless. On the other hand, there are also continuous possibilities of technical issues and it also varies as per the system configuration of individual learners.

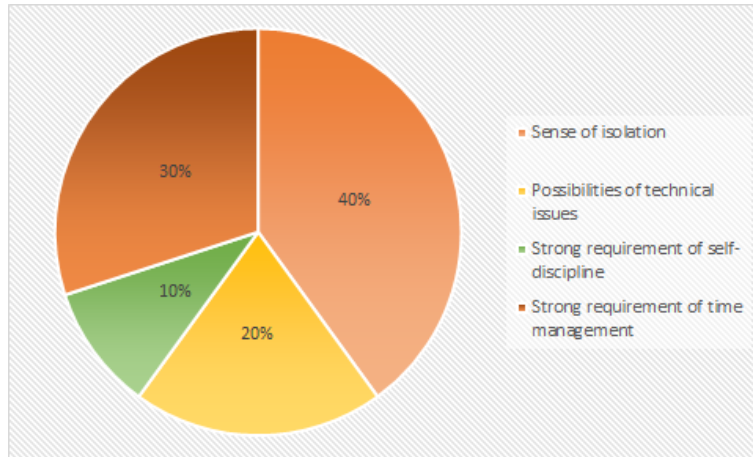


Figure 4: Weaknesses of VLE

(Source: Self-created in Excel)

This question is regarding the differentiation between the benefits and harms that are faced by the learners in their real-time VLE experience. The maximum number of learners have faced problems regarding lack of learning intention and lack of time management. These are the most genuine problems that learners can go through during online learning. It is because there is a necessity to have some principles and disciplines within a classroom. If the disciplines are not there then the learners will not have any pressure over their heads. It may impact their concentration towards learning and they can also face time management issues. The issue of time management is also because of improper discipline. It is because when the learners study from home then they include their personal activities within their schedule as well. It can create complexities within the time management strategy and the impact can be on their study as well.



Figure 5: Benefits or harms which are faced by the learners

(Source: Self-created in Excel)

4. Secondary data analysis

The application of VLE is visible in different learning areas throughout the world. There are different faculties like science, education, International programs, information technology, management etc. The application of this is maximum visible for information technology, International programs and management respectively (Psycharis et al. 2013). The remaining faculties like science and education also have quite similar applications but it is not that possible because of their practical activities. In the case of the first three, the implementation is very much possible as the learning activities are mostly based on a theoretical approach. It means the preferences of the learners will also vary according to their learning area. This information is visible in the research of Hettiarachchi and Wickramasinghe, (2016).

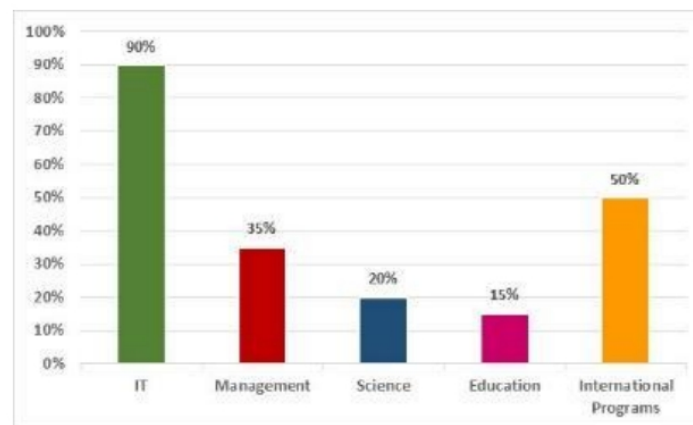


Figure 6: Willingness to use Moodle: across different faculties by students

(Source: Hettiarachchi and Wickramasinghe, 2016)

VLE Moodle also has the huge possibility of providing a positive impact on individual achievement. The following image is taken from the research of Barker and Gossman, (2013). It is found that the maximum number of students agree on the positive impact of the effect on them as a student. The positive responses are around 50% and the neutral responses are around 28%. It means it can be considered an effective strategy overall. The maximum number of the students also consider Moodle as an important and valuable tool for their studies. The responses are quite similar for all the questions and it means certain students have chosen specific options for all the questions. Around 43% positive responses to the question regarding more earnings from moodle. The question regarding the improvement of learning quality has also received 44% positive responses. In all the questions, the one area of worry is the section on neutral responses. There are near to 30% neutral responses for all the questions. It means there is still confusion among the learners regarding the features of the virtual learning

environment. If this confusion is there then they will not be able to get the maximum benefits of the implementation of VLE (O'Conno and Larkin, 2019). This responsibility belongs to the educational institution and the individual teachers to make the learners understand the appropriate utilization of the functions of VLE.

Answer Options	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree	Mean Score
8a. Moodle has a positive impact on my effectiveness as a student.	(13) 5.2%	(22) 8.9	(71) 28.6%	(123) 49.6%	(19) 7.7%	3.46
b. Moodle is an important and valuable aid to me in my studies.	(16) 6.5%	(16) 6.5%	(71) 28.6%	(120) 48.4%	(25) 10.1%	3.49
c. I learn more with Moodle than without it.	(18) 7.3%	(34) 13.7%	(72) 29.0%	(107) 43.1%	(17) 6.9%	3.29
d. Moodle improves the quality of my learning.	(13) 5.2%	(26) 10.5%	(88) 35.5%	(109) 44.0%	(12) 4.8%	3.33
Total Respondents as Percentage of response count	6%	10%	31%	46%	7%	

Figure 7: Possibilities of positive impact on individual achievement because of VLE - Moodle

(Source: Barker and Gossman, 2013)

There are multiple impacts of VLE in terms of psychological benefit and faster adoption of learning activities by the learners. It is found that the average score out of 10 for the positive impacts is more than 9 for all options. The learners confirm that a virtual learning environment is available to spread positive energy and it is also beneficial for preparing the course materials effectively. On the other hand, the learners also get a controlled teaching environment and they also become able to submit their course works within due time. These are because there are certain functions in Moodle and they will not be able to make submission of files after a certain time (Kazanidis et al. 2018). It is good for keeping the learners engaged and there will also be a fear of deadlines within them. There are also a few other areas like the clarity of expression, controlling the pace of teaching, guidance through questions, feedback on homework etc. These have received lower scores as compared to the other options. It means the strength of these benefits can be considered low as compared to the previous ones.

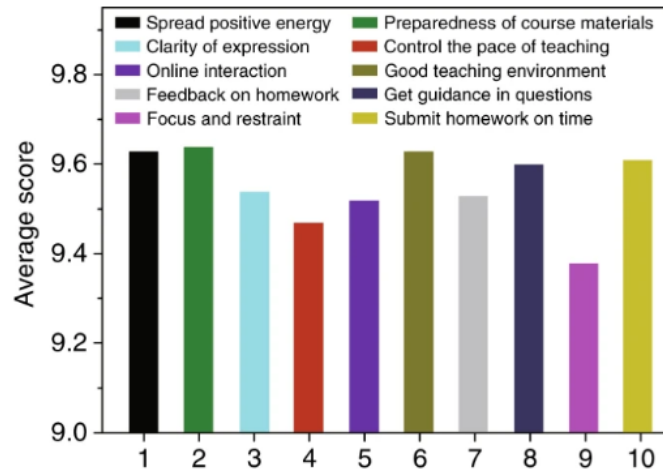


Figure 8: Responses regarding the quality of VLE in terms of its impact on learners

(Source: Sun et al. 2020)

The huge impact of VLE is on the mindset of the learners and their studying approaches. While there was offline learning, the mindset of the student was different as they had spent most of the time within the classroom environment. The environment of learning has a good impact on concentration and it can also make them more engaged (Lyndon and Hale, 2014). In the case of VLE, this possibility is not there and the learners are also not able to have control over their concentration on study. More specifically, it is also the case of the maximum number of leaders. It can be a threat to the future generation of students if the possible changes for making improvements are not made.

5. Conclusion

It is found that there are both positive and negative impacts of a virtual learning environment on the learners. The positive impacts are regarding transparency, better communication, flexibility etc. It creates more opportunities for the learners to ask for queries and get those solved instantly. On the other hand, there are also possibilities of negative in terms of isolation, lack of concentration, negative psychological impact etc. In spite of having positive impacts, there is a necessity of making possible improvements to avoid the negative ones. As these negative impacts can change the way of handling learning approaches by the individual learners. However, if the learners are mature and they belong to a higher level of learning then they will be able to grab the maximum benefits of it.

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