

BMSW4003: Digital Skills and Research Methods

Virtual Learning Environment

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1. Introduction

The research is conducted to analyse the impact of VLE at the University of Wales, London Campus. The researcher will provide a literature review in this context. The research method will be described followed by the different types of data findings and analysis.

1.1 Research aim

- To understand the impact of the virtual learning environment at the University of Wales, London Campus.

1.2 Research objective

- To evaluate the feasibility of a virtual learning environment in the pandemic situation.
- To analyses the importance of a virtual learning platform
- To analyse the impacts of virtual learning platforms (Drexel University, 2021).

2. Literature review

The implementation of VLE using online mode has become a high demand in education recently though conventional mode was able to focus the students' overall development (Ahmed *et al.*, 2020). Online classrooms through various platforms not only provide education to the students but also the teachers can use their resources as well (Singh and Singh, 2021). This era of advanced technology is exploring several instructional methods that can be easily distributed. The pupil, as well as the teachers, feels comfortable and they both can interact effortlessly during the learning process (Tabatabai, 2020).

3. Methodology

In this research paper, the researcher has only concentrated on realism philosophy as it is the real fact to identify the importance and impact of virtual learning platforms in daily life (Zuo *et al.*, 2020). Following the realism research philosophy in this research paper will help the researcher in identifying authentic information with the help of an abductive research approach and a mixed data collection method here (Govindarajan and Srivastava, 2020). This mixed data collection method has been performed within online surveying by the participation of 15 students of the university campus of London individually. The researcher has also confirmed that proper and efficient ethical considerations are considered during this data collection process effectively (Sadeghi, 2019).

4. Data findings and analysis

4.1 Primary data findings

Question1. What do you know about virtual learning environments (VLE)?

Responses	Answers
1.	Virtual Learning Environment is a web-based learning process that allows students and teachers to gather on web platforms to attend online classes.
2.	Virtual learning is very supportive to us during this covid situation.
3.	VLE refers to the virtual platform utilised for learning.
4.	A web-based learning system

5.	It is a virtual platform used for learning.
6.	A VLE is a designed place for teaching and learning replacing the classroom environment and existing educational processes.
7.	It is very useful
8.	The virtual learning process is very effective during the pandemic with the help of professors
9.	A web platform used for learning nowadays.
10.	Efficient for maintaining social distancing during covid
11.	It is a platform to facilitate the learning experience.
12.	It is a learning platform used for learning virtually
13.	Cloud-based learning platform
14.	It is a web-based learning platform.
15.	An internet-based learning platform for learning

Table 1: Responses to question number 1

(Source: Author)

Question 2. Is Trinity Saint David London Campus utilising VLE?

Response	Numbers	Percentage
Yes	13	86.7%

No	0	0.0%
Maybe	2	13.3%

Table 2: Response of question number 2

(Source: Author)

Question 3. Are you getting benefited from VLE?

Response	Numbers	Percentage (%)
Yes	17	73.3
No	3	20
Maybe	1	6.7

Table 3: Response of question number

(Source: Author)

Question4. What are the positive impacts of VLE you find?

Responses	Answers
1.	It is very easy to join and read assessments at any time.
2.	VLE provides interactive and instant study materials.
3.	Time serving.
4.	Not much expensive.
5.	Useful with online assessment.
6.	The teachers and the students get benefitted from this process. The workers are also getting benefits working from home.
7.	It makes the learning process easier.
8.	It makes the study process easier
9.	It is an effective platform for the students and helps to enhance the learning experience.
10.	It makes the learning process easier than ever.
11.	It makes learning easier.
12.	It makes learning possible during the pandemic period.

13.	It makes the learning process more interesting.
14.	During a pandemic, it helps the student to continue their classes.
15.	You can use it anywhere.

Table 4: Responses of the question number

(Source: Author)

Question 5. Do you think VLE has some negative sites as well?

Response	Numbers of respondent	Percentage (%)
Yes	9	60
No	4	26.7
Maybe	2	13.3

Table 5: Response of question number

(Source: Author)

Question 6. Do you find VLE useful during the pandemic situation?

Response	Numbers	Percentage (%)
Yes	13	86.7
No	2	13.3
Maybe	0	0

Table 6: Response of question number

(Source: Author)

Question 7. Do you think VLE can successfully replace the in-class experience?

Response	Numbers	Percentage (%)
Yes	6	40
No	5	33.3
Maybe	4	26.7

Table 7: Response of question number

(Source: Author)

Question 8. What are the platforms Trinity Saint David London Campus utilising for VLE?

Responses	Answers
1.	Google meet
2.	Moodle, Acron LMS
3.	Google meet
4.	Moodle, Blackboard Learn
5.	Moodle, Google meet
6.	Google meet
7.	Moodle, Zoom meeting
8.	Moodle
9.	Google meet, Google classroom
10.	Google meet, BlackBoard Learn

11.	Skype
12.	Don't know.
13.	Moodle LMS
14.	Moodle
15.	Moodle

Table 8: Responses of the question number

(Source: Author)

4.2 Primary data analysis

Response of question number: 1

Most of the students of this university from the London campus have said that the web learning system, as well as the virtual learning platform, became too useful to them during this pandemic situation.

Response of question number: 2

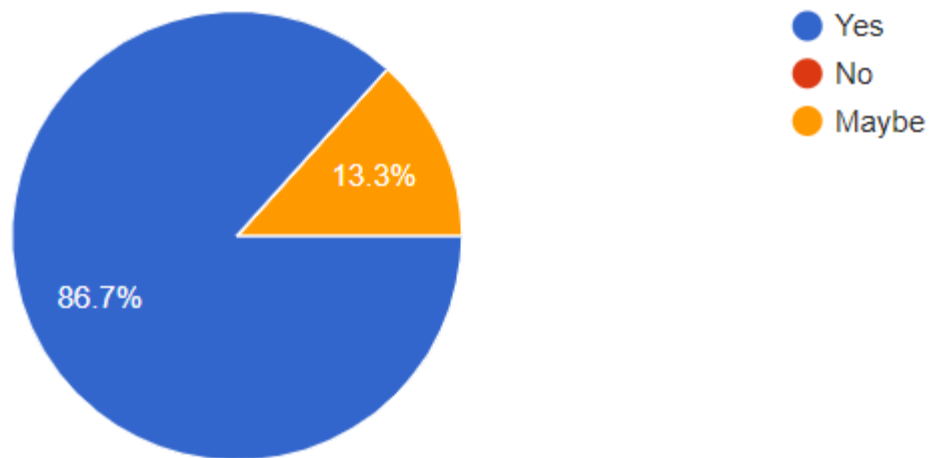


Figure 1: Graphical analysis of Question number

(Author)

According to the above graphical analysis of question number 3, it is revealed that 86.7% of the students from the London campus have agreed with the successful use of VLE by the University.

Response of question number: 3

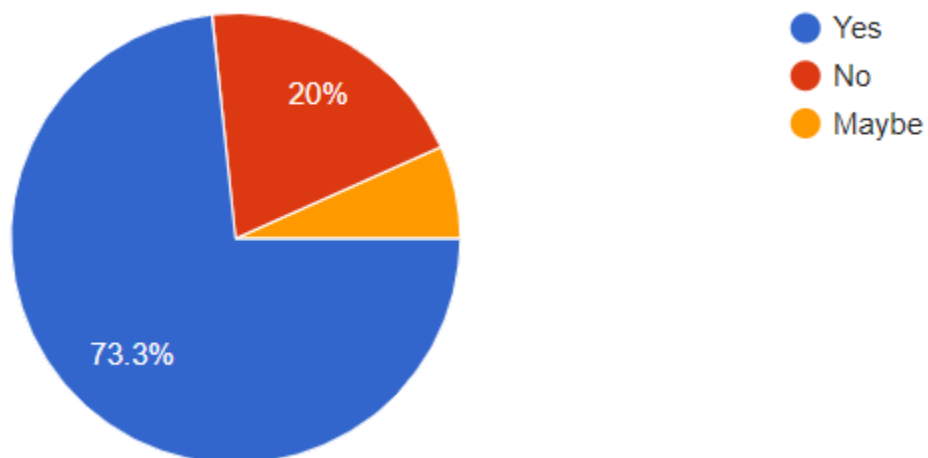


Figure 2: Graphical analysis of Question number

(Author)

The above graphical statement includes that 73.3% of the students from the London campus are getting benefited from the VLE platform offered by the organisation effectively.

Response of question number: 4

In response to question number 4, it is revealed that most of the students have found VLE to be one of the most important time serving and cost-efficient learning mediums along with the unlimited support of regular assessments and lecturers' support.

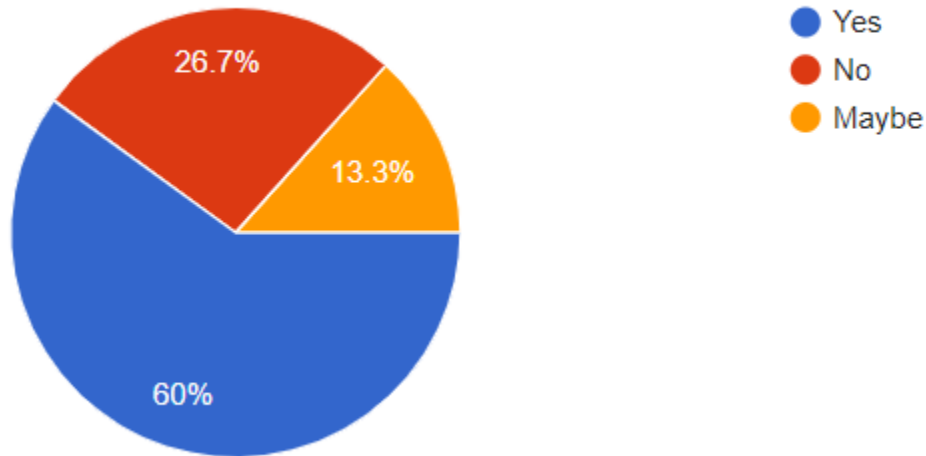
Response of question number: 5

Figure 3: Graphical analysis of Question number

(Author)

According to the above graph, 60% out of the total students from the London campus think that VLE has lots of negative sites such as cyberbullying, cybercrimes, cyber attacks, data losses and many more.

Response of question number: 6

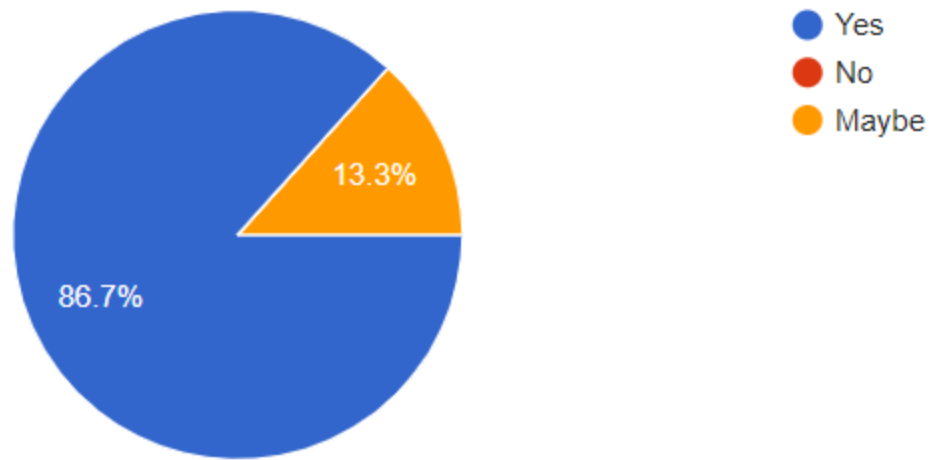


Figure 6: Graphical analysis of Question number

(Author)

Here, it is proved that 86.7% of the students or the maximum number of audiences in this survey support VLE as to be useful during this pandemic situation effectively.

Response of question number: 7

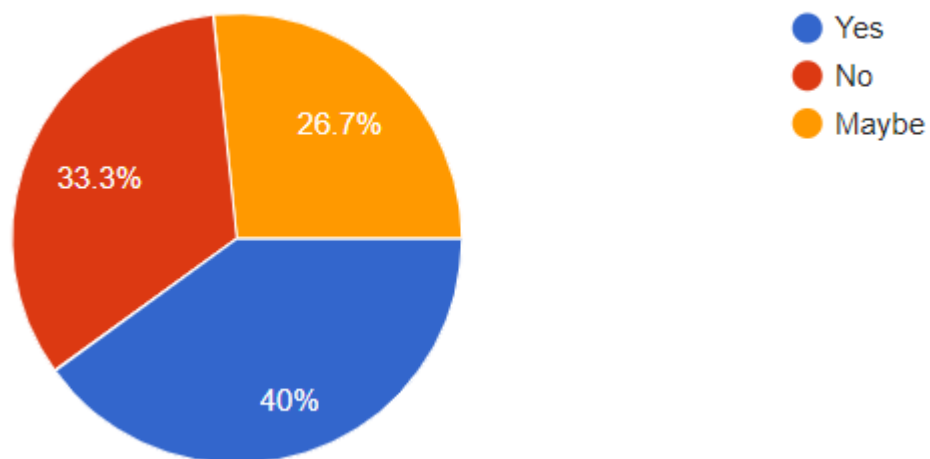


Figure 7: Graphical analysis of Question number

(Author)

Here, it is noticed that 40% of the participants are useful to this virtual learning platform whereas 33.3% are not comfortable with this platform too.

Response of question number: 8

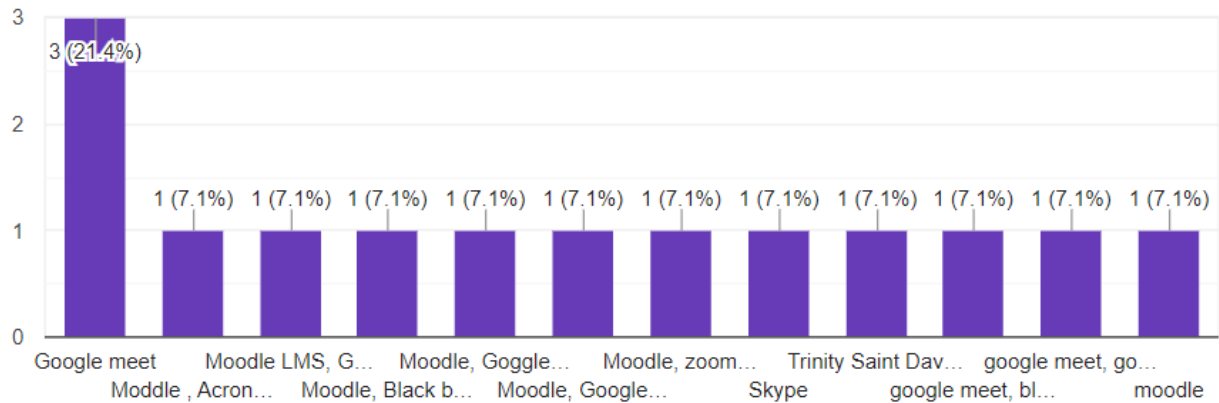


Figure 8: Graphical analysis of Question number

(Author)

According to this survey, it is evaluated that Google meets, Moodle is the most useful virtual learning platform used by this organisation and their students too.

4.3 Secondary data findings

One of the important factors for VLE is flexibility which is provided in online classes even for working people (Shaw, 2021). The teachers can prepare gradation and results via this mode very effortlessly. They have to choose the options and provide individual feedback to the students. The students also benefit from getting these reviews and feel comfortable during the whole session. This mode can also engage the users in activities and include instrument assessment outcomes. The online learning environment provides all over-development such as strengthening communications, ensuring individual knowledge construction, participation and social

collaboration. The pupil's learning interests have increased that shape their behaviour and actions as well as develop technical knowledge (Kadir Jonovich, 2019).

Attending a virtual learning course allows an individual to select his/her own choice able schedule. Thus it allows one to be more attentive without any distractions and develop meaningful learning. Even in the case of buying books and course materials, the pupils are saving as they are using online resources. The tuition fees also vary in online and offline modes thus online courses offer education on a pocket-friendly budget. The learning environment thus enhances career advancement providing better opportunities in the international platforms (Gupta and Katarya, 2020).

One of the most important impacts is the teachers, with 74% saying it is a useful tool, and the students become comfortable using collaboration tools enabling them to grow their analytical skills (Al-Jaber and Al-Ghamdi, 2020). The students also perform better gaining effective learning and understanding on standardised measurements of every perspective. During the pandemic, the students have become resilient as they enjoy their virtual learning being in a comfortable and flexible zone. The training and development through the process open a large forum for the opportunists. Using advanced technologies and interactive tools have enhanced self-assessment qualities in both learners and teachers (Adnan and Anwar, 2020).

4.4 Secondary data analysis

According to this research report, it is evaluated that VLE has become one of the most essential parts of learning modules in most of the universities in the UK. It provides students lots of opportunities in training and development whereas the offline classes need more time consumption from daily life (Smigelski et al., 2020). Additionally, it is observed that most of the

students from different universities along with the Trinity Saint David London campus have found it useful for its flexibility of classes as well as cost efficiency too. Additionally, the learning interests of students increase a lot during this virtual learning process as it offers lots of assessment and data support to the students effectively. However, the virtual learning platform makes the result and examination process easier and effortless as well, for which teachers from different universities also prefer this mode of study during this current situation (Barker, 2018).

5. Conclusion

This paper concludes that virtual learning platforms have become more useful during the pandemic situation effectively in the UK. Most of the universities in this country now are using and preferring virtual learning approaches to their students from different skill development and university education programs as well. Moreover, the above survey has revealed that most of the students is also preferring this format of education. Network failure, as well as face to face interaction, is also needed to be improved by using the latest technologies in this medium to make virtual learning platforms more efficient for both students and teachers in future.

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ROBOTIC TECHNOLOGY – DRONE DELIVERY

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AMAZON PRIME AIR DELIVERY DRONES BACKGROUND

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WHO IS AMAZON PRIME AIR?

- Prime Air is a drone delivery service.
- The service is also currently in development by Amazon.
- Was revealed in 2013 by the founder but approved for testing in the U.S. in March 2015.
- In 2019 Amazon Prime Air received an Airworthiness Certificate for their research of its MK27 drone.



DRONE DELIVERY BACKGROUND



- Who is Amazon Prime Air
- The founder
- How they start
- Interesting background facts



THE FOUNDER

- Amazon Prime Air was founded by Jeff Bezos
- He is also the Founder of Blue Origin.
- He was born in Albuquerque and raised in Houston and Miami.

HOW THEY START



- Amazon prime air delivery drone has begun as a commercial in Cambridge.
- The first delivery took just 13 minutes from the customer placing the order.

INTERESTING BACKGROUND FACTS

- The Amazon Prime Air team worked with NASA and also Single European Sky ATM on trials.
- For additional safety they decided that the drones will fly at a low altitude somewhere below 400 feet.

THE CHALLENGES BEFORE THE INTRODUCTION OF MODERN TECHNOLOGY

amazon
Prime Air



➤ Florenta Alexandra Stan -1919632

WHAT ARE THE DISADVANTAGES OF DRONE DELIVERIES?

- Drones are found operating in unauthorized airspace.
- Drones are shot down by civilians
- Drones have trouble operating in moderate rain or thunderstorm condition.
- Drones replace drivers.



WHAT ARE THE ADVANTAGES OF DRONE DELIVERIES?

- Prime Air – a future delivery system from Amazon designed to safely get packages to customers in 30 min or less.
- The packages are not confusing, they come correctly to the destination due to the system that the drones have.
- Amazon`s drone technology is a labor-saving / capital-using technology like drones.
- A drone flies above road delays such as construction, detours, accidents, traffic deviated roads, etc.

IS THIS NEW TECHNOLOGY PROFITABLE OR LOSS FOR THE COMPANY?

- Amazon's drone technology is a labor-saving/capital-using technology.
- Drones replace labor and trucks with more specialized capital.
- One drone operator will monitor multiple drones.
- The lifespan of drone is 5 years.

CONCLUSION

- Amazon is a resilient company
- Delivery by drones increases the number of buyers and brings a good profit to the company.
- Amazon gain a strong competitive advantage over online and physical retailers.



INSIGHTS TO THE MODERN TECHNOLOGY INTRODUCED

GEORGIANA ANDREEA MATAACHE: 2111127

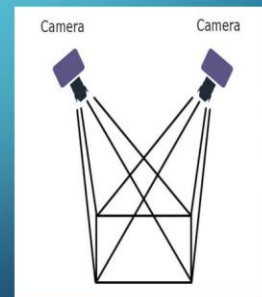
WHAT IS THE STEREO VISION SENSORS TECHNOLOGY?



- Computer vision implementation who use stereoscopic ranging techniques to change the image from 2D to 3D.
- Is a type of camera with two or more lenses with a separate image sensor.
- Is a type of camera that can simulate human binocular vision and have the ability to capture three-dimensional images.
- The distance between lenses is 6.35 cm with a longer base line for more extreme three-dimensionality.

HOW DOES STEREO VISION SENSORS WORK?

- The two cameras capture two images in the same time and after the images are analyzed to see the differences.
- The corners are easy to find in one image.
- The differences between the images helps to get the depth of the point which enables projecting it in a 3D world used for navigation.
- The cameras use 3D vision sensors which scan all angles and make a point cloud.



POSSIBLE APPLICATIONS OF STEREO VISION SENSORS TECHNOLOGY

- Industrial inspection for 3D objects;
- Autonomous vehicles, robotics;
- Transport;
- Medical;
- Scanning electron microscope.

PURPOSE OF STEREO VISION SENSORS AT AMAZON PRIME AIR- DRONE DELIVERY

- The stereo vision helps the drone to analyse the footage for different threats: humans or animals.
- The drone can see the difference between a lawn and a swimming pool.
- To minimize the risk of sending the parcel unsafe to the customer.
- To avoid any obstacles until the destination.



IMPACT OF THE TECHNOLOGY INTRODUCED

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POSITIVE IMPACTS

- Can quickly deliver products to a different location
- Drones conserve energy
- A safer delivery system
- A higher level of efficiency
- Drones could reduce consumption levels
- Drone delivery saves time



HOW DO CUSTOMERS FEEL ABOUT THIS TECHNOLOGY?

- People used this technology in a pandemic period for delivering medical supplies
- Is used by customers who care about the environment
- Many customers consider this transport to be “A magical experience “
- The customers think that the use of drones requires close monitoring



- Some customers consider drone delivery beneficial especially in food delivery
- Customers consider it a beautiful idea especially for unsafe roads
- The customers supported the use of the drones for military and police applications
- Customers would use drone delivery in search and rescue, crime prevention, disaster response



LESSONS DRAWN FROM THE CASE STUDY

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LESSONS LEARNED FROM THE CASE STUDY

- Development of this technology will allow the drones to save people's time.
- Camera that uses stereo vision sensors.
- Drones got a very light but powerful and fast engine.
- Most of them are made of thermoplastics as they are cheaper to rebuild in case of a crash.



LESSONS LEARNED FROM THE CASE STUDY

- Best battery for a drone it's called Grepow because of it's energy and very light.
- Lots of sensors as it drives itself, autopilot.
- Design: Quadcopter & Octocopter.



LESSONS LEARNED FROM THE CASE STUDY

- Transport packages, medical supplies, food, or other goods.
- Shooting movies, sports.
- Amazon delivery drones can deliver packages that weigh up to 30kg.
- The longest time a drone can fly is 25minutes.
- Drones can fly up to 62mph(100km/h).

LESSONS LEARNED FROM GROUP WORK

- Organisation skills;
- Communication;
- Teamwork;
- Problem solving;
- Research skills;
- Decision making.

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