



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

DIGITAL SKILLS AND RESEARCH METHODS

MR. GASSO MWALUSEKE

STUDENT: RAMONA MARIA JANTEA 1916897

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Introduction

Virtual learning is known as the learning experience which is enhanced by utilising the computers and internet both inside along with outside the educational, organisational facilities. Teaching activities carry out online, whereby learners and teachers are separated physically (Becker *et al.*, 2019). The student's effect after use of the VLE or Virtual Learning Environment toward academic performance hasn't subjected toward the extensive research; however, is to become one of the interests to both the lecturers and students who create VLE resources. This technology supports teacher to manage the administrative work, plan lessons, track the students' activity, performance, engagement level and deliver extra materials as well as support for students and other who require it (Černochová *et al.*, 2020). Taking this into consideration, this research is going to determine the Virtual Learning Environment's impact-Moodle on learning experience of students' at Wales Trinity Saint University (London Campus). Both primary, as well as secondary, will be made to collect the authentic data related to VLE or Moodle's impact on the students learning. Based on the analysis, several findings will be discussed.

Primary quantitative data collection

The researcher is going to collect as well as analyse the data through primary quantitative data collection. The data will be related to Saint David Campus of London, where students will share their learning experiences through Moodle or VLE. Teachers of Wales University even also share their experiences of teaching to students through the Moodle. The researcher will develop questionnaires of 5 questions related to the topic and ask 45 University students and teachers via online (Correa *et al.*, 2020). All the questions will be closed-ended. Due to current Covid-19 situation, the researcher will make a survey online. It will prevent the chance of spreading the pandemic and keep the safety from both the parties. The sample size is 45. Due to the survey, the researcher will use the primary quantitative data collection method. With the help of the quantitative method, several statistical, mathematical outcome will be getting by the researcher. The researcher will use Microsoft Excel to generate graphs by putting data on it. This will help the researcher to get the authentic outcome, and based on analysis; several findings can be generated (Hearn *et al.*, 2019).

1. Do you agree that Moodle provides you with total understandability and clarity of lectures at Wales University?

Deliverables	Total respondents	Number of respondents	Percentage
Strongly Agree	45	15	33.33%
Agree		10	22.22%
Neutral		10	22.22%
Disagree		5	11.11%
Strongly Disagree		5	11.11%

Table 1: Understandability and clarity of lectures

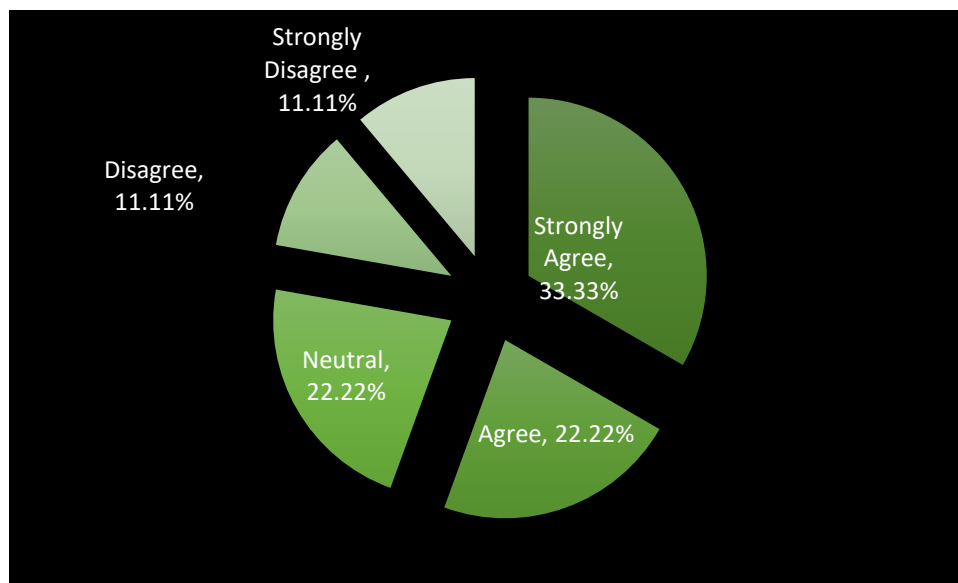


Fig 1: Understandability and clarity of lectures

(Source: Created by the learner)

Analysis: From the above analysis, it is analysed that out of 45 respondents, 15 are strongly agreed, ten are agreed and stayed neutral about the fact, which is 33.33% and 22.22% respectively. Five have disagreed and strongly disagreed about the fact, which is 11.11%. Therefore, it is concluded that Moodle delivers students total understandability and clarity of lectures at Wales University.

2. Is Moodle providing you effectiveness and clarity to forward instructions to finish the projects and exercises?

Deliverables	Total respondents	Number of respondents	Percentage
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Strongly Agree	45	17	37.77%
Agree		13	28.88%
Neutral		8	17.77%
Disagree		2	4.44%
Strongly Disagree		5	11.11%

Table 2: Effectiveness and clarity to forward instructions

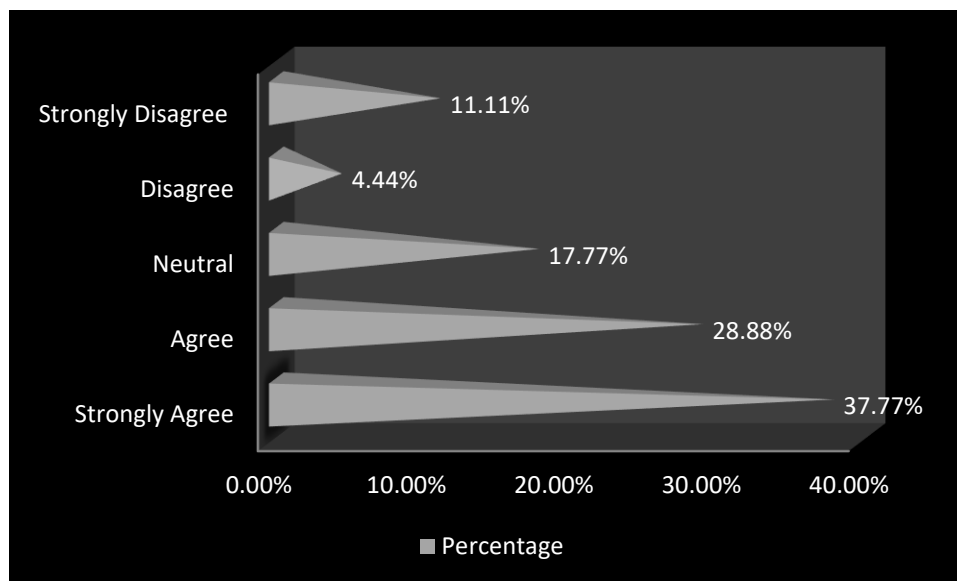


Fig 2: Effectiveness and clarity to forward instructions

(Source: Created by the learner)

Analysis: From the above graph and table, it is analysed that out of 45 respondents, 17 have strongly agreed about the fact which is 37.77% of the total percentage. Out of 45 respondents, 13 have agreed, eight have stayed neutral, two have disagreed as well as five have strongly disagreed with the fact which are 28.88%, 17.77%, 4.44% and 11.11% respectively. Hence, it is concluded Moodle delivers students effectiveness and clarity to forward instructions to finish the projects and exercises.

3. Do you agree, Moodle increases the cooperation between the students and the teacher?

Deliverables	Total respondents	Number of respondents	Percentage
Strongly Agree	45	15	33.33%
Agree		10	22.22%

Neutral		10	22.22%
Disagree		5	11.11%
Strongly Disagree		5	11.11%

Table 3: Cooperation between the students and teacher

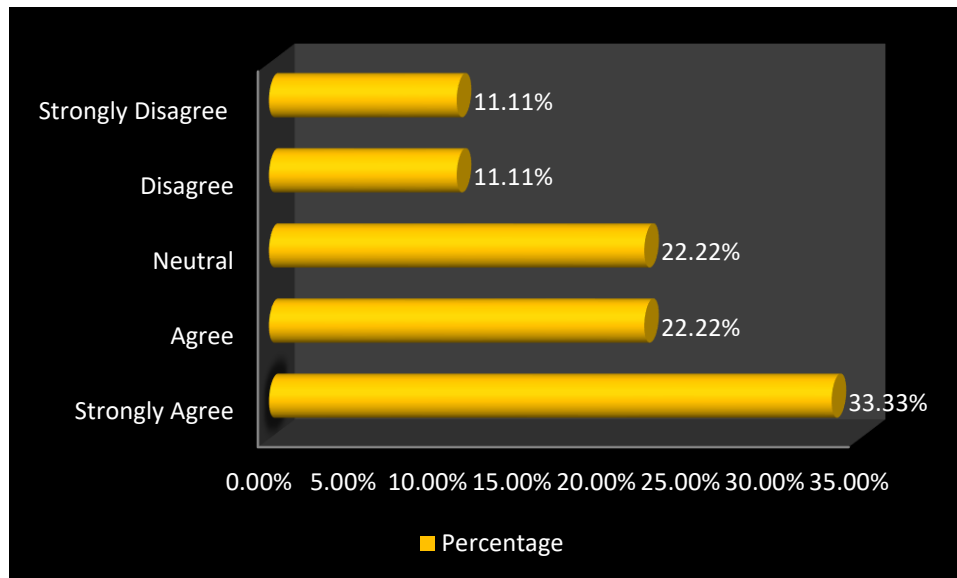


Fig 3: Cooperation between the students and teacher

(Source: Created by the learner)

Analysis: From the above graph and table, it is analysed that out of 45 respondents 15 have strongly agreed, ten have agreed and neutral, five have disagreed and five have strongly disagreed about the fact which are 33.33%, 22.22% and 11.11% respectively. So, this is concluded that majority have strongly agreed that Moodle increases the cooperation between the students and teacher.

4. Do you agree, learning via Moodle is better than the traditional learning?

Deliverables	Total respondents	Number of respondents	Percentage
Strongly Agree	45	16	35.55%
Agree		14	31.11%
Neutral		5	11.11%
Disagree		8	17.77%

Strongly Disagree		2	4.44%
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Table 4: Virtual learning vs. traditional learning

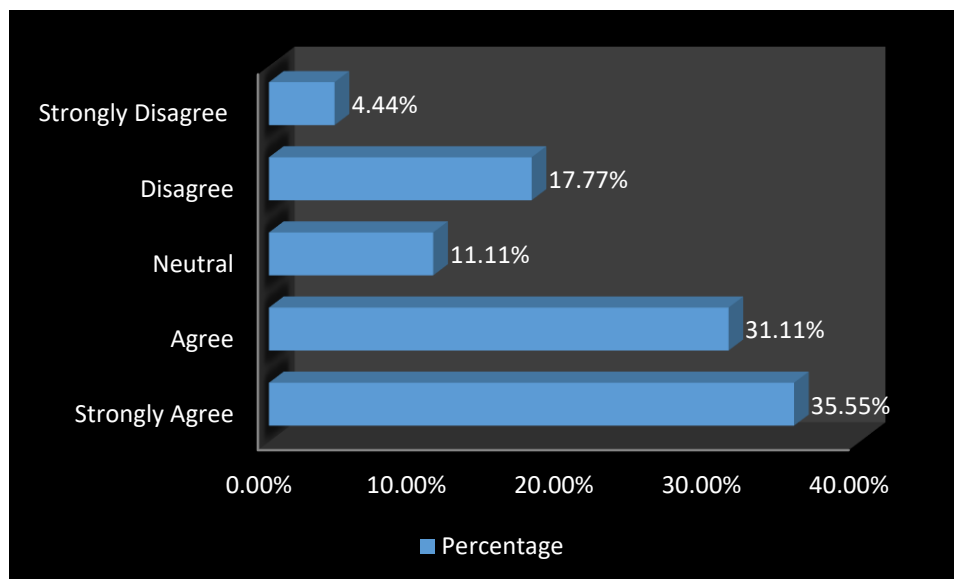


Fig 4: Virtual learning vs. traditional learning

(Source: Created by the learner)

Analysis: From the above graph and table, it is analysed that out of 45 respondents, 16 have strongly agreed about the fact which is 35.55% of the total percentage. Out of 45 respondents, 14 have agreed, five have neutral, eight have disagreed, and two have strongly disagreed about the facts which are 31.11%, 11.11%, 17.77% and 4.44% respectively. So, it is concluded that Moodle or virtual learning is better (as per the majority agree) than traditional learning.

5. Do you agree, without an internet connection you can't access Moodle for learning?

Deliverables	Total respondents	Number of respondents	Percentage
Strongly Agree	45	20	44.44%
Agree		15	33.33%
Neutral		5	11.11%
Disagree		3	6.66%
Strongly Disagree		2	4.44%

Table 5: Without internet connection can't access to Moodle

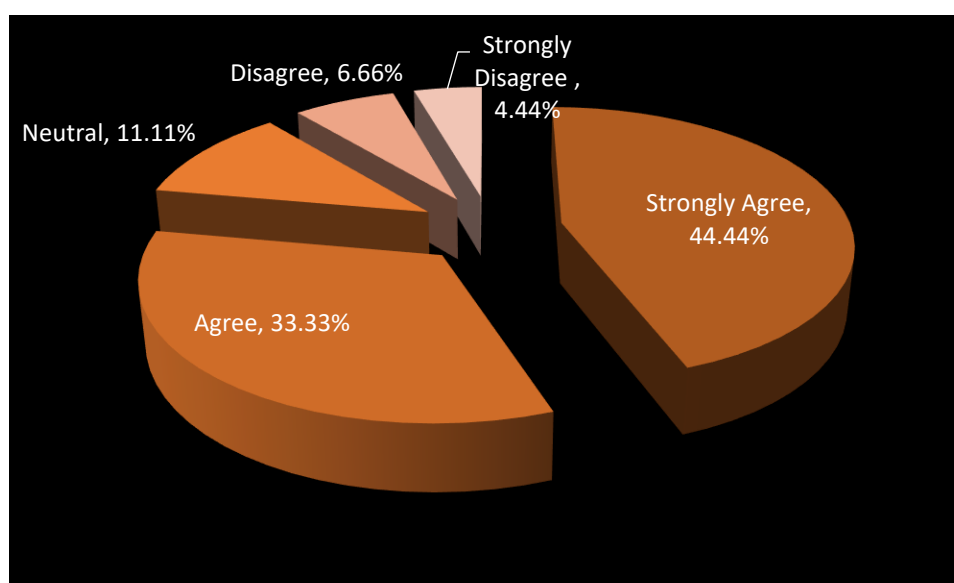


Fig 5: Without internet connection can't access to Moodle

(Source: Created by the learner)

Analysis: From the above table as well as graph it is analysed that out of 45 respondents, 44.44% of total percentage have agreed with the fact which is 20 respondents. Out of 45 respondents, 15 have agreed which is 33.33%, five have stayed neutral, three have disagreed, and two have strongly disagreed with the fact which is 11.11%, 6.66% and 4.44% respectively. Therefore, it is concluded that the majority have strongly agreed with the fact without an internet connection you can't access Moodle for learning.

From the above analyses, the researcher has found that VLE or Virtual Learning Environment like Moodle positively impact on both teachers as well as student's experiences of learning at Wales University (London Campus).

Before collecting the survey data and ask participants question by survey method, then she ensures that each data that are collecting will be used only for academic purposes and nothing else. After the analysis of these data researcher will delete entire information. Even when the researcher will start a calculation and determine the findings, the data may be lost or stolen by hackers. For this purpose, the researcher has to take some precaution like installing anti-virus on the computer. It is an effective tool to protect the data set and not led important data to get hacked. The researcher will also use a hard drive to store the data after findings of the analysis. Data will not get corrupt and stay safe in this device.

Secondary data collection

The secondary tool of data collection for this research will be qualitative. The researcher will take the help of newspaper, online articles, journals or websites to gather the research on the impact of the Moodle or especially the VLE or Visual Learning Environment toward teacher's teaching and course sharing and students learning. Thematic analysis will be made by the researcher to analyse the past experienced different universities, students and teachers.

From the virtual learning environment's impact by Barker and Gossman, the researcher has determined that VLE or Moodle in the UK are used only for work purpose. Teachers are applying this tool has the facility to set homework as well as sharing the sites with students with few workers utilising tools for collaborative learning (O'Doherty *et al.*, 2019). Worker time for the training was cited as a major reason. Though, author of this journal doesn't deal that much directly with the experience of students which does offer several insights into the reason of VLEs should negatively impact the learning. Still, the researcher has determined that however, VLE has created a minor effect on the performance in academic field of students but the moderate effect toward the performance in. However, neither of the effects have statistically significant (Schmid and Petko, 2019). The researcher has also determined from this article the six reasons VLE can motivate students like,

- **Communication:** Both collaboration and interaction learning include forums, email, chat usage for the feedback and discussion motivates students to study. It is also suggested that working with the other people, provided the right conditions, this is in itself motivating.
- **Ownership:** This is increased access to the technologies that have encouraged participation hugely. The opportunity of learning informally within time, at proper pace and place for suiting is hugely motivating.
- **Control over the learning:** The students should define activities and tasks they wish if engaging in, they have taken responsibility for the learning (Sousa and Rocha, 2019).
- **Learning-in-context:** The opportunity of accessing the data and resources in a relevant context with the ability to share this with the others.
- **Fun:** The learning 'online' should associate with the fun.
- **Community among the contexts:** The VLEs offer also expanded the opportunities for the formative feedback as well as assessment leading to the advantages based on achievement and retention.

From the article of ‘The use of Virtual learning environments and their impact on academic performance’ the researcher has determined that how well VLE structure is, there should always be the difference in the way diverse students apply resource. The researcher has determined about 57% of students have read the learning materials, 14% have assessed the external web pages, as well as 52%, have downloaded the learning materials. It implies students tend for looking at the VLE resources simply as the online lecture versions notes instead of the additional data source to further its understanding (West *et al.*, 2019). The researcher has also identified that VLE application in Design Project appears of having the far huge correlation with the student's marks. During Geotechnics 3 module is also based across the lectures, with some data which students require being provided out as the lecture hand-outs or notes, work majority for Design Project takes place lectures outside in student's time. Having a majority of resources available through internet allows team members for working independently as well as meet solely toward touch base as required. Working flexibility is aided through other asynchronous, and synchronous interaction media include mobile phones, email as well as sites of social networking.

Conclusion

This research has concluded about the VLE impact, especially the Moodle impact on the student's learning experiences of Wales University (London Campus). To gather authentic data researcher has applied both secondary qualitative and primary quantitative analysis. From the primary analysis, several findings are found such as,

- Moodle provides students with total understandability and clarity of lectures at Wales University
- Moodle provides student's effectiveness and clarity to forward instructions to finish the projects and exercises
- Moodle increases the cooperation between the students and teacher
- Learning via Moodle is better than the traditional learning
- Without an internet connection, students and teachers can't access Moodle for learning

From the secondary data collection, the researcher has determined that by six ways, students can motivate themselves, such as ownership, communication, learning-in-context, and control over learning, fun and community among the contexts. The researcher has also determined

57% of students have read learning materials, 14% have been assessed external web pages along with 52% have been downloaded learning materials.

Reference

- Becker, M., Benner, A., Borg, K., Hüls, J., Koch, M., Kost, A., Korn, A., Lueg, M.C., Osthoff, D., Pelka, B. and Rosenberger, C., 2019, July. How to Design an Intervention to Raise Digital Competences: ALL DIGITAL Week–Dortmund 2018. In *International Conference on Human-Computer Interaction* (pp. 389-407). Springer, Cham.
- Černochová, M., Voňková, H., Štípek, J. and Černá, P., 2020. How do learners perceive and evaluate their digital skills?. In *Learning and Performance Assessment: Concepts, Methodologies, Tools, and Applications* (pp. 1453-1464). IGI Global.
- Correa, T., Pavez, I. and Contreras, J., 2020. Digital inclusion through mobile phones?: a comparison between mobile-only and computer users in internet access, skills and use. *Information, Communication & Society*, 23(7), pp.1074-1091.
- Hearn, G., Swan, D. and Geels, K., 2019. Action research. In *The Palgrave Handbook of Methods for Media Policy Research* (pp. 121-139). Palgrave Macmillan, Cham.
- O'Doherty, D., Loughheed, J., Hannigan, A., Last, J., Dromey, M., O'Tuathaigh, C. and McGrath, D., 2019. Internet skills of medical faculty and students: is there a difference?. *BMC medical education*, 19(1), p.39.
- Schmid, R. and Petko, D., 2019. Does the use of educational technology in personalised learning environments correlate with self-reported digital skills and beliefs of secondary-school students?. *Computers & education*, 136, pp.75-86.
- Sousa, M.J. and Rocha, Á., 2019. Digital learning: Developing skills for digital transformation of organisations. *Future Generation Computer Systems*, 91, pp.327-334.
- West, M., Kraut, R. and Ei Chew, H., 2019. I'd blush if I could: closing gender divides in digital skills through education.