

**Impact of Virtual Learning Environment (VLE) – Moodle on the Learning
Experience of Students at the University Of Wales Trinity Saint David
London Campus**

DSR Assignment 2

Name: Andreea-Cristina Iliescu

Identification Number: 2009203

Module Name: Digital Skills and Research Methods

Module Code: BMSW4003

Lecturer: Terry Walcott

Abstract

The proposed research attempted to examine the impact of Virtual Learning Environment (VLE) – Moodle on the learning experience of the students. The undertaken research is qualitative and of a social investigation nature. At first, past researches were explored to identify literature on the impact of VLEs on the learning experience of the students. Then, primary research was undertaken on 100 randomly selected students of the London Campus. The students were asked to provide their view on some general statements and identify the most crucial benefits and challenges offered by Moodle. The findings of the research are summarized and presented with the help of bar charts and pie charts. It was found that students rate VLEs highly because of its flexibility and self-management appeal. Academic misconduct and ineffective communication were found to be the most significant challenges of VLEs. The findings of the primary analysis found to be in harmony with the empirical review. Finally, a few suggestions were made to enhance the learning experience of the students by addressing the challenges discovered in the research.

Table of Contents

Introduction.....	1
Research Preliminaries.....	2
Research Objectives.....	2
Problem Statement.....	2
The rationale of the Research.....	2
Scope of the Research.....	3
Empirical Review.....	4
Research Methodology.....	6
Data Analysis.....	7
Rating Factors Related to Benefits and Challenges Offered by VLEs.....	7
Analysis of Questionnaire Responses.....	8
Conclusion.....	12
References.....	13
Appendix.....	15

Introduction

Virtual Learning Environment (VLE) is a learning management system (LMS) that offers a web-based platform to students and educational institutions for conducting learning sessions (Annetta, Folta, and Klesath, 2010). As an alternative to physical classrooms, VLEs offer different academic tools and solutions, such as – activity stream, unit map, assessment centre, dedicated database, online discussion forum, simulated learning tools, grade tracker, etc. (Boboc and Koç, 2018). They engage students in a continuous learning platform, track their activities, and provide a quick and efficient communication medium to both students and instructors. VLEs like Moodle and Blackboard have become essential learning tools at educational institutions in developed countries.

The report aims to examine the impact of **Moodle**, a VLE platform on the academic experience of the students. Moodle is a PHP-based, open-source LMS that offers web-based learning solutions to its education partners under GNU General Public License.

Research Preliminaries

Research Objectives

The examination of the impact of **Virtual Learning Environment – Moodle** on the academic experience of the students is the general objective of this report. The research explored the learning process of the respondents and tried to develop an understanding of the benefits and challenges offered by VLE platforms. Achievement of the general objective was facilitated by the achievement of the following specific objectives.

- Understanding the economics of VLEs, tools, and solutions offered by them and the way VLEs coordinate with their educational partners to streamline the traditional learning process (Bayne, 2008).
- Developing and implementing a primary research methodology to enhance data collection, research, and data analysis skills.
- Conducting a secondary analysis to discover past research on VLEs and identify areas of interest for further research.
- Facilitating the development of comprehensive literature on LMSs and the e-learning process by filling existing gaps in the literature.

Problem Statement

The objectives mentioned above raised some specific problems that were addressed under the following questions –

- What is the impact of Virtual Learning Platform like Moodle on the learning experience or process of the students?
- What are the benefits and challenges faced by students in conducting learning sessions through Moodle during the Coronavirus Pandemic?
- How can the e-learning experience be improved with the help of VLEs like Moodle?

The rationale of the Research

For a long time, e-learning platforms like VLEs are applied in the traditional learning framework by the universities of developed economies. The web resources provided by these platforms enable students to coordinate and self-manage their learning processes, flexibly align the individual learning process with the institutional environment, and get actively involved in academic activities (Weller, 2007). Also, during this current pandemic, the significance of VLEs has been felt more than ever. It has become important to assess the efficacy of such platform-based models in ensuring quality education in the sense of their

growing implementation. In view of this, the proposed research attempted to analyse the effectiveness of Moodle in ensuring a superior e-learning experience for the students. The outcome of the research is used to draw an overall conclusion on the e-learning experience of the students currently studying in the UK.

Scope of the Research

The proposed research is a qualitative research of social investigation nature to analyse the impact of Virtual Learning Environment. The research aims to assess the e-learning experience of students in form of primary research and use the outcome to supplement literature on e-learning and VLE. It also aims to provide suggestions to improve the e-learning experience of the students by identifying LMS industry best practices. Since only a handful of academic research was done on the topic, the proposed research will explore and recommend the scope of further research on the topic, if there is any.

Empirical Review

Bayne (2008) defined VLE as a course management system and stated that VLE use core technologies to provide integration support for learning management, ensure efficient communication and distribution of resources, and support campus learning framework and the contribution of the effective LMS like Moodle on the virtual learning for a learner is very much high.

Shandilay (2018) regarded VLE as a design space that helps students to structure their learning process and as a consequence co-create a sustainable learning platform with the help of digital resources, instructors, and education partners and here the usage of Moodle is very effective to facilitate these as it contains all the requirements to create VLE. Erkan (2019) also studied the impact of VLEs on the academic performance of university students and found a significant positive relationship. According to him, university students having access to VLEs in developed countries perform better in academic research than students in developing countries.

Vuopala, Hyvönen, and Järvelä (2015), students can have access to course maps (from registration to grade evaluation), assessment centres, performance dashboards, etc. through VLEs both on-campus and off-campus and here Moodle can work as an essential tool to facilitate that. These facilities reduce time and geographical barriers and provide flexibility to the students thus apparently increasing academic-personal life balance.

Ho, Higson, Dey, Xu, and Bahsoon (2009) in their research compared VLEs to classroom learning and found the former to be more popular on four grounds– flexibility, self-management, engagement, and accessibility. Around 87% of the respondents rated flexibility and self-management (course selection, activity mapping) to be the most beneficial factors while the rest kept engagement and accessibility ahead. Most of the respondents rating flexibility and self-management higher were foreign students and part-timers.

Szeto (2020) studied the effectiveness of using different LMS like Google Classroom, Moodle, TalentLMS, MOOCs, etc. as an e-learning mechanism during the ongoing Coronavirus pandemic and found a positive response in this regard. Students could participate in academic activities, and maintain communication with educational institutions even after being in different geographical locations.

One of the most notable studies was conducted by Kalayci (2015) who found that VLEs promote undisciplined behaviours and academic misconduct. Students try to attempt their assessments and other academic activities by cheating or taking assistance from third parties in exchange for monetary benefits.

Songkram (2015) conducted a study to evaluate the effectiveness of e-learning platforms like Google Classroom, Moodle, TalentLMS, MOOCs, etc. in maintaining continuous communication and feedback. These platforms offer discussion forums, live chat, meeting facilities, notification dashboards, etc. to remain updated on academic streams. However, the study found that even after providing access to these technologies VLEs remain ineffective in controlling student behaviour and tracking performance.

Research Methodology

As stated in the scope, the research is qualitative and comprises of two types of analysis – primary and secondary. For the secondary analysis, existing researches published in academic journals and web sources are studied and summarized as part of the empirical review.

For the primary research, responses were collected from the 100 students of the London campus of the University of Wales Trinity Saint David based on the questionnaire. As per the instruction provided in the brief and with consideration of safety and health issues of respondents, the research was conducted online with the help of Google Workspace. There have some different LMS like Google Classroom, Moodle, TalentLMS, MOOCs, etc. but here Moodle has been selected as a representative to conduct this research.

Sampling and Data Analysis: For the analysis, 100 students were selected by applying the random sampling method, and responses were collected in Google Form. The form was posted in different student forums of the University of Wales Trinity Saint David on Facebook and LinkedIn to limit the sampling biases.

For analysing the collected data, at first, they were inputted in a spreadsheet and analysed using available data visualization tools. The collected data can be used to run the regression for assessing the significance of the impact of VLEs on the academic experience of students.

Ethical Issues: To ensure the objectivity of academic research, the following issues were addressed throughout the research process.

- The necessary information had been collected randomly to avoid any kind of unfair means.
- An utmost effort was made to reach out to students of the London campus online to maintain the randomness of the sample.
- The subjectivity of individual judgment was addressed by matching research outcomes with empirical findings while concluding.

Data Analysis

This section presents the analysis of primary data collected using the Google Form. To make sense of the responses, the information is presented in graphical form.

Rating Factors Related to Benefits and Challenges Offered by VLEs

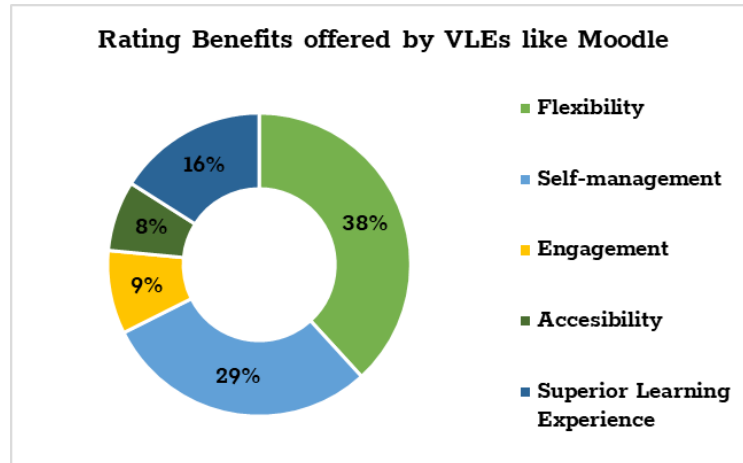


Figure 1: Rating Benefits Offered by VLEs like Moodle (Author)

Respondents were asked to rank the benefits offered by VLEs on a scale of 1 to 5, where 5 refers to the most crucial benefit and vice versa. It was found that around 67% of the respondents rated either flexibility or self-management of the learning process as the most crucial benefit of VLE – Moodle.

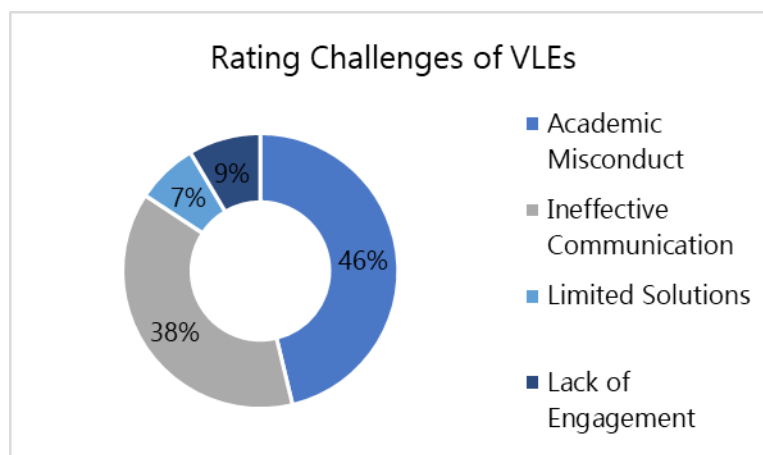


Figure 2: Rating Challenges of VLEs (Author)

After that, respondents were asked to rank the most significant challenge of using VLEs like Moodle. Around 84% of the respondents (46% of which rated Academic Misconduct first) rated academic misconduct and ineffective communication among the biggest challenges of using VLEs.

Analysis of Questionnaire Responses

The Google Form included ten general statements regarding different aspects of VLE, in this case, Moodle. Students provided their views by rating the statements on the Likert Scale (Strongly Agree to Strongly Disagree). The responses are summarized and interpreted below.

Statement-1:

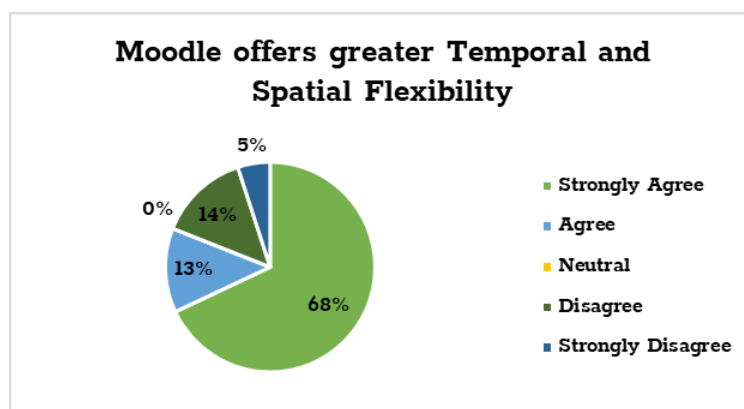


Figure 3: Findings regarding flexibility of Moodle (Author)

Around 81% of the respondents (68%+13%) agreed to the point that Moodle as a VLE offers greater temporal and spatial flexibility. Many students could enrol for different units even after being in different countries during this Coronavirus pandemic because of the flexibility offered by VLEs like Moodle.

Statement-2:

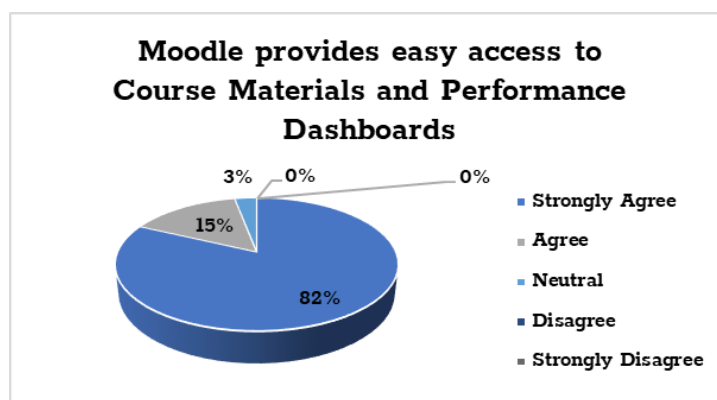


Figure 4: Findings regarding the easiness of Moodle (Author)

Almost 97% of the respondents quoted that Moodle provides easy access to course maps and performance dashboards. Students can easily access lectures, tutorial materials, assessments, register for units, communicate with instructors, and track their performance in assessments through VLEs Moodle.

Statement-3:

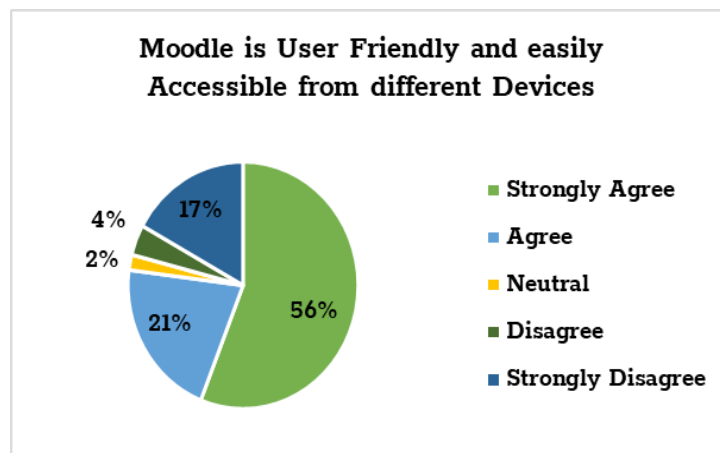


Figure 5: Findings regarding the acceptability of Moodle (Author)

Around 77% of the respondents agreed that they can have easy access to course materials and digital solutions offered by Moodle through different computing and mobile devices. However, 21% of the respondents disagreed with the point and stated that the app version of the VLE is full of bugs and glitches. The presence of these bugs creates problems while attempting assessments and online exams.

Statement-4:

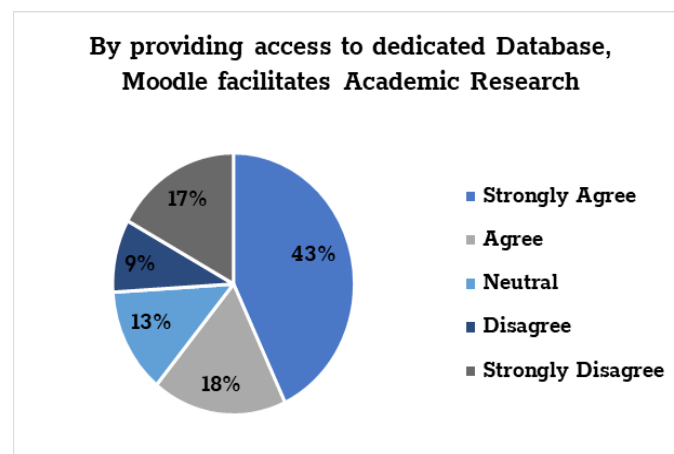


Figure 6: Findings regarding “Moodle facilitates academic research” (Author)

61% of respondents believe that Moodle provides greater access to rich databases and libraries like ProQuest, MarketLine, Boston Business Journal, etc. for academic research purposes. These databases and libraries can be used to find the latest data on companies, industries, market research, research papers, etc. However, 26% of the respondents stated that VLEs like Moodle should provide more access to free database sources.

Statement-5:

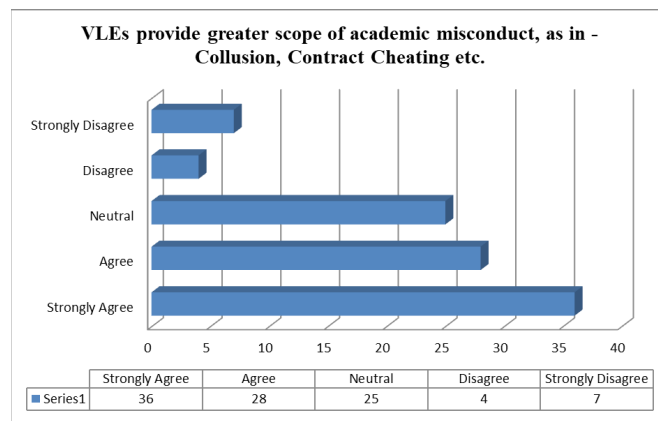


Figure 7: Findings regarding “VLEs provide a greater scope of academic misconduct” (Author)

64% of the respondents believe that VLEs like Moodle offer more opportunities to be engaged in academic misconduct like collusion, contract cheating, etc. At present, contract cheating has become a crucial concern for universities in the UK and VLEs are adding more fuel. 25% of the respondents were neutral in view of this statement.

Statement-6:

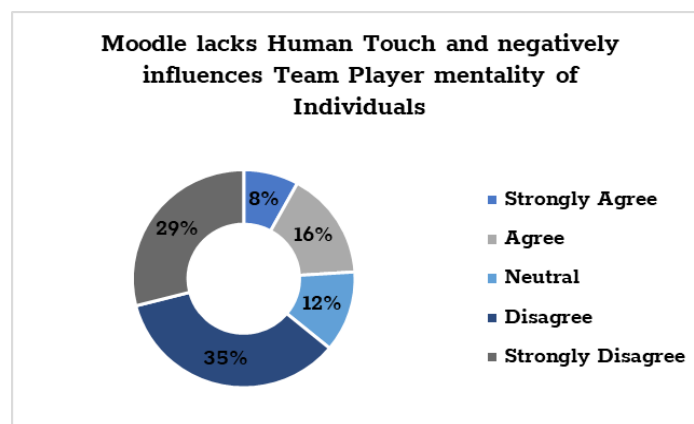


Figure 8: Findings regarding “Moodle lacks human touch and negatively influences the team player mentality of individuals” (Author)

65% of the respondents disagreed with the statement that Moodle lacks human engagement and reflects poorly on collaboration. According to the respondents, Moodle keeps them up-to-date on coursework and they often use its chat facility, video integration tool, etc. to communicate among themselves during group assessments. In this way, Moodle is attracting students to its digital solutions and promoting collaboration among peers.

Apart from these, the Google Form had the following questions. The bar points under each statement represent the number of respondents.

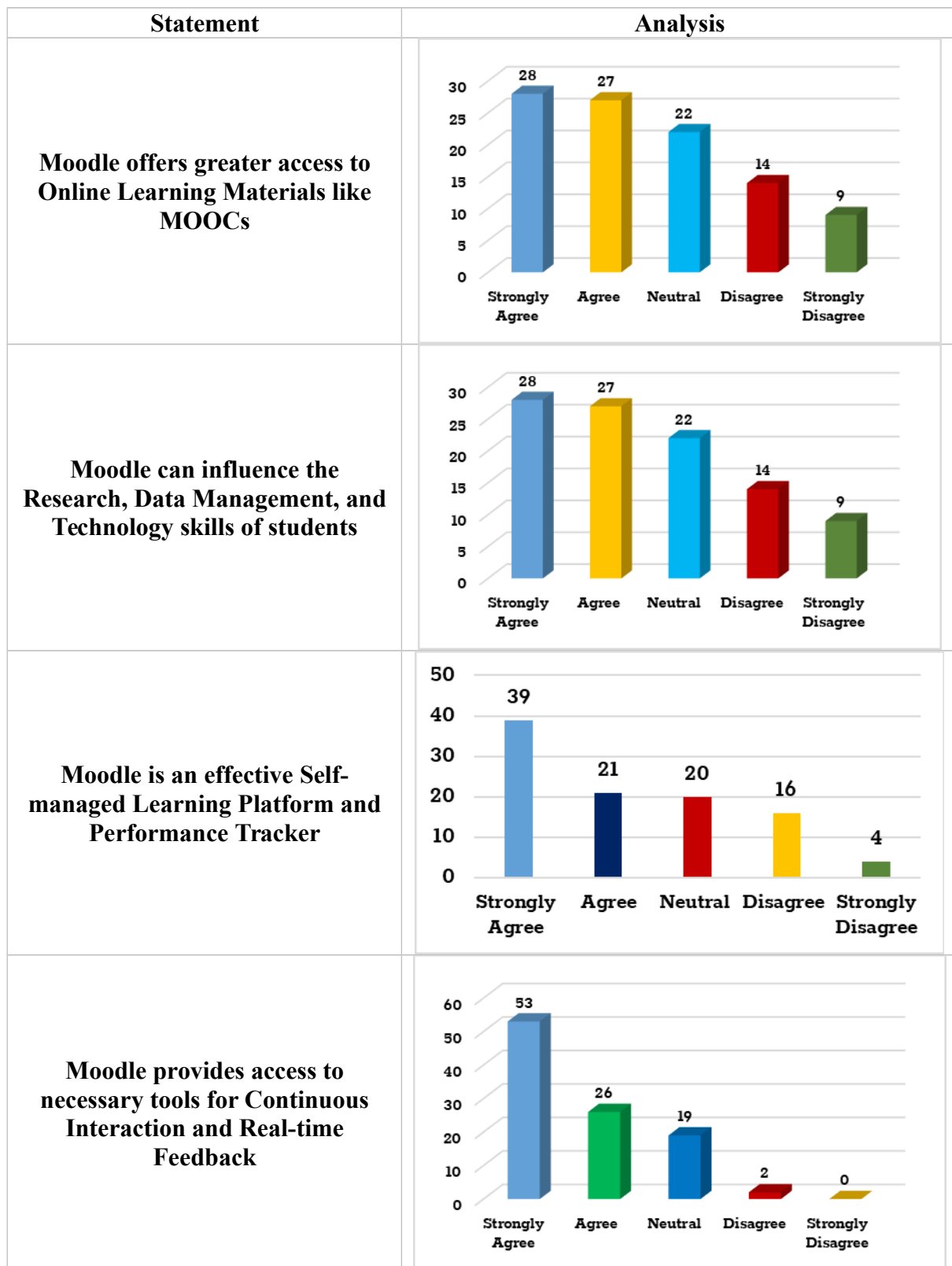


Figure 9: Findings regarding different aspects of Moodle (Author)

Conclusion

The findings of primary and secondary analyses on the impact of VLE on the academic experience of the students can be summarized in a few points. Temporal and spatial flexibility offered by Moodle and the appeal of self-managing individual learning processes increase the popularity of VLEs and that supports the statement of Szeto (2020) because he studied the effectiveness of using Moodle as an e-learning mechanism during the ongoing Coronavirus pandemic and found a positive response in this regard. The alarming increase of academic misconduct and ineffective communication is found to be the most crucial challenges of VLEs and this finding also covers the research outcomes of Kalayci (2015) who found that VLEs promote undisciplined behaviours and academic misconduct. The problem of ineffective communication is not a core problem of VLE rather a problem of how such a platform is applied in practice (Boboc and Koç, 2018). Through engaging online discussions and webinars, regular activity tracking, and constructive feedbacks the problem of 'ineffective communication' can be reduced. Finally, VLEs like Moodle should consider increasing student access to online databases and libraries and Erkan (2019) also said that.

References

- Annetta, L., Folta, E., and Klesath, M., 2010. *V-Learning: Distance Education In The 21St Century Through 3D Virtual Learning Environments*. 1st ed. Dordrecht: Springer Netherlands.
- Bayne, S., 2008. Higher education as a visual practice: seeing through the virtual learning environment. *Teaching in Higher Education*, 13(4), pp.395-410.
- Boboc, M., and Koç, S., 2018. *Student-Centered Virtual Learning Environments In Higher Education (Advances In Higher Education And Professional Development)*. 1st ed. IGI Global.
- Erkan, A., 2019. Impact of Using Technology on Teacher-Student Communication/Interaction: Improve Students Learning. *World Journal of Education*, 9(4), p.30.
- Ho, W., Higson, H., Dey, P., Xu, X. and Bahsoon, R., 2009. Measuring the performance of the virtual learning environment system in higher education. *Quality Assurance in Education*, 17(1), pp.6-29.
- KALAYCI, S., 2015. Students' Attitudes Towards Collaborative Tools In A Virtual Learning Environment. *EDUCATIONAL PROCESS: INTERNATIONAL JOURNAL*, 4(1-2), pp.71-86.
- Shandilay, D., 2018. Virtual Learning Environment Scenario in Higher Education (Web-based Learning). *International Journal Of Management And Economics Invention*, 04(05).
- Songkram, N., 2015. E-learning System in Virtual Learning Environment to Develop Creative Thinking for Learners in Higher Education. *Procedia - Social and Behavioral Sciences*, 174, pp.674-679.
- Szeto, E., 2020. Transforming Learning and Teaching in Higher Education: The Impact of ICT on Pedagogy, Peer Interaction, and Support in a Networked Virtual Learning Environment. *The International Journal of Learning: Annual Review*, 17(11), pp.205-214.

Vuopala, E., Hyvönen, P., and Järvelä, S., 2015. Interaction forms in successful collaborative learning in virtual learning environments. *Active Learning in Higher Education*, 17(1), pp.25-38.

Weller, M., 2007. *Virtual Learning Environments: Using, Choosing, And Developing Your VLE*. 1st ed. London: Routledge.

Appendix

Questionnaire: <https://forms.gle/JQWU3iiM1Wu861RC6>

Impact of Virtual Learning Environment (VLE) – Moodle on the Learning Experience of Students at the University Of Wales Trinity Saint David London Campus

Educational institutions in developed countries are using VLE platforms to supplement their traditional classroom learning for a long time. The tools and web solutions offered by these platforms help the students to structure their learning process, align the individual learning process with the institutional framework in a flexible manner, and participate in academic activities efficiently. Besides, the importance of VLEs has been felt greater than ever during this ongoing pandemic. Due to their increasing application, it has become essential to evaluate the effectiveness of such platform-based models in ensuring quality education. The general objective of the research is to examine the impact of Virtual Learning Environment – Moodle on the academic experience of the students at the University of Wales Trinity Saint David London Campus.

Note: Information was collected from the students in a random manner without resorting to any kind of unfair means (data theft, impersonation, inducement). The information will be kept secured from any unauthorized access. The respondents can demand a copy of the findings upon successful submission of the academic research.

* Required

Email address *

Your email

Your Name *

Your answer

Your Age *

Your answer

Are you a current student at the University of Wales Trinity Saint David London Campus? *

Impact of Virtual Learning Environment (VLE) – Moodle on the Learning Experience of Students at the University Of Wales Trinity Saint David London Campus

Rate the following Benefits offered by a VLE, in this case, Moodle. The most important benefit should receive the highest score and vice versa.

Greater Temporal and Spatial Flexibility *

	1	2	3	4	5	
Least Beneficial	☐	☐	☐	☐	☐	Most Beneficial

Self-management of Learning Process *

	1	2	3	4	5	
Least Beneficial	☐	☐	☐	☐	☐	Most Beneficial

Impact of Virtual Learning Environment (VLE) – Moodle on the Learning Experience of Students at the University Of Wales Trinity Saint David London Campus

Rate the following Challenges of using a VLE, in this case, Moodle. The most crucial challenge should receive the highest score and vice versa.

Greater Opportunity of Academic Misconduct (Collusion, Contract Cheating, Impersonation, etc.) *

	1	2	3	4	
Least Challenging	☐	☐	☐	☐	Most Challenging

Ineffective Communication *

	1	2	3	4	
Least Challenging	☐	☐	☐	☐	Most Challenging

Impact of Virtual Learning Environment (VLE) – Moodle on the Learning Experience of Students at the University Of Wales Trinity Saint David London Campus

Evaluate the following statements and give your opinion.

Statement-1: Moodle offers greater Temporal and Spatial Flexibility *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

Statement-2: Moodle provides easy access to Course Materials and Performance Dashboards *

	1	2	3	4	5	
Strongly Disagree	☐	☒	☐	☐	☐	Strongly Agree