

BMSW4003

DIGITAL AND RESEARCH METHODS

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Table of Contents

1.0 Introduction.....	3
2.0 Background.....	3
3.0 Aim and Objectives.....	6
4.0 Method.....	7
5.0 Results	8
6.0 Discussion	8
7.0 Conclusion.....	12
References.....	13
Appendix 1	14
Appendix 2	15

The effectiveness of Virtual Learning Environments as new Academic tool

1.0 Introduction

Virtual Learning Environment (VLE) is an educational management system that has been developed in order to create a virtual space where students and lecturers can interact for teaching and learning purposes. The VLE enables users to communicate, interact, download materials, share information and submit assignments. Furthermore, most of the University are adopting VLE for different reasons, for example to deliver distance or blended learning.

The number of institutions that adopted the VLE system is increasing day by day as it has been a solution for remote education in order to avoid time restrictions and geographic proximity.

Nowadays, the VLE seems to be very effective specially during the pandemic caused by COVID-19 that made impossible for Universities and students to interact with face-to-face classes. The aim of this research is to analyse the effectiveness of VLE in the higher education, highlighting students' perspectives related to e-learning and face-to-face learning. Another aim of the research is to demonstrate if the virtual learning Environment can positively affect students' outcomes by creating an easy and faster way between teaching and learning.

2.0 Background

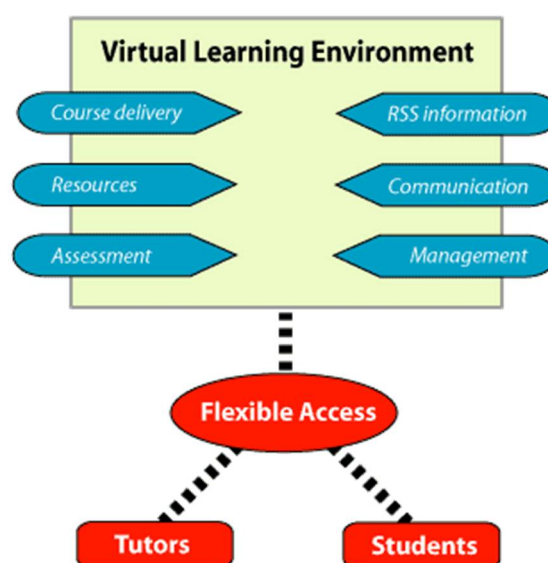
The advancement in information and technology has been increasingly adopted by higher education. In universities and other institutions, the main training criteria include e-learning processes. Because of the World Wide Web, distance education has become possible with the introduction of new creative courses, and online education is now open to both students and lecturers for their interaction (Chen and Dwyer 2008). In the last few years, the term e-learning has been related more often to the Academic scenario in order to explain the internet support used by Universities to deliver their educational service (Alexander 2001). Previous studies analysed how VLEs can affect students' outcomes and how this management computer system

can positively improve students' digital skills (Baird and Fisher, 2006). In the current scenario, where digital skills are no longer optional in order to find a good job, the use of VLE in Higher education is definitely train students to be more confident with computer software and programmes that can be a plus in the working competitive scenario (Bromage, 2004). According to Ofsted (2009), the VLE has to be adopted by Universities only to support traditional training with slides, video and audio in order to reinforce students' understanding with additional on-line materials that can be used when they are not physically in the classroom. According to Boyle et al. (2008), the VLE is a revolutionary system that enable students to be more independent and have a better understanding of the subjects as they can use on line library, check weekly materials on the virtual platform and submit their assessment without having the limit of time and geographical proximity. The VLE can cross the borders and make possible for students and trainers to interact between them even if the face-to-face lessons are not possible, for example during the COVID-19 pandemic. The figure1 shows the most important principles of VLE that are:

- Social Software
- Lightweight Programming
- Students as Co-creators
- Reusable contents and components
- Continual updating
- Personalised
- Based around service
- Harnessing Collective Intelligence
- Open Architecture

According to Ofsted (2009), some of the VLE system are too difficult to be used by students and this can decrease their performance as they may be feeling lost and discouraged. On the other hand, some open software like Moodle, Zoom, Microsoft Team that are easy to use as they were developed to be used by people that don't have advanced digital skills. Furthermore, the VLE stimulates students to increase their performance as they feel more active in using the virtual learning platforms rather than a passive face-to-face training (Coates et al., 2005). Recently, many institutions find the right balance in order to deliver a good educational service

through checking the attendances, giving one to one feedback and sharing presentations and group works. In a research study conducted by Coventry University regarding the VLE in higher educations, find out how only 14% of the students use external reading sources to add more information to their understandings. According to Mimirinis and Bhattacharya (2007) most of the students use and read only the material that they find on their student platform without using other sources as they think the sources posted on the system is enough to deliver a good assessment. Previous studies highlighted how the entrance and the use of universities' library have decreased in the last few years as students think they don't have to support their understanding with extra reading. For this reason, many universities and institutions introduced the on-line library service where students are able to download e-Books, Journal and audio materials. This is a good achievement as now students are able to read and book many books without having a number restrictions, the lectures have the responsibility to emphasise the importance of using external sources in order to increase and improve student performance.



Nowadays, many students are choosing online classes as for example, they can find a balance between working and studying specially in the U.K where the living costa are higher. In 2003 the Open University started to offer on line courses or blended and it received many applications in the last few years. Previous researches demonstrated how companies prefer to give a job vacancy to applicants that studied in a university on campus rather than distance learning courses. Many universities, in the last few years, invested in developing the Web-based educational service in order to improve the quality of the teaching and meet student wants and needs worldwide (Lundberg et al., 2008). The online classes have now many

positively aspects as the students are required to attend the classes as traditional face-to-face lessons. In the traditional educational teaching, the classroom is focused on the lecturer that has the dominion of the scene, on the other hand, the on-line learning is student- cantered as it is required to be more active and interact in order to show their participation. According to Salcedo (2010) students are less shy to communicate behind a screen rather than a face-to-face class as they are not afraid to be recognised or judged by other peers. On the other hand, the benefit of face-to-face courses are that are well-recognised modality, some students can feel disappointed from on line teaching as they always used to be present in the classroom since the primary school and the on-line teaching can be considered by them less effective in terms of quality-teaching delivered (Xu and Jaggars, 2016). Another issue can be considered the technical problem, if students don't have a proper internet connection, they won't be able to communicate or use the on-line sources. The most important consideration seems to be the future carriers and job opportunities as most of the companies and institutions do not considered distance learning degree as valuable as qualifications that have been taken on campus (Kemp and Grieve, 2014).

3.0 Aim and Objectives

The aim of the research is to are:

- Analyse if the VLE in higher education is more effective than traditional face to face courses.
- Understand if VLE in higher education affects student performance.

The objectives of the research are:

- To comprehend if VLE is considered in a positive way by focusing on students' perception.
- To analyse the issues related to VLE based on student experience that are currently studying in a British university.

4.0 Method

In order to comprehend the effectiveness of VLE in Higher Education the researcher decided to use a positivistic philosophy to have a deeper understanding of the research topic. For this reason, the researcher focused the study on students' perception related to the experience with VLE in the University (Saunders et al., 2019). The researcher collected primary data to cover the theoretical gap left from previous studies and give a valuable contribution. The study is based on quantitative method that helped the researcher to analyse and quantify data collected and test if previous theories are still valid. The quantitative approach has been used with statistical support to enable the researcher to quantify and analyse the data collected from the respondents through the questionnaire. According to the aims and objectives of this study, 16 participants between 20 and 50+ aged VLE users (students) have been chosen as target population. The sampling criteria has been chosen to cover the aged of all participants as many students nowadays decide to join universities when they are over 50. The main characteristics of the respondents are:

- Students who have VLE access
- People who are currently studying in Higher Education

The small sample of respondents and the time limit given to conduct the study, don't enable the researcher to generalise the findings but at least to give a small contribution to previous studies. Regarding data collection, secondary data has been analysed in the literature review in order to give an overview of the main frameworks and theories related to the research topic. Regarding the primary data, a survey has been conducted by the research, through a questionnaire with 10 multiple choice questions with Google Docs. The questionnaire was sent online and it has been self-completed by respondents. The questionnaire was shared by email with the following link: <https://forms.gle/EhYvzrh6DLwVh6798>. The primary data have been analysed and shown under charts and graphics through Excel. Regarding the Ethical considerations, honesty is the most important value used during data collection and analysis. The sensitive data of participants has been collected and analysed in an anonymous way and have been not shared with third parties. Furthermore, the researcher selected participants not under the legal age of 18 years old.

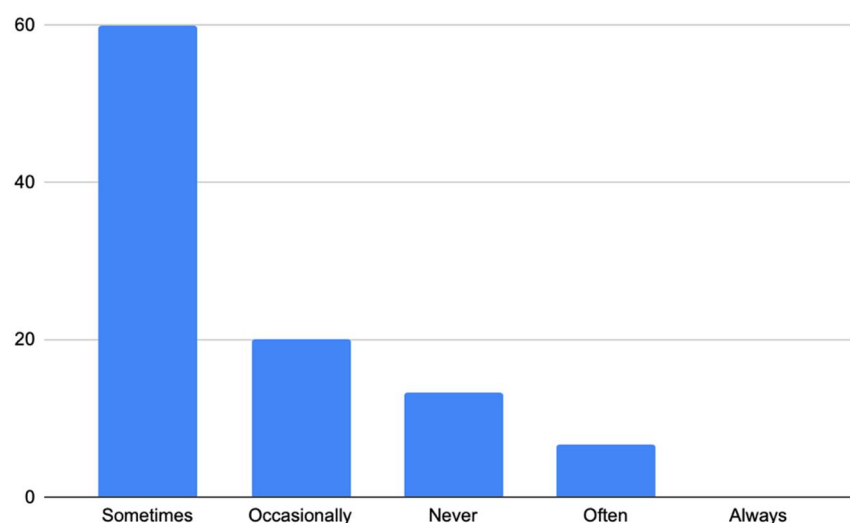
5.0 Results

The following tabulate form shows the results of the questionnaire.
(Questionnaire form in Appendix 1)

gender	age	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	
Female	20-30	Sometimes	Easy	No	Yes	Face-to-face		3 Interaction w	Satisfied	
Female	41-50	Often	Easy	No	Yes	Face-to-face		3 Socialising	Satisfied	
Female	41-50	Sometimes	Easy	No	Yes	Face-to-face		3 Socialising	Very satisfied	
Male	Over 50	Sometimes	Very easy	No	No	Face-to-face		3 Socialising	Satisfied	
Female	41-50	Sometimes	Easy	No	Yes	Face-to-face		3 Socialising	Very satisfied	
Male	20-30	Sometimes	Easy	No	Yes	Face-to-face		4 Socialising	Neutral	
Male	20-30	Never	Easy	No	Yes	Face-to-face		5 Socialising	Satisfied	
Female	20-30	Occasionally	Easy	Yes	Yes	VLE		4 Interaction w	Satisfied	
Female	31-40	Sometimes	Easy	Yes	No	Face-to-face		4 Socialising	Satisfied	
Male	20-30	Sometimes	Very easy	Yes	Yes	VLE		5 Interaction w	Very satisfied	
Male	31-40	Occasionally	Very easy	Yes	No	Face-to-face		4 Socialising	Very satisfied	
Female	31-40	Sometimes	Easy	Yes	No	Face-to-face		4 Socialising	Very satisfied	
Female	31-40	Sometimes	Easy	Yes	No	Face-to-face		4 Interaction w	Very satisfied	
Male	31-40	Never	Easy	Yes	No	VLE		3 Interaction w	Very satisfied	
Male	31-40	Occasionally	Easy	Yes	No	Face-to-face		3 Socialising	Satisfied	

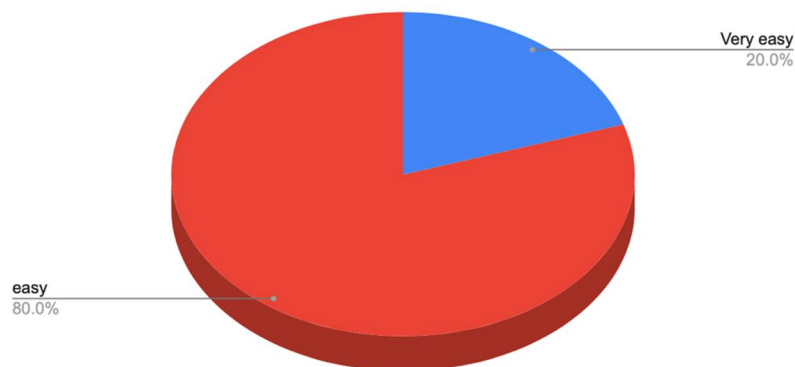
6.0 Discussion

The purpose of the research is to understand the research aims and objectives in order to test if previous frameworks and theories are still valid and to give an update overview of the research topic. The target population that has been chosen to answer the questionnaire is characterised by 16 respondents' males and females (university students) aged between 20 and over 50 years old. The first question of questionnaire highlights how the majority of the respondents 60% affirmed that they use sometimes Moodle, 20% Occasionally, 13,3% Never and 6,7% Often.



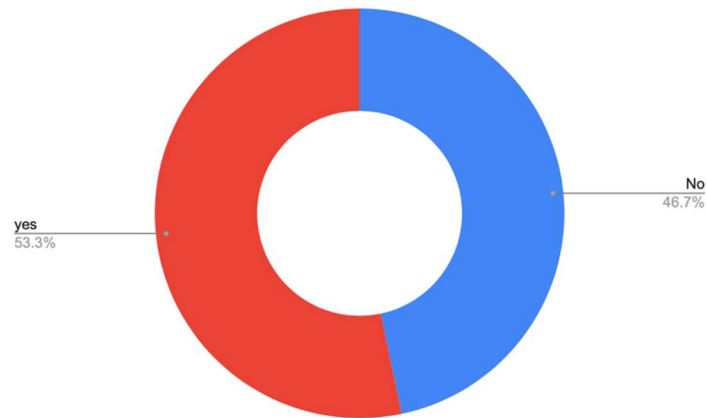
According to previous study the advances in technology has been increasingly adopted by higher education. In universities and other institutions, the main training criteria include e-learning processes. Because of the World Wide Web, distance education has become possible with the introduction of new creative courses, and online education is now open to both students and lecturers for their interaction (Chen and Dwyer 2008). The result of the first question confirms previous theories.

In the second question, the researcher asked the participants about the how hard the find using Moodle and 80% of the respondents affirmed they believe Moodle is easy to use and 20% find it very easy, no one believe it is hard or very hard.



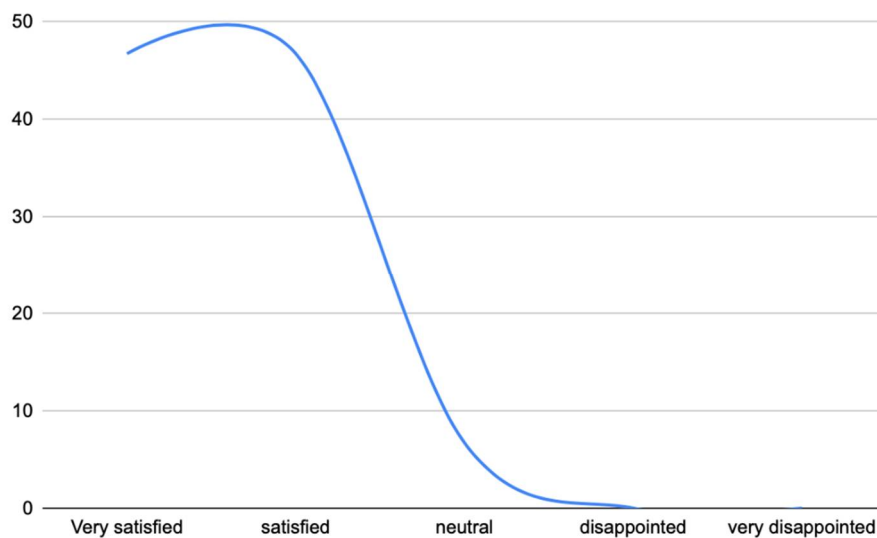
The results seem to confirm previous study that highlighted how some open software like Moodle, Zoom, Microsoft Team are easy to use as they were developed to be used by people that don't have advanced digital skills (Ofsted, 2009).

The majority of the participants 53,3% believe that VLE is less effective than face-to-face classes. On the other hand, a good percentage 46,7% affirmed that is more effective that traditional learning techniques.

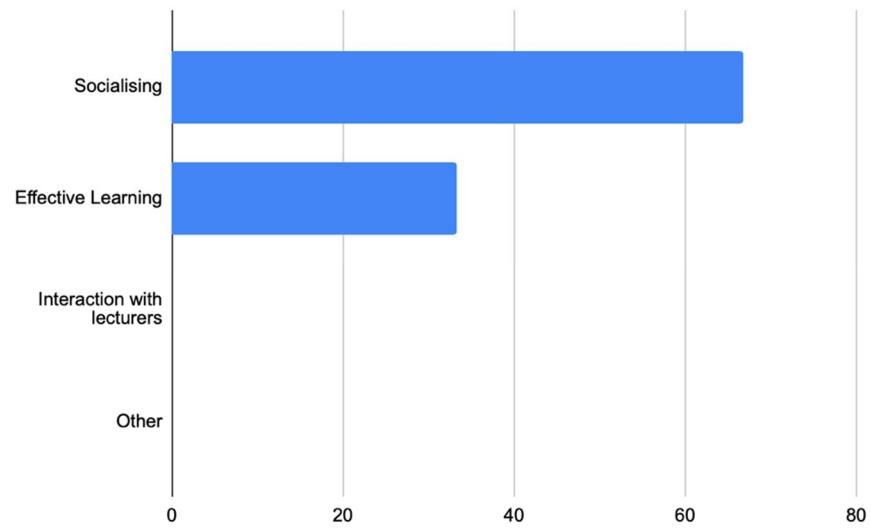


Students seem to be convinced that traditional face-to-face classes are more effective as most of the companies and institutions do not consider distance learning degree as valuable as qualifications that have been taken on campus (Kemp and Grieve, 2014).

The majority of the students confirmed to be satisfied 46,7 and very satisfied 46,7% about the VLE offered from their University while only 6,7% of the respondents took a neutral position.



The findings seem to give a positive consideration about VLE related to students' perception and experience. The students are mostly satisfied with e-learning service offered by their Institution and the only aspects that they miss from traditional teaching/learning techniques are socialising with peers 66,7% and a better interaction with Lecturers 33,3%.



7.0 Conclusion

The advances in technology made possible for Universities and Institutions to introduce new and developed e-learning methods. The VLE is a revolutionary management software that allow students to progress with their carrier and improve their digital skills in an easy and faster way. The VLE made possible to avoid time restrictions and geographical proximity, bringing flexibility and innovation in the current academic scenario. Nowadays, the introduction of open software like Moodle allows students to download materials, submit assignments and interact with peers and lecturers, especially during the current pandemic caused by COVID-19.

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Appendix 1

QUESTIONNAIRE

The effectiveness of Virtual Learning Environments as a new Academic tool

Q1 Please select your gender

- Female
- Male
- Prefer not to say

Q2 Please select your age group

- 20-30
- 31-40
- 41-50
- Over 50

Q3 How often do you use Moodle?

- Never
- Occasionally
- Sometimes
- Often
- Always

Q4 How hard is to use Moodle?

- Very easy
- Easy
- Hard
- Very hard

Q5 Have you ever used VLE before starting University?

- Yes
- No

Q6 Do you think VLE is less effective than face-to-face learning?

- Yes
- No

Q7 What do you prefer more VLE or face-to-face classes?

- VLE
- Face-to-face

Q8 I believe the VLE is an effective academic tool (1 is not effective and 5 is very effective)

- 1
- 2
- 3
- 4
- 5

Q9 What do you miss more from face-to-face learning?

- Socialising
- Effective Listening
- Interaction with Lecturers
- Other

Q10 How satisfied are you about VLE offered from your University?

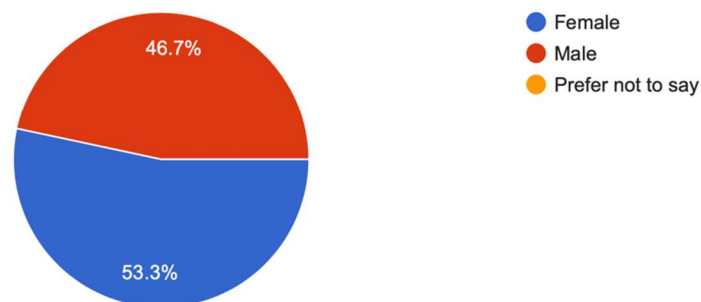
- Very satisfied
- Satisfied
- Neutral
- Disappointed
- Very disappointed

Appendix 2

RESPONSES

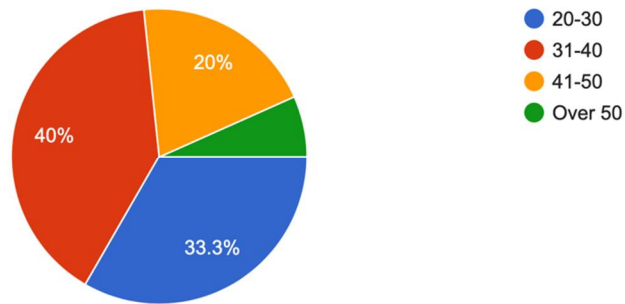
Please select your gender

15 responses



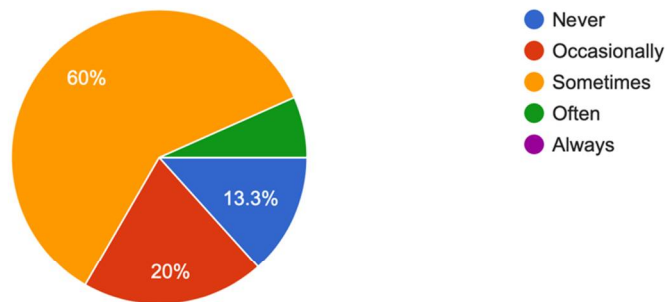
Please select your age group

15 responses



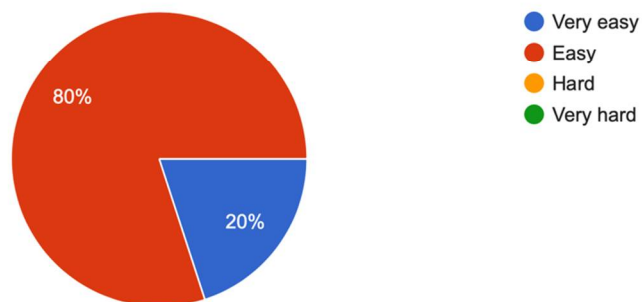
How often do you use Moodle?

15 responses



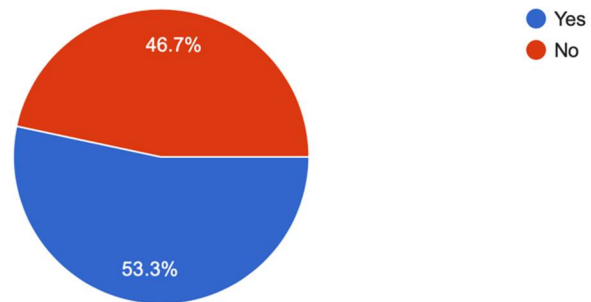
How hard is to use Moodle?

15 responses



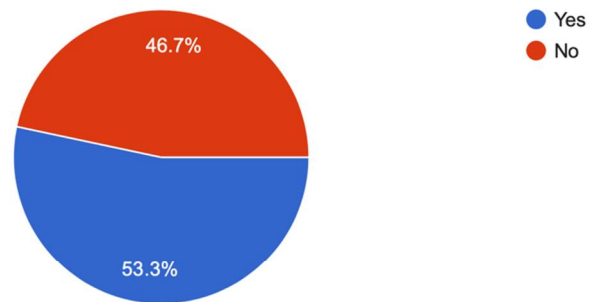
Have you ever used VLE before starting University?

15 responses



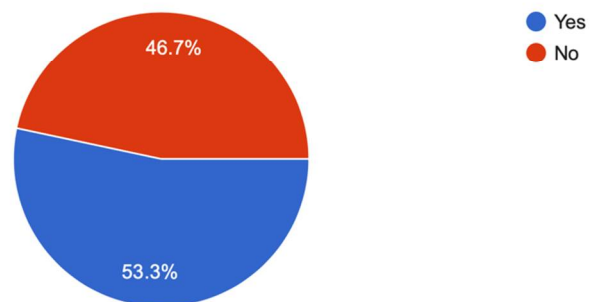
Do you think VLE is less effective than face-to-face learning?

15 responses



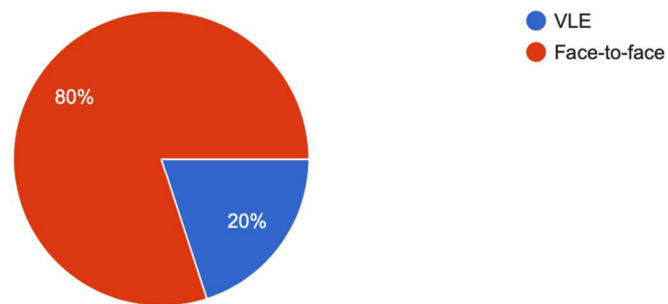
Do you think VLE is less effective than face-to-face learning?

15 responses



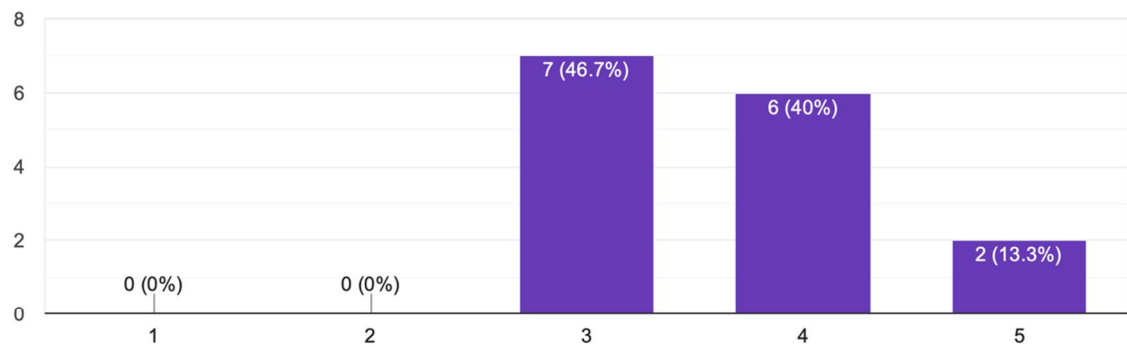
What do you prefer more VLE or face-to-face classes?

15 responses



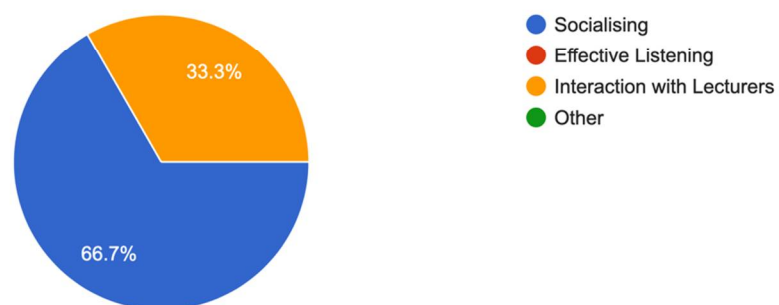
I believe the VLE is an effective academic tool (1 is not effective and 5 is very effective)

15 responses



What do you miss more from face-to-face learning?

15 responses



How satisfied are you about VLE offered from your University?

15 responses

