



Digital skills and Research methods

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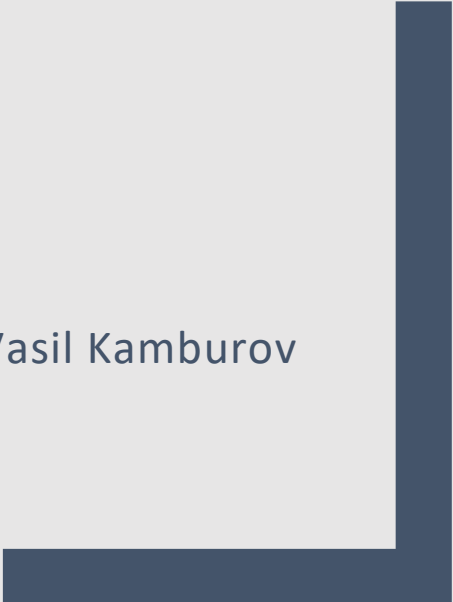


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1. Introduction

The aim of this report is to investigate students experience regarding the Virtual Learning Environment. In order to acquire reliable results, the researcher will collect primary data in the form of a survey, which will be analysed as well as used alongside secondary data sources. Additionally, a definition, explanation and analysis on qualitative and quantitative methodologies will be included as well as describing of the method used. This report has been produced to explore and clarify what is the students opinion on their experience with VLE and produce new approach regarding improving it by analysing the aforementioned data and drawing out conclusions.

2. Rationale

With it being a somewhat fresh method for acquiring education, like traditional, virtual learning has its advantages and disadvantages. Some of them could be seen in the table. Emarkable(2018)

<u>Advantages</u>	<u>Disadvantages</u>
Convenience- flexibility in undertaking classes with option for times to be set according to a given student.	Isolation- understanding a subject could sometimes be hard and it's more convenient to understand these subjects when a student is in a classroom.
Easily accessible – in today's world all that is needed in order to access virtual learning platforms is a digital device (tablet, mobile phone, computer(laptop)	Technology difficulties- This could prove very unproductive if it occurs in the middle of a class as it might result in more time spent on fixing a given software or hardware problem than on the actual learning material
Affordability- all that is needed in order to access a virtual learning platform is a network connection, eliminating all other costs such as travel costs.	Self-discipline- having the needed motivation during a given module is essential, and this results in people who tend to leave stuff for the last minute affected.

Emarkable (2018)

In order to get further information regarding the students virtual learning experience the researcher will include both primary data under the form of a survey and secondary data collected from articles and books. The reason why the researcher has chosen survey as their primary data collection method, is because it provides the clarity and precision in the results collected which should lead to reliable conclusions. Also, no financial expenses are involved and, due to the survey's simplistic structure along with the easy distribution method (sent via email) to the people sample it makes it very time efficient as well.

In order to also eliminate the most familiar disadvantage seen in surveys the questions will be designed in such way, so they are appropriate for every person in the sample. Sincero (2020)

3. Literature review

Not only are students the primary user of virtual learning environments, they are also the go to resource in order to get the best results of VLE. Due to the insufficiency of equipment, assets and facilities a vast number of lecturers and researchers have become more and more interested in online learning platforms since it's extremely convenient and flexible for all parties. Castro and Tumibay (2019) In order to produce provide convenience to students and lecturers different approaches are undertaken in designing, establishing and managing digital libraries and virtual learning environments respectively. The most common difficulties are linked with technical, person and administrative issues. The build-up of a link would however provide possibilities of more efficient synergic learning, resources usability and re-usability and time efficiency for all involved in virtual learning. To produce better integration, it's very important for librarians to build up a new approach regarding improving it. Virkus et al., (2009)

4. Research Methodology

Research methodology demonstrates the exploration is a scholastic methodology that alludes to the way toward looking for appropriate data on a particular theme. Zikmund (1997) defines research methodology as a part of the study that gives detail vivid details about the essence of the research and the occupational actions taken to acquire the data.

4.1 Research philosophy- Improvement

The research philosophy is built around the improvement of the VLE service by implementing the data collected. It's vital to take the philosophy into consideration preliminary to the execution of a given research. The reason behind this is it administers a vivid plan as to how investigators can form and execute their studies. It also helps in making a decision regarding the right approach and method when it comes to data collection and analysis. Remenyi et, al. (1998)

4.2 Research method types

There are numerous different methods which can be used in order to conduct a research, however there are two which are considered the most common types of research. These are Qualitative and Quantitative.

Qualitative data method includes practical and allegorical approach to its case's demeanour. In other words, occurrences in ordinary activities where striving for explanation or clarification regarding the people's understanding is what qualitative researches look for.

Quantitative data method- "Quantitative studies consist mainly of data analysis through various sources: data driven observation, scientific research and close-ended questions" (Carol & Rothe 2010).

Combined research method- this method is aimed to gather, analyse and combine written and numerical data using both methods mentioned above withdrawn from the researcher's study. Creswell (2003)

4.3 Data and Data collection methods

To be able to comprehend data collection it's required to understand what data means what are the two types of data.

Data is a raw piece of information. More than often data does not have any meaning by itself and needs to be methodized in order to make any sort of sense. When the given data is composed, catalogued, refined or presented It's known as **information**. Diffen (n.d.)

The two types of data are called primary and secondary. **Primary data** is "new information collected specifically for your purposes, directly from people in the know. Methods of primary data collection vary based upon the goals of the research, as well as the type and depth of information being sought." (Wolf, 2016) A few examples of primary data are: observation, interviews, surveys and focus groups. They all have their pros and cons, however what's important to note regarding these three examples as well as all other examples is the fact that all primary data has one big advantage and one big disadvantage.

The advantage is that this type of data is the most accurate and reliable data which can be collected. It does however take an enormous amount of time when compared to collecting secondary data which is its disadvantage.

Formplus Blog (2020)

On the other hand, material which has been collected by other people is **secondary data**. Usually it's relatively easy to acquire this type of data which can then be used to support any exploration activity. Knowing how and where to acquire it as well as deciding whether is the right information is key to gathering and using the right material. Wolf (2016)

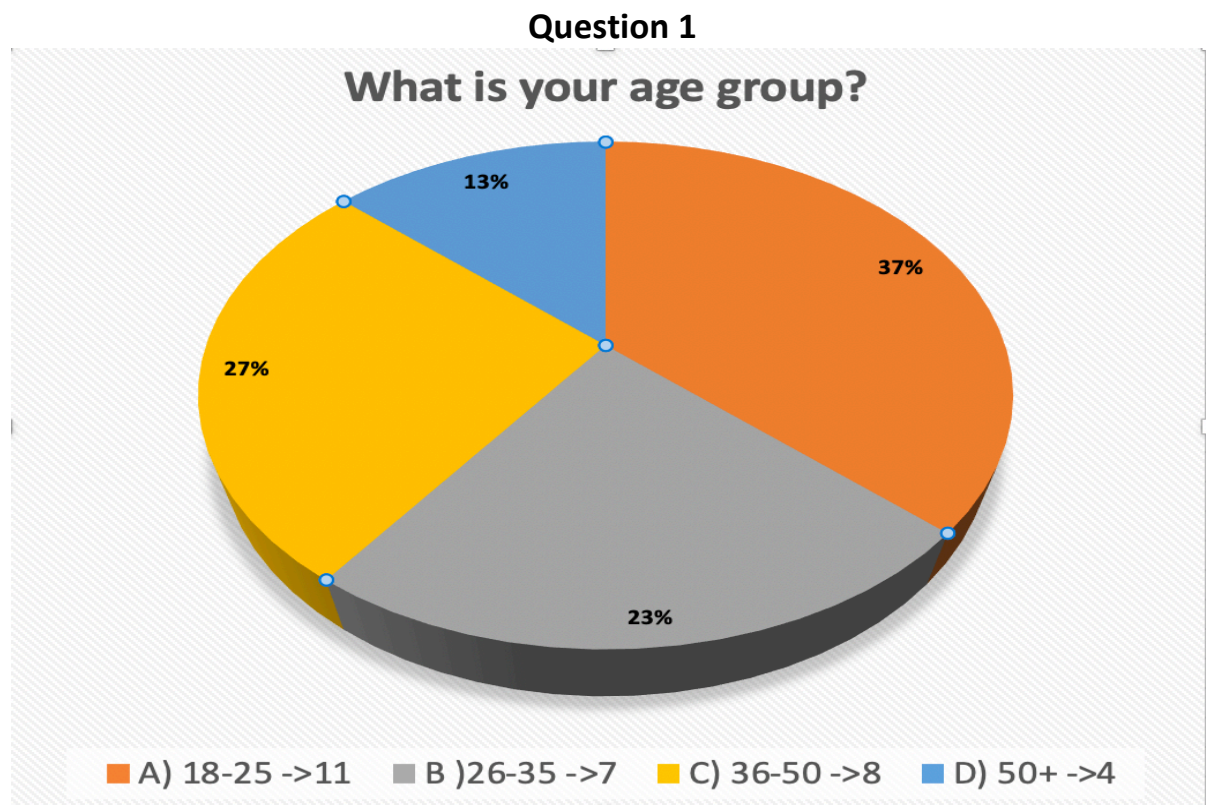
Just like primary, secondary data has one distinct advantage and one such disadvantage. The advantage is that it's very time efficient to collect this type of data, however as mentioned above it's really important to understand how to find the right information and even then it could be subjective or wrong entirely which is why it's not as relevant as primary data. Pérez & López (2013)

4.4 Data collection process

In order to acquire most reliable results possible, the combined research method will be used under the form of a survey which will include close-ended, multiple choice and open-ended questions. The latter falls under the qualitative research method, however the results taken from it can be interpreted both quantitatively and qualitatively and it gives the population sample the option to provide the researcher with information regarding personal experiences with Virtual Learning Environment.

Along with the aforementioned survey (primary data) the researcher will back up their analysis by using information gathered from articles, websites and books (secondary data). The reason behind this is it backs up the data and content included in this report and therefore becomes more dependable.

5. Survey (Questionnaire)

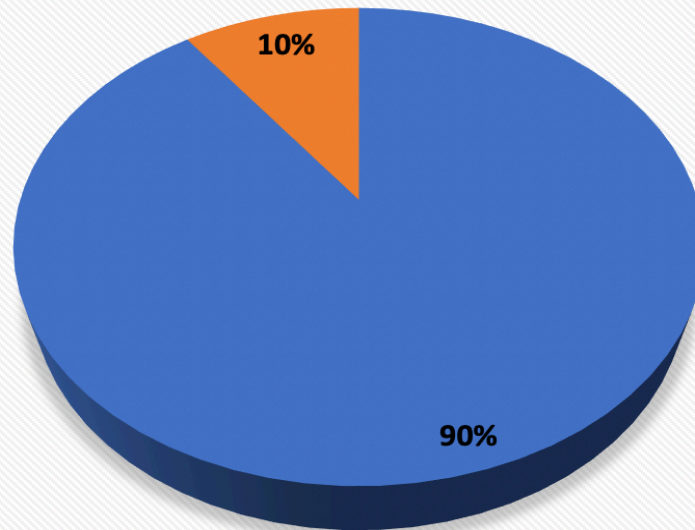


Pie chart analysis, question 1- The biggest part, in particular 11 out of the 30 people sample are aged between 18-25. Next come in people aged between 36-50 with 8 people followed by the 26-35 aged group which consists of 7 people. The rest 4 people of the sample includes people aged 50+.

Looking at these results it can be seen that the people in the sample are relatively young with more than a third (37%) falling under the youngest category and only 13% being in the oldest category. The other half of the sample is made up of the two middle age categories with people between 26 and 35 and between 36-50 totalling at 23% and 27% respectively.

Question 2

Are you familiar with Virtual Learning Environment?



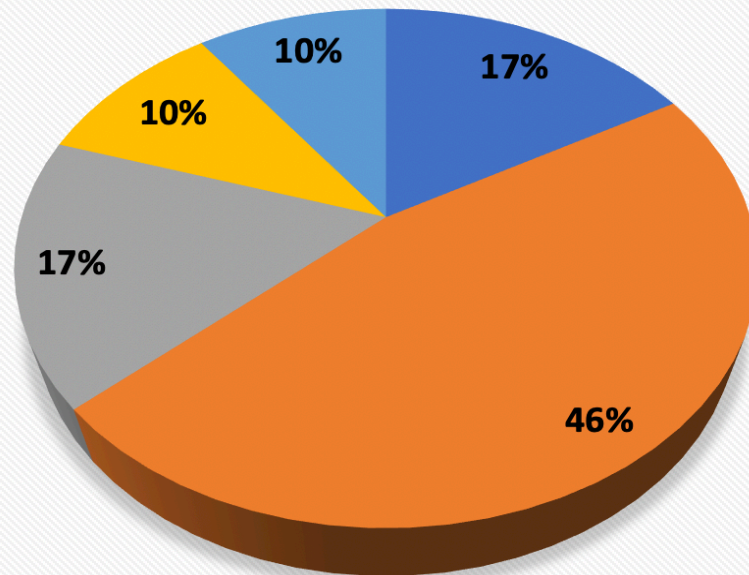
■ A) YES - 27 ■ B) NO -3

Pie chart analysis, question 2- out of the 30 people sample 27 people have responded positively when asked whether they were familiar with VLE and only 3 submitted that they have never heard of it.

In other words, 9/10 (90%) have used or have at least heard of VLE against only 1/10 (10%) not familiar. That results in a very competent nature among the sample which should eventually lead to better results as it does provide information regarding people with previous experience who have most likely faced difficulties and seen advantages of VLE.

Question 3

How often do you use Virtual Learning Environment (Moodle)?

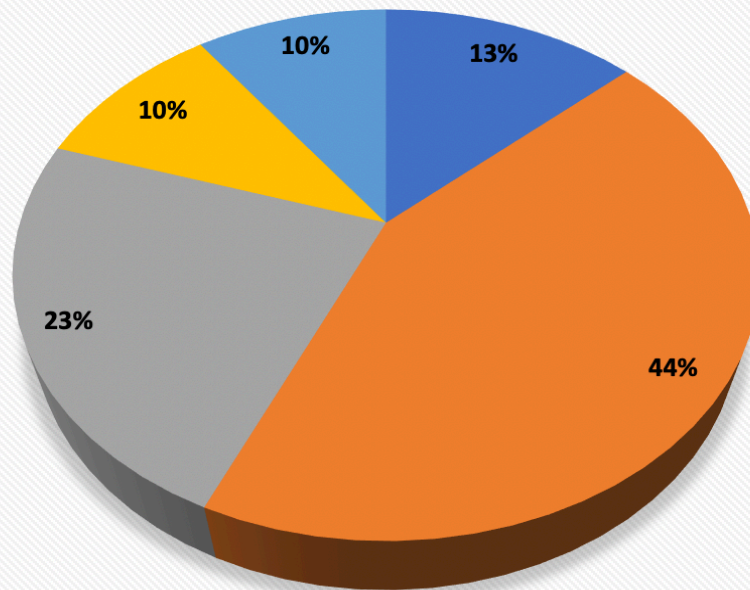


■ A) Everyday -5 ■ B) Every other day -14 ■ C) Once a week -5
■ D) Rarely -3 ■ E) Never -3

Pie chart analysis, question 3- Regarding this question there is a mix of different answers involved. However, it can clearly be noticed that students tend to use VLE every other day with nearly half (46%) or more particularly 14 people doing so. Looking at the rest of the results it's really interesting to notice that there are two identical groups with categories A and C compiling 5 people each and categories D and E 3 people each. As expected category is equivalent to the amount of people who have are not familiar with VLE (see previous question).

Question 4

How likely is it that you would recommend Virtual Learning Environment?

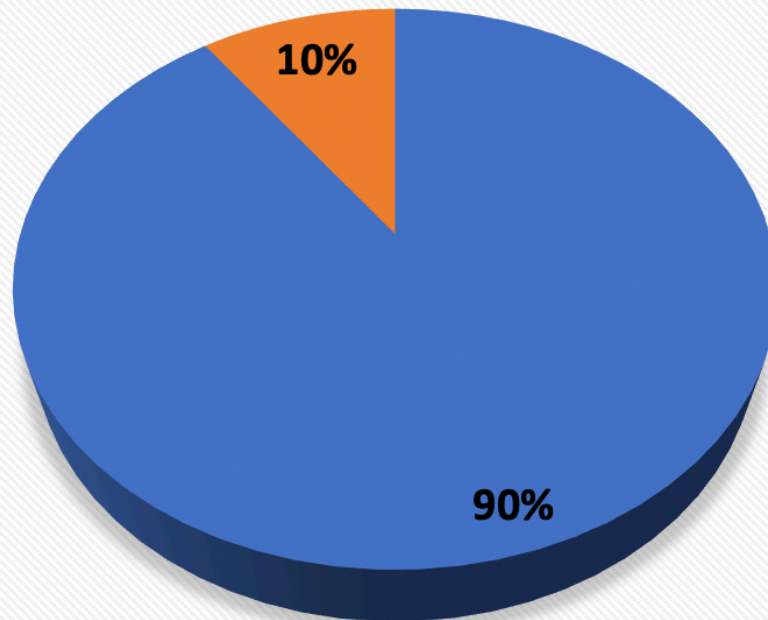


■ A) Always -4 ■ B) Very Likely -13 ■ C) Likely -7 ■ D) Not Likely -3 ■ E) Never -3

Pie chart analysis, question 4- looking at the pie chart it's vivid that category B is the clear dominant, coming in at 44% (13) meaning that a pretty big part of sample consists of people who would very likely recommend VLE. 7 people (23%) of the 30 would likely recommend it. Next come in people who would always recommend the and this category consists of 4 people (13%). Categories D and E share the same amount of people coming in at 3 each.

Question 5

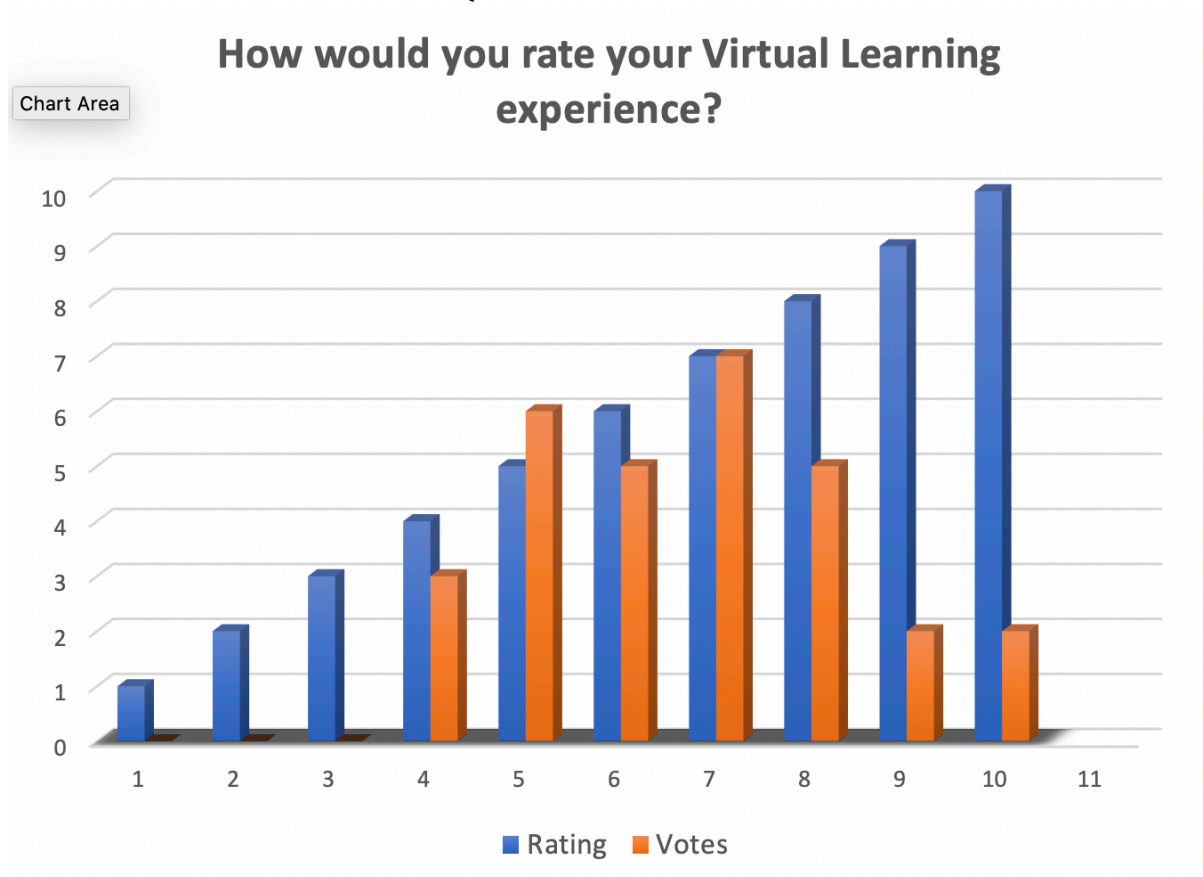
According to your opinion how is VLE (Moodle) impacting on students' learning experience?



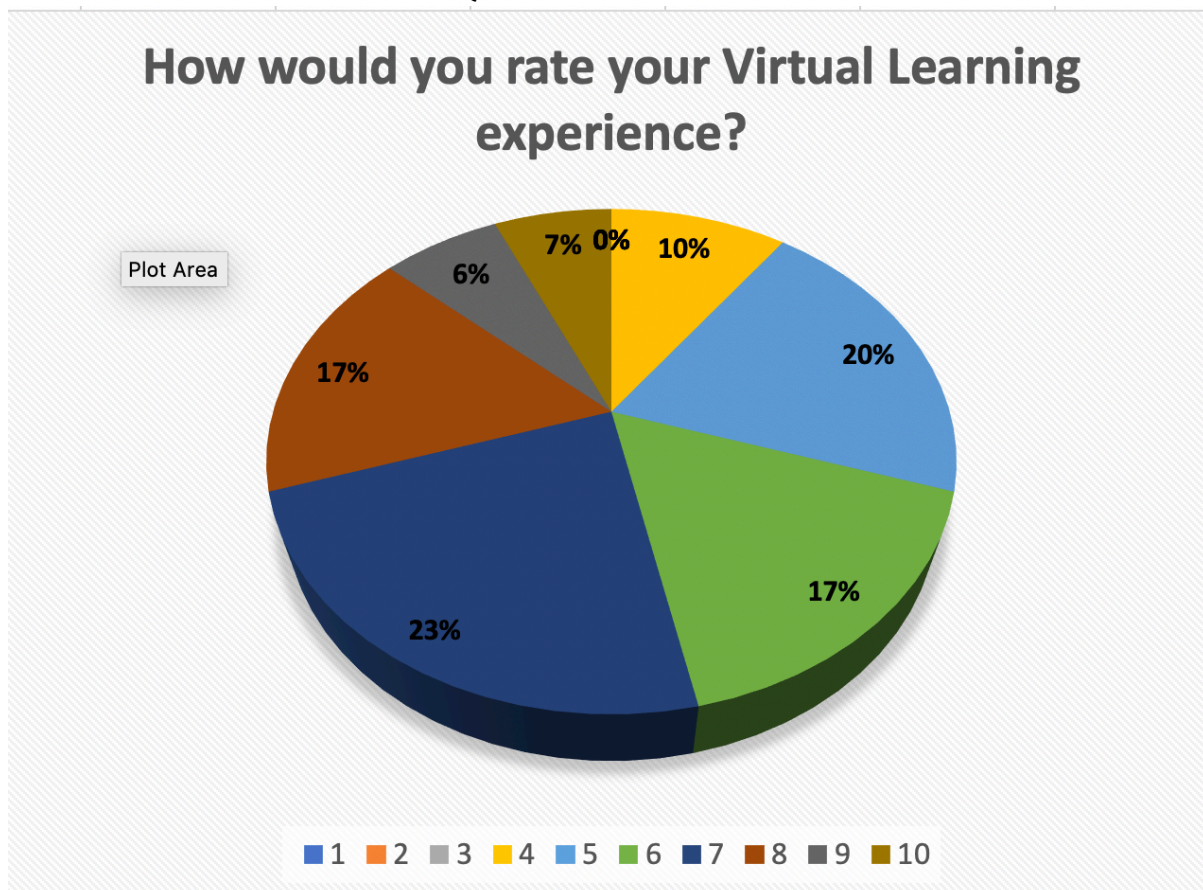
■ POSITIVELY -27 ■ NEGATIVELY -3

Pie chart analysis, question 5- This chart shows that 27 people out of the 30 total recognize that VLE has a positive impact on studying as opposed to 3 how have not deemed it as positive side. That means that every 1 person of 10 thinks it does not have a positive impact and the rest 9 people think the opposite. This response is massive in a positive way.

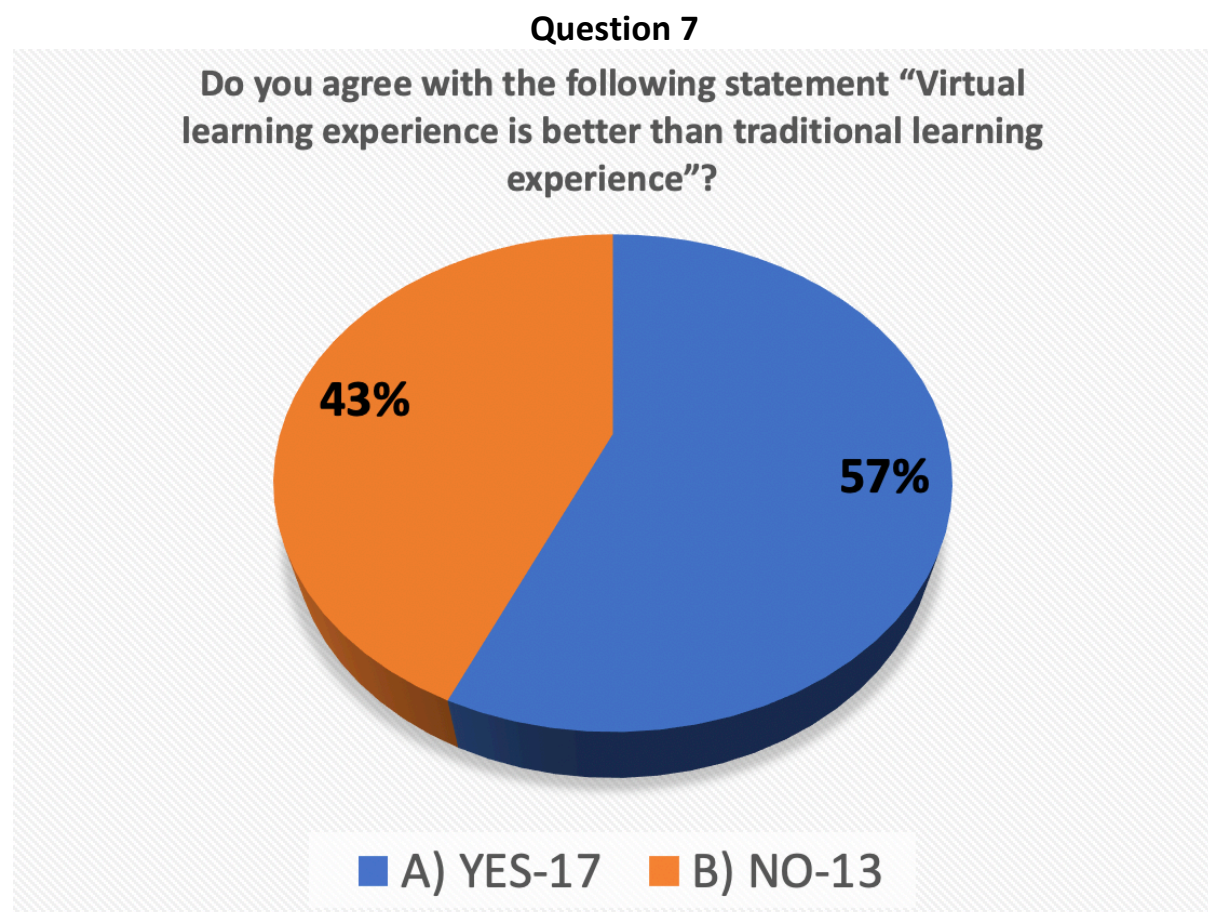
Question 6 Bar Chart



Question 6 Pie Chart

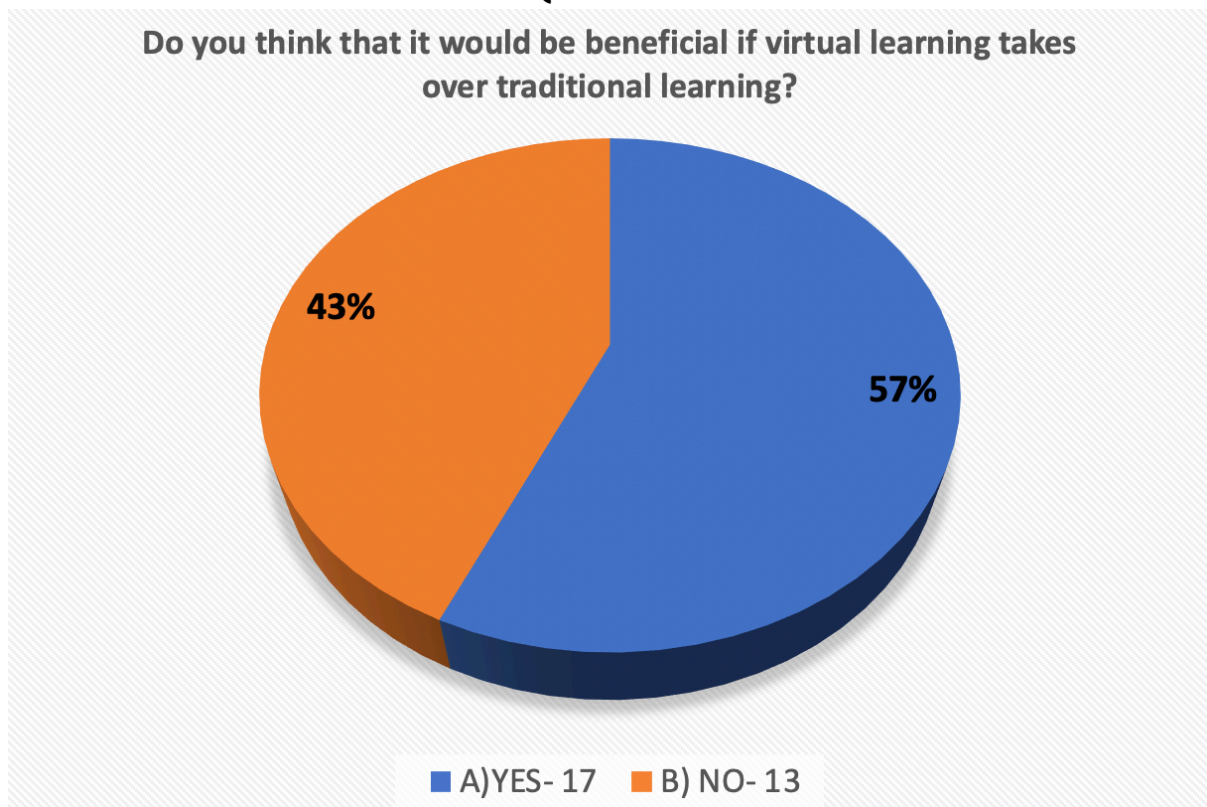


Bar and Pie chart analysis, question 6- Looking at this bar chart somewhat balanced results could be seen. The highest amount of people (7) voted for 7 as a score out of 10 followed by rating 5, chosen by 6 people. Next come in ratings 6 and 8 which share the same number of votes at 5 each. 4 is the next rating in line with 3 voters. Ratings 9 and 10 also share the same result at 2 votes each. And surprisingly enough no one has deemed VLEs rating to be anywhere between 1 and 3. Taking a look at the pie chart as well, a pretty solid result can be noticed, seeing as nearly a quarter (23%) of the sample have deemed their experience good. And very close to that, 1/5 of the sample (20%) have described their experience as average. Above average(6) and very good(8) have both got 17%, and 4 people have split their experience between Great(9) and Excellent(10) coming in at nearly 7% each. Only 13% have deemed their experience below average(4) and the worst three ratings don't qualify in throughout the sample ratings (0.00%).



Pie chart analysis, question 7- The pie chart shows that 17(57%) out of the 30 people sample agree that "Virtual learning experience is better than traditional learning experience" the rest of the people amounting to 13(43%) don't. This means that even though it's not by much people have had better experiences by learning virtually as opposed to traditionally.

Question 8



Pie chart analysis, question 7- This chart shows the exact same results as the one from the previous question with 17(57%) out of the 30 people sample answering with a YES and 13 answering with a NO. Therefore, yet again even though is not that big of a difference (only 14%) the bigger part of the sample think it would improve the student experience if they are studying from home as opposed to going to university.

Question 9

According to you, what could be changed in the Virtual Learning Environment platform to make it perform better?

Since question 9 is an open ended but unlike question 5 it has a bigger diversity in the answers no chart could be produced. However the answers the 30 people sample have provided are explained in the summary below.

6. Summary of Findings

The sample has provided reliable information in order to get a vivid description of their experience with VLE. First of all, the sample of people is relatively young which provides better results seeing as older people “Fear of making mistakes and wider concerns about their social responsibility are among reasons why older people are rejecting digital technologies, a new study reveals.” (Lancaster University, 2018)

One pattern that supports this theory could be seen, when taking questions 2 to 5 into consideration as in all of them we see the same three individuals who have not had any experience with VLE prior to studying at university and are not comfortable with it in any shape or form. Additionally, looking at question 1 it’s seen that out of the four individuals who are aged over 50 three are the aforementioned inexperienced persons which builds a pretty strong case by itself. Based on that information though question 6 could not be deemed as relevant as expected. This is because two of the three individuals rated VLE as an average experience (5) based on not knowing nor understanding anything regarding it as well as the third individual rating the service a 4 out of 10 with the same reason behind it ,which has been mentioned in their answers to question 9.

Along with these three people, there were 5 more individuals who have described their experience as quite a hard one, with the reason behind it being problems with their hardware (microphone, screen, computer in general) out of which four were in the 18-25 age group and one in the 26-35 age group. The pattern formed here is further explained as a financial insufficiency which is quite understandable as according to these particular students it’s hard to keep up with all the expenses involved with living in London and studying at the same time. However, it is interesting to see that apart from that reason, the same four are pretty much fully behind VLE and the advantages it gives according to them. This is backed up by their rating given in question 6 where they split the Great (9 out of 10) and Excellent (10 out of 10) ratings and they also fall in the “always category” when it comes to recommending VLE. Last but not least they are part of the people who have both agreed with the statement mentioned in question 7 as well as the possibility of virtual learning taking over the traditional learning. The reason behind this is further explained in their comments in question 5 where they say that even though it could cost a great amount of money at this moment, this is like a deposit that pays itself in the long run, as a decent piece of hardware could be used for years to come.

7. Conclusion

Taking all this information into account it's clear that VLE does bring some disadvantages in particular cost in some cases as well as inexperience in other such. The latter disadvantage in some individuals is key in the reason why it would be hard for virtual learning to take over traditional learning though, as this puts people who fall under this category at a huge disadvantage. However, the advantages it brings are a lot more productive in the long run. Some of the advantages consist of:

- Better time management for example due to saving time when not travelling
- money saver- this includes no travel expenses, less food & drinks expenses, in many cases no child carer expenses and further private expenses
- Less stress when it comes to communication and answering in front of the whole class
- More convenient setting familiar personally to each individual as everyone is different, therefore some people are not comfortable with any other setting apart from their own and that has a huge impact on productivity.

There are a lot more advantages which can be seen when comparing the types of learning.

it's safe to say that the virtual learning environment is definitely a big step in the right direction of students learning process. And although the experience build-up process in some cases might be a tough one, and the software systems need to be continuously updated, it is nothing compared to the advantages and freedom which both students and lecturers receive with VLE. Therefore, it is vital for the learning system to further look into virtual learning and the aforementioned benefits it brings as further improvement could lead to revolutionary changes in learning as a whole.

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