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the Impact of Moodle on students of the University of
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Introduction

My name is Jana and in this writing assignment I would like to explore both the positive and negative impact VLE's have on modern day higher education. A Virtual Learning Environment (VLE) is a web-based platform design to aid students with the digital aspects of their course of study. It's a phenomenon that has grown significantly in use since the 00s. VLE's have since become a key aspect of modern-day education. Particularly when implemented in distance learning.

The main objectives of a VLE in higher education are as follows:

1. Provide the students with study material needed to support their educational development.
2. Allow students with special needs, learning difficulties or restrictions to find an alternative mode of study through the platform and giving them an opportunity to study at a speed they are able to cope with.
3. Provide cost-effective enrolment options for universities that do not require physical contact visits to the campus, saving labour costs.
4. Develop an environment where students can exchange and share study material and continue to self-educate further outside the boundaries of the campus
5. Offer academic reading material for students at a discounted price or completely free of charge.

Abstract

Through the use of data analysis techniques we can determine the impact VLE's have on today's education. In particular we will be studying the VLE used by The University of Wales, an open source VLE called Moodle.

For this assignment we can use several data collection techniques in order to obtain the data we seek. To start off, we will be collecting primary data through surveys, internet searches, academic writings and statistics.

Primary data collection

Data collection consists out of two main components. Primary data and secondary data. As the name suggest primary data is information collected first-hand by the investigating person through surveys, open discussions, research on the topic, newspaper articles or, in a corporate environment, this could also be through the collection of company records.

A prime example of primary data collection would be the conduction of a survey. Which will be my primary technique used in this writing assignment to gather the information needed in order to analyse the impact of VLE's on education today.

Survey

Through conducting a survey targeted at higher education students using Moodle as their primary VLE, I will have a better insight in the individual impact the VLE has for students of various age, gender, ethnicity, etc..

The survey will consist out of 10 questions, in which the students will have to either answer Yes (Y) or No (N). The questions are as follows:

Q1:	Do you feel like VLE's such as Moodle have simplified revising and studying your course material at home?
Q2:	If you are a working student, do you feel as if Moodle has made it possible to return to education and still be in-work?
Q3:	Would you say that Moodle has made it easier to prioritise tasks and simplify self-study?
Q4:	Would you say there is a negative aspect to Moodle as opposed to in-class learning?
Q5:	Would you prefer suspending in-class learning and replacing it for fully virtual based learning??
Q6	Would you agree that VLE's such as Moodle are an advantage to students with learning difficulties that require more time to process information than the average student would?
Q7	Do you feel as if Moodle has caused a decrease in the level of one-on-one support given to students?
Q8	Do you feel as if Moodle relying on outside factors such as internet speed and Wi-Fi connection increase the risk of missing submission deadlines?
Q9	Do you find Moodle easy to use and navigate through?
Q10	Has your experience using Moodle been mainly positive?

Secondary data collection

Secondary data information is collected by an outside source, but can be utilized by the investigator to aid in analysing the topic. For example, journals, internet research, research articles, statistics, public opinions, etc...

To accompany the primary data obtained through the survey, I will also make use of research articles and data found online to come to a final conclusion.

Prior studies were conducted on the impact of VLE's in higher education by Universities and Colleges Information Systems Association (UCISA) and the Joint Information Systems Council (JISC). They conducted these studies between 2001 and 2005. They've concluded the following:

“ There is clear evidence of increasing use of VLEs but not of widespread change in pedagogic practice. VLE management is increasingly centralized in all matters considered strategic, with dedicated devolvment occurring for a range of support activities. Differences in practice exist between old and new universities. There is in general negligible interest in standards or in institutional collaboration. “

Source: <http://www.ucisa.ac.uk/groups/tlig/teach/members.htm>

The University of Kingston has also conducted a study on the impact VLE's have on first-year student retention. They collected their data through structured interviews with academic staff and students. Their findings were that the positive impact of VLE's on retention in first-year students is likely caused by the sense of control and ownership of time the VLE's have given students. Academic staff seemed to be less enthusiastic about the increase of VLE-use than students were.

Source: <https://doi.org/10.1080/03098770802645189>

Web 2.0

A potential threat to the dominant position of VLE's in higher education is “Web 2.0”. This is a term describing a new wave of applications and tools such as Facebook, Wikipedia, Youtube, Whatsapp, etc...

“ Web 2.0 is a set of economic, social, and technology trends that collectively form the basis for the next generation of the Internet..... characterized by user participation, openness, and network effects.” (Musser et al, 2006).

“Young people are spending their time in a space which adults find difficult to supervise or understand...Use of digital technology has been completely normalised by this generation and it is now fully integrated into their daily lives.....almost all are now involved in creative production...they all use technology in a way that in the past would have labelled them ‘geeks’....”
(Green and Hannon, 2007)

VLE developers have tried to battle this challenge by introducing more personalised features for students, however the preference of using web 2.0 based applications over VLE's can be seen across the board. The reason for this is believed to be the institutional character of VLE's as opposed to the social characteristics of the Web 2.0 applications. There is a strong indication that the projected Web 2.0 expansion of use will be a threat to VLE existence or its growth and development.

Data processing and analysis

To process the data achieved through surveys I chose to make an excel sheet. Please find attached in Appendix 1.0.

The conclusion after looking at the answers is that a majority of students answered YES to the questions posed about their experiences using Moodle. On questions 6 and 7 however there was mainly a negative response.

The question in particular that was interestingly getting a majority of negative responses was the question whether the students would agree that VLE's are an advantage to students with learning difficulties. I previously assumed that for these students in particular, having the ability to control the pace of studying would be an advantage, but the results show a majority of students feel otherwise. The reasons given for their response was mainly that VLE's cannot provide the users with the one-on-one attention that these types of students generally require. Lack of extra attention might be more detrimental to them than a faster pace of studying might be. This remains to be investigated.

Ethics in Data Collection

With the recent commotions around the breach of data privacy made by data mining firms such as Cambridge Analytica, it is important to take a moment to discuss the ethics in data collection.

In 2018, the British firm Cambridge Analytica was accused of misuse of data by inappropriate data mining. They were specifically targeted for their involvement in particular far-right political campaigns in which they used data analysis to send out micro-targeted (mis)information to potential voters in order to gaslight the public to vote for the candidate whose campaign they were hired to run. They mainly used Facebook as a platform for this, gaining access to millions of users' private data in the process.

The company was exposed through a former employee of the company, Christopher Wylie. Christopher decided to be the whistle-blower exposing the company to having worked with illegal datamining techniques for the Ted Cruz campaign. He became a silent whistle-blower for an article in The Observer back in 2017, and eventually came out in the Channel 4 news and appeared in the Netflix documentary "The Great Hack".

When the scandal got exposed, Facebook's CEO, Mark Zuckerberg, was made to testify in congress against the accusations in breaching the data privacy of what is believed to be more than 50 million Facebook profiles. Urging the implementation of a more solid Data Protection Act.

The Data Protection Act

Following the data mining scandal, governments around the world were urged to update their data protection laws. This resulted in the 2018 rebirth of the Data Protection Act. This is a national law complementing the European Union's General Data Protection Regulations.

Ethical considerations

When collection personal data from individuals, a few criteria must be met in order for the process of collecting this data to be considered ethical.

The most important consideration to make would be DO NO HARM. The collection of personal data, when acquired ethically should never harm the individual in question.

Another consideration to be made is informed consent. As a data-collector, you must have complete consent by the individual whose information you are collecting. Make sure the individual has been fully informed and has given his/her consent in writing before proceeding to collect any personal data from them.

It goes without saying that collecting data from an individual who was forced into giving out that information, is unethical. The individuals must always give their voluntary participation. This leads to the last two considerations required to achieve a fully ethical process of data-collection. Confidentiality and anonymity. Having acquired personal information from an individual's private data, gives you the responsibility of keeping said information confidential and respecting the individual's right to anonymity.

Only when the investigator adheres to all 5 of the above considerations, the process of data collection can be considered to be ethical.

Conclusion

Through this writing assignment I have acquired the knowledge and skills needed to not only collect data, but also to process and analyse this in an effective manner.

Through primary data in the form of a survey and secondary data in the form of consulting results of previous studies, my conclusion on the impact of VLE's in higher education is as follows:

VLE's such as Moodle have risen up tremendously in popularity since their introduction in the early 2000's. They are now a key component of higher education and have provided a range of benefits such as easier access to study material, cutting costs for educational institutions, and making distance-learning more easily achievable.

The results of the survey showed a positive experience of the use of Moodle amongst students of The University Of Wales, Trinity Saint David. With a vast majority of students agreeing the platform enhances their learning experience.

However, as VLE's are still mainly giving off an institutional vibe, students are quick to switch to the more pleasant and personal web 2.0 applications, such as WhatsApp, Pinterest, etc.. Developers of VLE's are desperately trying to incorporate more personal attributes to their VLE updates, but the future predicts the rise of web 2.0 usage, might be the biggest threat to their existence.

The negative aspects of VLE's according to the survey participants would be the lack of one-on-one educational support by lecturers, but it was also stated that when needed, such support could be provided alongside the use of VLE's.

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