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Impact of Virtual learning environment (VLE)

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Introduction Virtual learning environment

The Virtual learning environment is a new platform accomplished for students to progress from passive to active learners through the use of it.

Active learning in the classroom facilitates the development of critical thinking skills among students that are necessary for the use or transfer of the classroom learning

According to JISC's Introduction to managed learning environments, the term "virtual learning environment" (VLE) refers to components in which learners and tutors engage in online interactions of various kinds, such as online learning. Thus, a virtual learning environment is any electronic space where learning can take place or where interactions occur.

Aim of the research

The purpose of the case study is to analyse the impact of the Virtual Learning environments over the students at the University.

The target of the Research

1. In order to enhance students' digital skills in the workplace via the Virtual Learning Environment.
2. An understanding of the significance of effective analysis of information and its translation into knowledge.
3. In order to recommend ways the researcher can overcome the limitations by utilizing a virtual learning environment in the future

What is the impact of the Virtual learning environments on the students life

In recent years, virtual learning environments (VLEs) have become an increasingly important part of education theory and practice (Weller, 2007). Weller in his book addresses the need to move beyond thinking about a VLE in terms of the particular package that a school has adopted to seeing it as a significant educational technology that will shape much of the teaching and learning process in the future.

Ideally, a VLE should allow students of all learning styles to benefit from the most relevant education, without being restricted to the lecture-based learning environment that primarily caters to auditory learners.

The impact on the students from a normal learning environment to a Virtual learning environment had a massive change on the student's life, the VLE allows the students of attend lessons or conferences from any part of the world as they don't need the presence at the actual class at the university, every student can follow their lessons just from a simple laptop, pc or either from a phone.

Normally Virtual learning environment allows:

- Content management – creation, storage, access to and use of learning resources
- Curriculum mapping and planning – lesson planning, assessment and personalisation of the learning experience
- Learner engagement and administration – managed access to learner information and resources and tracking of progress and achievement
- Communication and collaboration – emails, notices, chat, wikis, blogs
- Real time communication – live video conferencing or audio conferencing

Research methods

Qualitative research

A qualitative study relies on data collected by the researcher through observations, interviews, questionnaires (on which participants write descriptive answers), focus groups, participant observations, and recordings in natural settings along with documents.

The following are some of the most common qualitative methods:

- **Observations:** documentation of what you have seen, heard, or encountered during your fieldwork.
- **Interviewing:** asking people one-on-one questions
- **Focus groups:** generating discussion between people by asking questions.
- **Surveys:** distribution of open-ended questionnaires.
- **Secondary research:** collecting existing data such as text, images, audio or video recordings, etc.

Qualitative researchers are often viewed as instruments in research because all observations, interpretations and analyses are filtered through their personal perspectives. As such, when you write up your qualitative research methodology, you should reflect on your approach and explain your choices in collecting and analysing the data thoroughly.

Quantitative research

Among the social sciences, quantitative research is the most often used research framework. While other types of research frameworks, such as qualitative research, might be subjective, quantitative research is more objective in its approach, it investigates processes through the use of numbers, and the primary purpose of the research is frequently to generate statistics.

Quantitative data is any information that can be expressed numerically, such as statistics, percentages, and so on. The researcher uses statistics to analyse the data in the hopes that the figures will produce an unbiased result that can be applied to a bigger population in the future. While quantitative research seeks to generalise across a large number of participants, qualitative research probes deeply into specific experiences with the goal of describing and exploring meaning through textual, narrative, or visual-based data, with the goal of developing themes that are unique to that group of participants.

The following are some of the most common quantitative methods:

- **Descriptive research:** research that uses descriptive methods describes settings, circumstances and/or variables.
- **Correlational research:** correlational study seeks to establish a link between numerous variables or data points. Like descriptive research, correlational research doesn't try to explain the relationship between variables.
- **Experimental research:** the scientific method is used in experimental research to modify and control variables in order to identify the cause-and-effect relationship.
- **Surveys or questionnaires:** participants are asked questions in a survey or questionnaire to assist researchers collect the information they need. Open-ended questions can be used in surveys.

What is Data Analysis?

Data analysis is the act of analysing, cleansing, manipulating, and modelling data with the objective of identifying usable information, informing conclusions, and assisting decision-

making. Data analysis has many dimensions and methodologies, and it encompasses a wide range of techniques that are referred to by many names. It is utilised in a variety of corporate, scientific, and social science disciplines. In today's corporate world, data analysis plays an important part in making decisions more scientific and in assisting organisations in operating more efficiently.

We can then divide the data onto 2 different groups:

1. Primary data:
2. Secondary data:

Primary data

Primary data is a type of information that is gathered by researchers directly from primary sources, such as interviews, surveys, experiments, and other methods. Primary data are typically acquired directly from the source—the location where the data was initially collected—and are widely recognised as the greatest type of data in research. The sources of primary data are typically selected and adjusted especially to satisfy the objectives or criteria of a particular research project or investigation. Additionally, before selecting a data collection source, it is necessary to determine things such as the research's purpose and the population that will be studied. When conducting a market survey, for example, it is necessary to first determine the purpose of the survey as well as the sample population. This is what will determine which data collection method is most appropriate for a given community—for example, an offline survey will be more appropriate for a population living in remote places without access to the internet than an online survey.

Secondary data

In research, secondary data refers to information that has previously been gathered from primary sources and has been made easily available for researchers to use in their own investigations. The information is a type of information that has previously been gathered in the past. The data for a particular study may have been obtained by one researcher, who then made it available for use by another researcher. In some cases, such as in the case of the national census, the data may have been collected for broad use rather than for a specific study objective.

Data that has been classed as secondary for one study project may be considered primary for another research project. The same holds true if the data is reused, with the first research serving as primary data and the second research serving as secondary data, as is the case when the data is used for two separate research projects.

Analysis of the case study

1. How you find the best way of Learning and Study?

Options	Participant population	Participant percentage	Overall participants
In class	8	42%	19
On line	1	5%	19
A bit of both	10	53%	19

Table 1: In the average students prefer both class and online learning.

2. Do you think a virtual learning environment is a very effective platform to study for a student?

Options	Participant population	Participant percentage	Overall participants
Agree	12	91%	14
Neutral	2	9%	14
Disagree	0	0%	14

Table 2: Virtual learning environment is an effective platform.

3. Is it your first time using Moodle?

Options	Participant population	Participant percentage	Overall participants
I have used the platform before	9	53%	19
Never used the platform before	10	47%	19

Table 3 : Moodle has been used before for the 50% of the students.

4. Do you find the Moodle platform easy to access and use?

Options	Participant population	Participant percentage	Overall participants
Very easy	5	26%	19
Easy	13	68%	19
Difficult	1	5%	19
Extremely difficult	0	0%	19

Table 4 : Moodle is an easy platform to access and use.

5. How much time do you spend on Moodle in a weekly average ?

Options	Participant population	Participant percentage	Overall participants
1 to 2 hours	12	64%	19
2 to 4 hours	5	26%	19
4 to 6 hours	1	5%	19
6 to 8 hours	0	0%	19
8 to 10 hours	1	5%	19

Table 5 :Students mostly spend 1 to 2 hours on Moodle weekly.

6. Would you advise Moodle to your colleagues?

Options	Participant population	Participant percentage	Overall participants
Yes	7	37%	19
No	0	0%	19
Maybe	7	37%	19
Other	5	26%	19

Graphical visualisation of findings

According to the results of the above survey, 91 percent of students believe that the VLE Moodle is capable of meeting academic requirements. Most of the students feel very confident with the use of the online learning platform. A good 50 percent of them have used the online learning platform before and the students found an easy access with a simple interface to use. From the data pulled in the survey the students think that the lesson in the class with the lecturer is still something that has to keep going and it is still good to follow, but possibly if they can alternate the lesson between VLE and the actual class with colleagues and lecturer, could be a good option for the student.

Analysing these data we can also see that students do not spend a lot of time in the weekly average on the Moodle platform. The 64 percent just spend around 1-2 hours a week and only a 26 percent spend around 2-4 hours per week, which at my appeal means that the students are mostly spending their time on preparing their assignments and take just a little support weekly on Moodle for refreshing their lessons.

Conclusion

Pulling over a conclusion on the case examined above for this research , we can deduct that the virtual learning process used by the University of Wales works very well, some difficulties were found initially on establish the method of research , but overall the process of the Virtual learning environment seems still to be very efficient and I have been observing the students who works constantly and follow class online, I have noticed that they were all well prepared as the students that follow the lessons in the class, their exam were very well prepared, sometimes the interaction between them and the class becomes a bit challenging but they manage to express their ideas and ask questions normally.

Initially the online learning platforms has some massive impact on the students , especially as soon the covid as arrived , but after almost 3 years the students and the Universities seems to have a good process in place for the student to learn and being fully prepared as a students at University.

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