

Virtual Learning Education and Student Performance – Scenario in a Private Higher Education Institution

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Abstract

Rapid technological change has changed the lives of people. The development of information systems and computing especially digital power has changed the form of education and learning as well. Since December 2019, the outbreak of COVID-19 has affected the whole world and the education sector particularly. In March 2020, UNESCO had advised that education should be mobilized and continued as usual so that it will not jeopardize the teaching and learning process. Therefore, every country is trying their best to ensure that students are not dropout or loss in their learning and studies. Ministry of Education started to plan and coordinate of the re-opening of the education institutions for every level of students; primary, secondary and higher education institutions (HEI). Implementation of technology, innovation are being incorporated into teaching and learning process. Thus, all education institutions are forced and have directed for virtual learning during this COVID-19 pandemic. The lecturers and students are having virtual learning using various digital methods such as google meet, webex, whatsapp, telegram, loom, zoom, skype and more. This paper focuses mainly on the relationship between the use of a virtual learning and students' performance during COVID-19 pandemic. The sample of this study was based on questionnaires distributed to 102 students from a private HEI. The results of the study found that the virtual learning does influence on the students' performance and it has a positive impact on their performances.

Keywords— Virtual Learning, Student Performance, COVID-19, Teaching and learning

INTRODUCTION

In December 2019 severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has been named COVID-19 by the World Health Organization has outbreak from Wuhan City, Hubei Province, China. Until then it becomes a significant threat to the whole countries in this world [7]. All of the sector of economies such as trade, tourism, services and education sectors have been affected and have had to be temporarily postponed of their activities. Education is the sector that is responsible for changing the status of a country, from a developing country to a developed country. Therefore, to become the developed country, human capital needs to be increased on par with

other developed countries. Thus, as this COVID-19 also has affected the education sector, action need to be taken by relevant party and every country involved. Knowledge and technology are two important things in human capital today. Rapid access to knowledge and the use of up to date communication technology is required. Currently, information can be reached as fast as lightning using digital communications. Various digital communication methods have existed to facilitate access to information. The educational process also has been affected by this COVID-19 crisis. Many higher education institutions (HEI) have had to postpone of their lectures and

registration process due to this global COVID-19 pandemic.

In March 2020, UNESCO had advised all the education minister to face the challenges of COVID-19 pandemic, so that it will not affect the teaching and learning and academic calendars that have been planned [35]. Thus, Ministry of Education has directed all the educational institutions to use virtual learning since the period of COVID-19 pandemic. This virtual learning has been around for a long time, but its implementation is still minimal. Recently, virtual learning is one of the main methods to impart knowledge through teaching and learning to students. Many digital communications exist and have been improved for ease of teaching and learning and adapted to the current situation. Among the most commonly used digital communications are webex, google meet, google classroom, loom and others medium as well. By using this digital communication, the teaching and learning system runs friendly and easier, even non-formal and flexible.

However, to adopt the changes in the various and new technologies in implementing virtual learning, it becomes a challenge for lecturers and students. Differences in the use of technology in virtual learning may affect student's performance. Overlooked on teaching conditions may lead to overestimation or underestimation the effect of virtual learning features on student's academic success. Therefore, this study is held to examine the impact of virtual learning on student performance in a private HEI.

VIRTUAL LEARNING

History shows that industrial and technological development can change society. The development of technology, especially the development of the Internet, has challenged the concepts and theories of traditional education, especially in terms of classroom concepts and teaching and learning methods [16], [28]. Computer-assisted learning has created virtual higher education institutions (HEI) that are increasingly popular today. The virtual HEI not only provides course modules, but also provides

interpersonal communication that only requires self-study, as well as synchronous and asynchronous communication tools as basic requirements [8]. One of the methods of lifelong education is a distance learning education or online distance learning (ODL) which is enabled by electronic networks and the concept of electronic learning (electronic learning) or e-learning [2], [17], [19].

E-learning begins with the ability to access websites on the internet that are access to various e-learning resources, including information access sites, programs and various hypermedia-based learning options that use attributes and resources from the website to create a learning environment the real one [15], [20], [22]. E-learning can take place either formally by following a special program conducted by HEI virtually or as a source of informal information management as a virtual discussion location. The virtual learning cycle is described as in Figure 1.

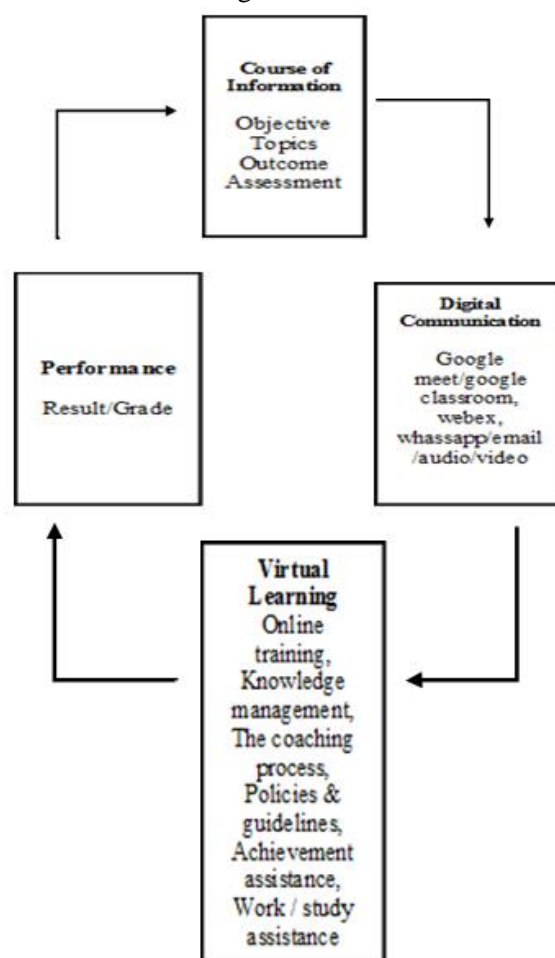


Figure 1: Virtual Learning Cycle

Educational systems based on the web are being used by an increasing number of HEI, schools and companies, not only to incorporate web technology into their courses, but also to complement their traditional face-to-face courses [36]. Virtual learning used in educational institutions has increased progress and provided innovative experiences not only to lecturers but also to students. This new environment has replaced traditional teaching and learning methods through online distribution of contents, messages and notices, online communication and even all tests and final exams are also carried out via online [19]. And applications of these technologies in virtual learning are challenges for both lecturers and students.

Most of the teachers agreed that virtual learning is a very helpful tool to improve teaching and learning processes [6]. Similar to the findings of [24] in their study stated that most of the educators find virtual learning tools are very useful and support notices, messages, and student registration. It is not only easy in accessibility but also user friendly and PDF download. However, in the sense of change and innovation, virtual learning may play a role in supporting non-formal and informal teaching and learning. Besides, [9], stressed that the association of student activity data through virtual learning with student performance is moderated by the teaching conditions.

However, virtual learning causes students to be less focused as virtual learning is not physically face to face. Some students did not even bother to expose themselves on the camera as a signal of their presences. Students just simply put on less effort on virtual learning by switching on their phone instead of their laptops and computers and remain seated during the class session. Furthermore, some students are expecting their lecturers to record the teaching and learning lessons for the session on that day. Usually during a virtual learning, lecturers will record and send videos to students via other online mediums such as telegrams or whatapps applications. So, without joining the virtual learning session, they can also view video recordings of the classes that they are missed.

Lesson on video recordings are made by lecturers to help students scan and review on specific topics.

However, some of the students take the opportunity by not attending on the virtual learning session. They believe the lecturer will send them a teaching and learning of the video recording. Furthermore, there are students who do less revision in sitting for their tests or final examinations. This is because most of the tests and final examinations conducted are given them permission to refer to reading materials such as textbooks, notes, videos, internets and so on. The students' final exam results did not show the good performance of the students. There are some students who cannot answer the final exam well even though the final exam has an open book concept. Thus, this study was made to examine the relationship of virtual learning and student performance in the private higher education institutions.

METHODS

A group of students of Diploma in Accounting from Kolej Poly-Tech MARA Alor Setar, consists of 120 students has been selected as respondents in this study. Previously, these groups of students had been exposed with the systems and software for accounting and also learn basic information technologies which make them to expose with laboratory class. Currently, these students have been using virtual learning since last year, during the early stage of the Covid 19 pandemic. To ensure students have a clear understanding on the questions being asked, usually students are asked to answer the online questionnaires at the end of the class session. Eight simple and direct questions have been asked to them in related to virtual learning and their study performances. Those eight questions have been adapted from [2] (2013). There are no questions being raised up by students while answering the questionnaires, meaning the questions are clearly understood by them.

ANALYSIS AND FINDING

Thus, online questionnaires were distributed to them and it was found that there were a total of 102 (85%) useful responses were recorded (Table 1).

The response rate of 85% in this study is suitable for analysis as a 30% response rate is rendered adequate for surveys [30].

Table 1: Response Rate

Description	Sample	Percentage (%)
Number of questionnaires distributed	120	100
Number of questionnaires responded	102	85

The demographic characteristics of the respondents are presented in Table 2. The results show that 90 of the respondents are female students, while there are 12 male students. 36 of the students are semester 1 to 2, 23 are semester 3 to 4, 21 students are semester 5 to 6 and 22 students are semester 7 to 8. Over 35% of the students are semester 1 to 2, 23% are semester 3 to 4, 20% are semester 5 to 6 and 22% are semester 7 to 8 accordingly. And from the responses, it is found that 61% of the students are received 3.75 to 4.00 GPA – Grade Point Average, 3.50 to 3.74 (22%), 3.00 to 3.49 (11%) and 2.75 to 2.99 (6%) accordingly. There are increment of their GPA – Grade Point Average once the virtual learning is implemented in the teaching and learning activities. To ensure the data is valid and reliable for this group of students, researcher also refer to the academic unit and results for their secondary data of their results on the previous semester and it is found the reporting is correct. About 83% of the students are found to improve and increase their GPA from 3.50 and above which are referring to 84 of the students. Therefore, there are also increment in their CGPA – Cumulative Grade Point Average since there are increment of GPA.

Table 2: Demographic Profile of the Diploma in Accounting

Demographic Profile	n	%
Gender		
Female	90	88
Male	12	12
Total	102	
Semester		
1 - 2	36	35
3 - 4	23	23
5 - 6	21	20
7 - 8	22	22
Total	102	
GPA		
3.75 – 4.00	62	61
3.50 – 3.74	22	22
3.00 – 3.49	11	11
2.75 – 2.99	7	6
Total	102	

The result of the responses are, 59 students are agree and 20 students strongly agree, while the 20 students are neutral and 3 students disagree that virtual learning has a positive impact on their effectiveness as a student. Virtual learning is an important and valuable aid to them in their studies. This is agreed and strongly agree by 48 and 23 students respectively. However, 27 students are shows neutral results and 3 students disagree with the important and valuable aid of virtual learning. The students have an ability and opportunity to learn more with virtual learning than without it. This is supported when 53 students show agree and 19 students strongly agree results, 24 students neutral, 5 students disagree and 1 student show strongly disagree respectively. Virtual learning also improve the quality of students learning. This is supported when the results shows 26 students strongly agree, 48 students agree, 21 students neutral, 6 students disagree and 1 student disagree accordingly.

The opportunity to learn using virtual learning at a time, place and pace to suit the students encourages them to learn independently. This is agreed by 51 students and strongly agreed by 29 students, 20 students shows neutral and 2 students shows disagree results. The way in

which courses are set up encourages them to learn independently results on agreed and strongly agreed by 62 students and 20 students respectively. 18 students are shows neutral and 2 students disagree. For the items on asking students on their courses in regards to the resource on virtual learning are mainly for information purposes. The results confirm that 35 students shows strongly agree and 39 students shows agree while 28 students shows neutral results. Furthermore, for student's courses, the activities on Moodle encourage them to talk to other students about the work. That is the reason on feedback of 28 students strongly agree and 47 students agree with that item. While another 25 students shows neutral and only 2 students disagree with the item. Overall, the findings for this analysis shows that there is a relationship between virtual learning and student performance in the context of private HEI.

CONCLUSION

The development of information systems and computing especially digital power has changed the form of education and learning activities. The lecturers and students conduct virtual learning using various digital methods such as google meet, webex, whatsapp, telegram, loom, zoom, skype and more. The virtual learning enhances skills in digital technology and improve the student performance in teaching and learning and academics. The performance of students are shows improvement when most of students received high GPA during the implementation of virtual learning methods. Besides, virtual learning has a positive impact and valuable aid to the students. It helps to increase the student's knowledge and technology skills on virtual learning. In addition, the virtual learning encourages the students to learn independently. They independently find the information and resources on the courses throughout the study. Thus, there is a relationship between the implementation of a virtual learning and students' performance in a private HEI. For future, this study can be conducted in a longitudinal study so that the impact of virtual

learning can be seen in precise and relevant. Comparison with the secondary data for a certain period also can support the findings of the empirical data used. Besides, HEI also needs to resolve students who are having problem in accessing networks due to their difficulty financially or locality even though it is involving a small group of students.

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