THE IMPACT OF COVID-19 ON TEACHING AND LEARNING AT UNIVERSITIES

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ABSTRACT:

The paper focuses on the analysis of the reports conducted by international organizations in association with the workable solutions implemented at higher education institutions. As a consequence, the paper will draw reasonable conclusions and propose practical measures in teaching and learning activities at the Institute of Industrial Management Logistics IMALOG, Binh Duong University.

Keywords: *Covid – 19, Teaching and learning, University.*

1. Problem

The Covid-19 pandemic affects every aspect of a country. In which, Education is the seriously affected sector. According to World Economic Forum, as of March 23, 2020 (in figure 1) there were 1.38 billion students affected by the Covid-19 pandemic in the world, it is because most of the countries were forced to close schools nationwide. (McCarthy, 2020)
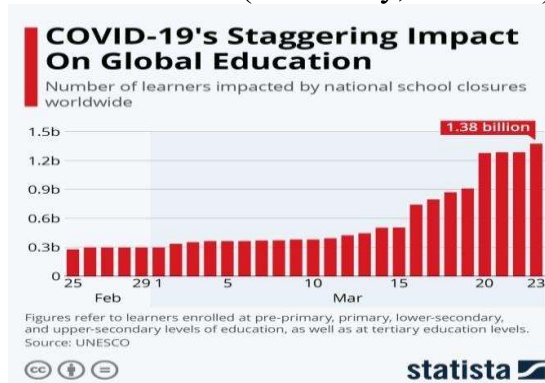
Figure 5. *Impact of Covid-19 on global education. (McCarthy, 2020)*

In response to the Covid-19 pandemic, countries have applied online learning to replace schooling, which has caused many difficulties for students who are and are about to attend university. What solutions are applied by schools in the US, UK, Australia and Singapore to maintain uninterrupted learning for students is the content of the research team's analysis.

2. Research Methods

To collect information for the article, the authors researched statistical data from universities in the US, the UK, Australia and Singapore. The research content focuses on issues surrounding students such as psychological health, the effects of Covid-19 and solutions to overcome the pandemic of the aforementioned universities.

3. Results and solutions

After careful consideration, there are some recommendations concerning learning and teaching activities at the Institute of Industrial Management and Logistics (under Binh Duong University) in order that all students and university lecturers can apply and diversify learning and teaching methods.

3.1. Impact of the Covid-19 pandemic on education in the United States, United Kingdom, Australia and Singapore.

In the case of the United States

The United States is the country hit most by the Covid 19 epidemic. In response to epidemics, the US as well as to a host of other countries, the United States imposed restrictions on social mobility and relaxation. The United States introduced policies to assist students in the online study but the situation wasn't very encouraging. In addition, the United States faced differential income of white and coloured students resulting in student dropouts, and the students' mental health suffered when faced with a computer for too long.
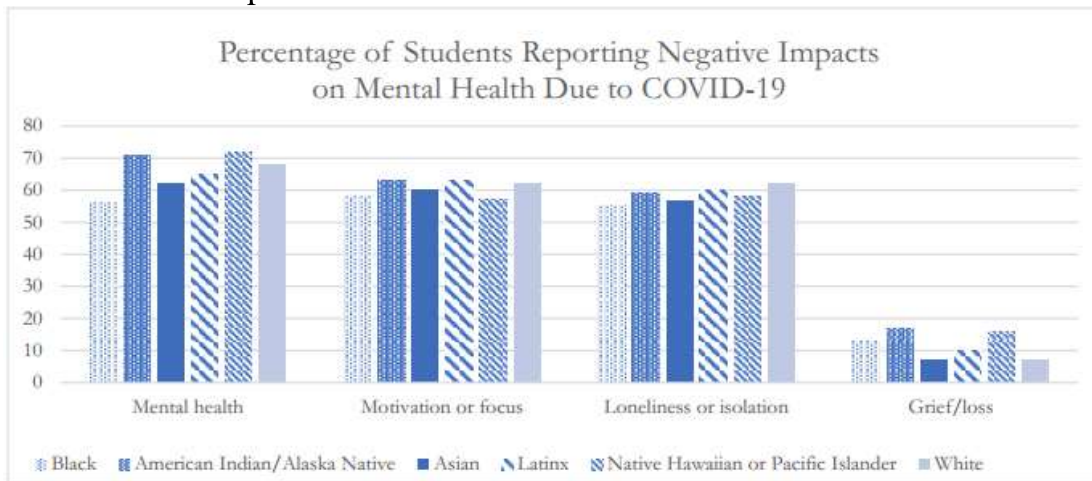
Figure 6. Percentage of students reporting psychological health effects due to the Covid-19 pandemic. (U.S.Department of education, 2021)

According to the survey of Active Minds (a nonprofit organization that promotes mental health, especially amongst young people, through dialogue and peer interaction) undergraduates study at nearly 2,100 universities suffered the detrimental impact of Covid-19 their psychological health, 20 per cent of the students were asked to report that their mental health has become significantly worse under Covid 19, 80% of reports that Covid 19 had a negative impact on their psychological health. 230 reports included elevated levels of stress and anxiety, feelings of disappointment, sadness, loneliness, and isolation. These results were repeated by the lecturers, a survey taken from 1,685 lecturers at 12 colleges and universities across the country, Reported 87% (see figure 2) that student's psychological learning was "worsened" or "significantly worsened" in the pandemic. The same survey found that 73% of faculty would provide train in students' mental health. (U.S.Department of education, 2021)

In the case of the United Kingdom

In the UK, most educational institutions have had to close to prevent the spread of the virus. Hence, lecturers and students switch to online teaching and learning at home. Students have to study online at home, be isolated from society, not able to communicate, contact the outside world when the pandemic is stressful

and universities do not have effective solutions for their studies. As a consequence, the epidemic has affected the daily life and mental health of students.

UK universities face serious financial problems. According to the analysis from the report of Forbes, the UK will lose about 62.5 million pounds ($85.9 million) in tuition fees and halve the number of students from European Union countries studying each year, students who cannot afford to pay tuition and living expenses. Furthermore, online learning creates inequality problems when access to technical equipment is not evenly distributed across the population, especially economically disadvantaged students. (Morrison, 2021)
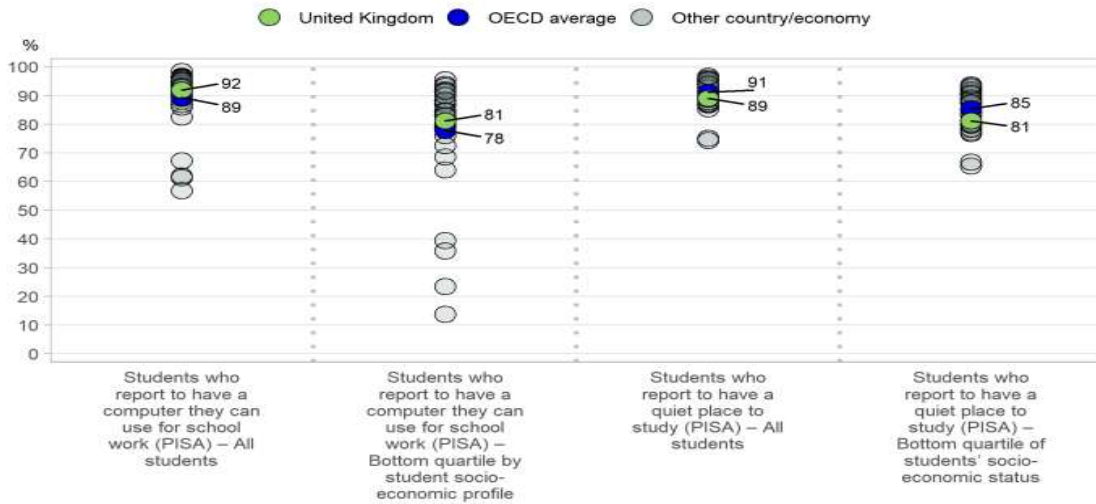
Figure 7. Equipment survey installed for home digital study. (OECD, 2020)

As can be seen in figure 3, the data of PISA 2018 (an international survey proposed by the OECD organization, to assess the ability of 15-year-old students of countries and territories within and outside the OECD, in maths, science and reading comprehension) in the UK illustrates that 92% of students said that they have a computer to use more than the OECD (Organization for Economic Cooperation and Development) average (89%). This rate for students with a low standard of living is (81%), higher than the (OECD) average (78%). The conditions for a suitable environment for learning at home are based not only on access to technology but also on the requirement of adequate space. 89% of students said they have a quiet place to study at home, lower than the OECD average (91%). This ratio is 81% for students has a low standard of living, which is lower than the OECD average (85%) (OECD, 2020). Furthermore, access to home computers may in fact be impaired when they need to be shared with other family members. Just as access to a computer, a quiet place to study could have also deteriorated during the crisis due to the same need for parents to work and for their children to study at home.

In the case of Australia

Covid-19 has affected Australia's education export sector which damages about AUD 13.6 billion (USD 9.8 billion). According to the Australian Bureau of Statistics published on August 06, the annual value of the Higher education export

sector, including tuition, accommodation, moving costs related, has decreased from AUD 40.3 billion (USD 29 billion) in 2019, to AUD 26.7 billion (USD 19.2 billion) within 12 months (to June 2021). As of May 05, 2021, the total number of international students in Australia is only under 526,000 people, down 17% compared to May 5/2020. Besides, the number of international students registered for new courses in Australia during the fiscal year 2020-2021 has dropped more than 100,000 people compared to a year before. (Linh, 2021).

Difficulties in new student enrollment had made revenue decrease. Many Australian Universities have been forced to narrow the scope of operation and cut down human resources. La Trobe University in Melbourne City (Victoria) cut down 200 jobs when revenue decreased to UAD 165 million (USD 118.8 million) in the fiscal year 2020-2021. (Linh, 2021)

Covid-19's sequelae effect on learning and academic performance of students were problems raised by doctors. Both the mental and physical health of students may be significantly affected, they may also have to struggle with long fear of not knowing when it end or it could be permanent. (Kutchel, 2021)

In the case of Singapore

Singapore's Ministry of Education (MOE) is closely monitoring learning disruptions caused by the COVID-19 pandemic and has taken steps to ensure that student learning and development not excessive damaged.

Singapore's Ministry of Education has taken measures to keep schools open as much as possible and ensure online learning maintains student learning. However, according to the MOE, the Singapore Ministry of Education did not notice a significant negative impact on student learning because of the pandemic. MOE surveyed its students about their students' complete home learning experience, and most of the students questioned showed that their learning was not seriously affected. The overall achievement of Singaporean students in the national exam in 2020 is like previous years, confirming that there are no students who have fallen behind. (Ministry of Education, 2021)

3.2. The solution has been applied by universities in the US, UK, Australia and Singapore.

Solutions in Singapore

1. Method of "blended learning"

On June 2, 2020, former Minister of Education Mr Ong Ye Kung mentioned MOE will review the approach of "combining" classroom learning and digital e-learning to exploit what is the best of both forms.

	Pre COVID-19	During COVID-19	Post COVID-19
Overall	14%	63%	51%
IHLs	20%	74%	58%
TPs	14%	56%	48%

Figure 8. *The proportion of learners report who have accessed online academic platforms provided by Institutes of Higher Learning (IHLs) and Training Providers (TPs) in Singapore. (Zan, Ang, & Puteri, 2021)*

In the year of 2018, it can be illustrated in figure 4, 14% of respondents in overall in the pre-Covid-19 period saying that they regularly use software that allows people to organize online meetings, voice calls, video, screen sharing, call recording, instant messaging. This proportion increased significantly during the epidemic in Singapore, with an increase of over four times, as the impact of the pandemic made meetings and exchanges limited. (Zan, Ang, & Puteri, 2021)

4. Using technology: Student learning space

Singapore has tapped its pre-existing national online learning portal, Student Learning Spaces (SLS), as a learning and teaching platform for teachers and students during the shutdown.

SLS is an online learning platform for Singapore students built by the Singapore Ministry of Education, a system containing materials that are consistent with the teaching plan and suitable for all lecturers and students. Instructors upload video lectures to SLS, students with personal accounts will save lectures to their computers later, submit assignments to SLS. This information exchange enables teachers to track student learning and progress.

5. Professional development and a shared community of teachers.

Singapore has stepped up professional development for teachers even more during the pandemic. Right from the moment Singapore had its first COVID-19 cases, the Singapore Teachers' Academy (AST) started expanding PD courses to provide support for teachers in navigating the digital space.

The Singapore Teachers Academy (AST) is a provider of conferences, forums, and seminars for teachers across the country. These programs come in many forms, from on-the-job training to online classes, with a wide range of subjects relevant to the teaching profession.

E-learning stands for Electronic Learning. This is a way of learning by connecting to the Internet to a server elsewhere that already has digital learning content and the applications to interact with remote students. Teachers can transmit visual, audio, or interactive materials over a broadband connection or a wireless connection such as Wi-Fi (Wireless Fidelity is a wireless internet access system), WiMAX (Worldwide Interoperability for Microwave Access is a long-range wireless networking technology standard for both fixed and mobile connections) or LAN (Local Area Network, "local computer network" is a network system used to connect computers in a small area. Computers in a LAN can share resources, typically sharing files, printers, scanners, and some other devices). Understood in a broader perspective, E-learning is understood as a learning environment with a full range of data storage, encoding and transmission technologies.

Solutions at the University of Michigan in the US.

Figure 9. *Education programs at The University of Michigan in the US (U.S.Department of education, 2021)*

To ensure the safety of students and faculty at The University of Michigan in the United States (in figure 5):

All lecturers, staff and students must complete a daily medical check before entering the school.

Wear a mask on campus and outside of school.

Wolverine Access Immunization Report.

Sharing vaccinated information to their supervisors.

The faculty and staff send vaccinated information that is eligible to draw weekly bonuses.

Symptom testing through sampling and community surveillance by the University of Michigan.

There are also activities of hygiene that ensure the safety of the learning environment: There are hand disinfectants in all classrooms and hallways, there are disinfecting wipes for all classes, all students and instructors clean the tables before and after school, and install the filter traps dust from the air and fans in the layers.

Solutions have been applied in universities in the UK.

1. Digital learning methods.

Sheets, exercises, educational videos, online lessons.

Access to internet electronic devices, apply information technology, online learning apps such as zoom, google meet, ms team.

2. Direct learning method but must ensure safety.

There are covid restrictions in place in schools.

Individual students must self-isolate and continue their learning online.

Students must be vaccinated.

Solutions have been applied in universities in Australia.

Extend the test time.

Regularly check students' concentration during lessons, ensuring all knowledge reaches students fully and vividly.

Recording for classes.

Support for students who have difficulties in health and learning and living conditions.

Priority scheduling for subjects with little or no practice.

Reduce the course load but still ensure the required quality of knowledge.

Enhance professional education for staff, including academics, involved in analytical projects at each stage of the development and implementation process.

Establish internal regulatory structure and professional expertise to

ensure and protect equity through implementing advanced data analytics.

6. Discussing research results

The Covid-19 pandemic has seriously affected the education world. In response to those effects, developed countries such as the US, UK, Australia and Singapore have taken many practical measures to overcome this problem caused by the Covid-19 pandemic. From analyzing a considerable number of workable solutions that universities in the US, UK, Australia and Singapore applied to students during the Covid-19 pandemic, the authors have come up with solutions in teaching and learning Management Institute, The teaching and learning methods have been adopted by Institute of Industrial Management and Logistics – IMALOG (under Binh Duong University, BDU) during the Covid-19 period as follows:

Firstly, design lively and attractive online lectures, helping to increase interaction for students during class hours, especially hybrid learning solutions as figure 6.

Secondly, reduce the content of the curriculum in the direction of ensuring the output quality for students, open more interactive seminars, learn through play, play and learn for students.

Thirdly, strengthen the role of students in actively researching and presenting knowledge content through thematic and group presentations. There is a form of reward and encouragement to encourage the spirit of interaction and contribution of students in each lesson.

Finally, deploying online exams, quality control to ensure fairness, properly assess students' abilities, thereby proposing appropriate teaching and learning solutions.

Figure 10. *Hybrid learning (Blended learning) have been applied by IMALOG – BDU in practice*

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ẢNH HƯỞNG CỦA DỊCH COVID-19 LÊN HOẠT ĐỘNG DẠY VÀ HỌC Ở BẬC ĐẠI HỌC

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TÓM TẮT:

Bài báo tập trung nghiên cứu các dữ liệu thu thập của các tổ chức quốc tế và các giải pháp đã được áp dụng tại các trường đại học. Qua đó, bài báo sẽ đưa ra kết luận và đề xuất áp dụng trong hoạt động dạy và học tại Viện Quản lý Công nghiệp và Logistics IMALOG, đại học Bình Dương.

Từ khóa: *Covid – 19, dạy và học, đại học.*

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