

The efficacy of online teaching and learning during COVID-19 pandemic: Reflections subject to the perception of undergraduate students from selected university, Eastern Province, Sri Lanka.

ABSTRACT

The dramatic transition to online pedagogy in education, as a consequence of COVID19 has shown several inequalities and challenges, as well as advantages in education. Evidently, the global higher education system in 2020 was profoundly changed by the epidemic of COVID-19. Educators reacted immediately and vigorously to the changes in lesson delivery. As a result, it is clear and widely acknowledged that “the crisis has accelerated innovation in the education sector.” Anyhow, whatever the situation, high academic standards are required for a university to produce high-quality teaching outputs, which in turn leads to the production of high-quality graduates, and it should be ensured all the time. With this intention, the cross-sectional research was conducted to assess the efficacy of online teaching and learning during the COVID-19 pandemic, focusing on the perceptions of undergraduate students from the selected university Eastern Province, Sri Lanka.

A validated questionnaire was used to perform an online survey. The questionnaire was completed by 171 students from the selected university. The primary goal of this paper is to analyse how the selected university, Eastern Province, Sri Lanka, education system adopted to the online teaching and learning, identify the preferred mode of study by the students in between face to face interaction and online learning, and identify the advantages and challenges faced by the students in online learning. The paper also aims to make recommendations for improving online teaching and learning through the use of online resources based on the students' perceptions and attitudes towards online teaching. The findings of the study shows that, even though the students are satisfied with the existing online teaching and learning, they prefer face to face learning than the online learning. The study would like to encourage academics, policymakers, and educators to have the strength to make radical improvements that go beyond simply changing the mode of delivery to ensure and maintain the standard in education.

Keywords: online, teaching, learning, students, perception

1. INTRODUCTION

The Coronavirus Pandemic has catalysed dramatic change, presenting numerous challenges to the global higher education. Meanwhile, this crisis can be viewed as an opportunity to rebuild long-standing educational structures and develop better and more up-to-date academic practises appropriate for today's learners young generation. This crisis can be seen as an opportunity to rebuild our long-standing educational programmes and develop better, more up-to-date academic standards that are appropriate for today's learners.^[1] Due to COVID-19 so many educators have been compelled to move online. Remote learning and teaching is made available by governments, education systems, and schools with less training, planning in digital experience^{[2][3]}. Instead of lecturing to the whole class, teachers may make videos of their lectures or find videos made by others and share them with their students. Teachers also meet with small groups of people to get specific guidance and support.

Despite all, the COVID-19 pandemic has impacted students at all levels of education. Around the world, educational schools have either temporarily closed or enforced regional closures, affecting about 1.7 billion students^[4]. Many institutions across the world have either rescheduled or cancelled their campus events in order to reduce the spread of the virus. These interventions, on the other hand, have greater economic, medical, and social consequences for both undergraduate and postgraduate populations^[5]. As education institutions continue to deliver online learning, new innovative and more effective models are being explored and practiced. The more successful online learning models have a well-balanced mix of synchronous and asynchronous sessions, allowing for more attractive modes of learning. There are many ways for educational institutions to provide remote learning^[6]. The selected university from Eastern province, Sri Lanka also respond to the changes in an effective manner and continue to disseminate the education beyond the challenges.

2. THE SCENARIO IN THE SELECTED UNIVERSITY, EASTERN PROVINCE, SRI LANKA

In the selected university, Faculties and departments being asked to transfer their teachings to online, educators were required to find solutions to continue the teaching including, using Moodle and other platforms, due to the fact that the instructions and guidelines required moving teaching online by Government. Within a limited days of receiving the instructions, the university began to explore all possible videoconferencing applications and channels such as google class room, WhatsApp, Skype, emails, Microsoft teams, and Zoom were used, in addition to the university's Moodle site.

COVID19 emerged unexpectedly, with little to no planning in place therefore, various challenges faced by the institution including, since there is no internet connection in many of the villages in the countryside areas where some students live, digital gaps among students and staff were unexpectedly exposed. The selected university faced lots of challenges when it moves to the online teaching and delivery mode including; unavailability of computers, smartphones, and tablets for students to use in connecting to the online mode. Inadequate prior training for both students and lecturers on the online teaching and learning. Many students, especially first-year students, struggled with how to work efficiently with new technology, slower internet speed and inconsistent power supply as a result occasions of power-cuts during the attending the lectures, affecting both students and lecturers.

Even though, the selected university faced lots of challenges in shifting to the online teaching learning, it is accepted by all the staff and students, as it is a general problem to the whole state university in developing country. Nevertheless, staff and students at the selected university were ready to move to the online mode, which resulted in a variety of benefits. Increase the use of available resources. Moodle and other platforms that had been underutilised prior to COVID19 were highly and extensively used during this timeframe, which were at the university but had given less importance prior to COVID19 by both lecturers and students, proved to be incredibly valuable resources during this period. The university organised numerous training and workshop sessions for lecturers on different form of digital

learning and teaching to familiarize the online teaching. Later on, the university teaching highly depend on the Zoom platform, as it received reasonably positive experience of many educators as well as students. At present, university has completed more than three semesters , and there is no question that the online mode has proved to be a backbone for completing the semester in tough times. Further, understanding the effectiveness of online teaching and learning would help to understand the perception of students to and ensure the stranded of the education.

3. METHODOLOGY

Students from the selected university were sent a link to an online Google form questionnaire. This study's questionnaire consisted of 21 questions split into two parts as follows: Three questions about the demographic profiles of participants were included in the first section (gender, department and academic year), and the impact of COVID-19 pandemic was assessed in the second part including the effect of lockdown on academic performance, the electronic interface used to access online, level of satisfaction with online learning, and evaluation of online learning in terms of opportunities and challenges. The data collection took place between March 16th to May 27th , 2021. SPSS version 27.0 was used to export and evaluate the data . To summarise the collected data, descriptive figures were provided as counts and percentages. The 5-Point Likert Scale was used to assess the efficacy of online teaching and learning during COVID among the selected university students.

4. RESULTS AND DISCUSSION

The data presentation and analysis are presented with frequency distribution, mean, and standard deviation.

4.1 Sample Profile

Descriptive statistical analysis was run on respondents' demographic variables. The results are shown in Table1.

Demographic Profile		Frequencies	Percentages (%)
Gender	Female	139	81.3
	Male	32	18.7
Year	1st Year	62	36.2
	2nd Year	21	12.3
	3rd Year	50	29.2
	4th Year	37	21.6

Table 1: Summary of demographic information

Table 1 reflects the demographic characteristics of respondents. A total of 173 responses were received, from that two respondents were removed from the study due to incomplete responses. Among the total 171 respondents, the majority of respondents 139 are females (81.3%) and 32 males (18.7 percent). As per the table 1 majority of the participants are from first year.

4.2 satisfaction of online learning

The figure 1 shows the response regarding the question are you satisfied with the existing online teaching delivery platforms?

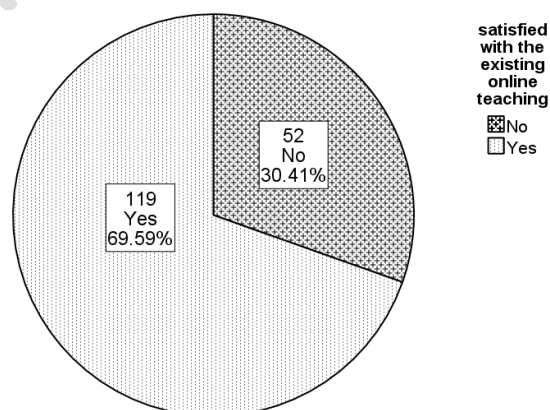


Figure1: satisfaction of online learning

The given pie chart shows that around 69.59 percentage of the students were satisfied with the existing online teaching classes mean time it shows that around 30.41% of the students are not satisfied with the online teaching classes. The reason for the dissatisfaction of the students may be due to the unanticipated, sudden conversion of online teaching. ^[7]

4.3 Preferred teaching and learning method

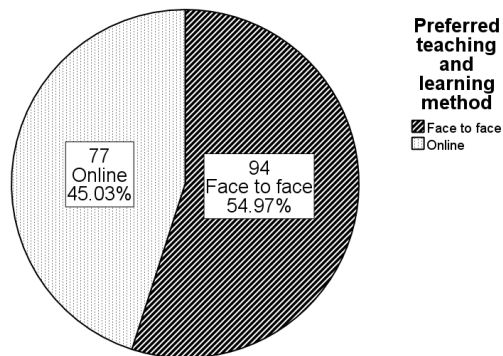


Figure2: Preferred teaching and learning method

Figure 2 reflects the students perceptions toward the preferred teaching and learning method shows that around 54.97% of the students prefer face to face teaching and the remaining 45.09% of the students prefer online learning. Hence, the findings clearly shows that more than half percentage of the students in the selected university, Eastern Province, Sri Lanka still prefer face to face learning rather than online learning.

The findings of the study suggest that, most students prefer face-to-face learning, the reason for that, students may compare their present experiences with prior face-to-face learning. However, now that online education has become widespread, it is critical to assess its performance in comparison to past approaches in order to improve it.

4.4 Perceived Advantages of online teaching and learning

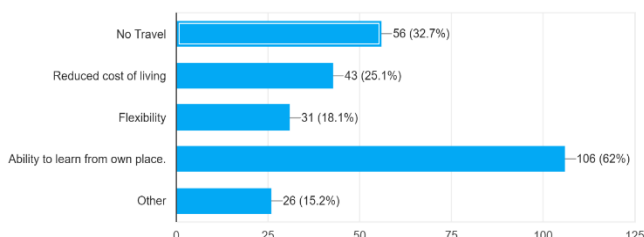


Figure3: Advantages of online teaching and learning

As per the student perception, major benefit of learning online, they could access their learning from their own place and the other major benefit that they perceived, there is no any travelling requirement to the University. Because majority of the students in the selected university are from different districts in Sri Lanka, therefore, they perceived because of the online learning they could omit or minimise their travelling as well as they can reduce the cost of living because of learning accessibility from their own place.

4.5 Challenges of online learning

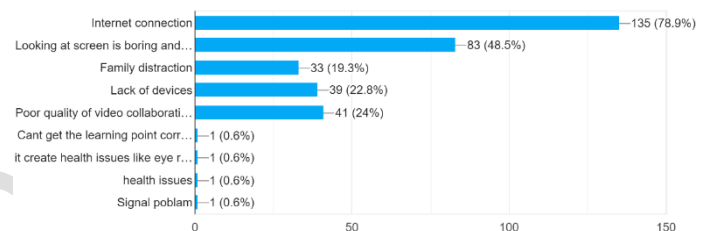


Figure4: Challenges of online teaching and learning

Despite the advantages, online learning may have been created several challenges such as poor internet connection, family distractions, lack of devices, health issues and signal problems during the online learning. The selected university students perceived barriers to the online teaching appear to be internet connection and looking at screen is boring and stressful. Online learning may disadvantage for the students with large families or with limited Internet access [7]. The study of World Bank emphasise that most students will face significant challenges in moving and obtaining online education because many are faced with many different internet access and other disadvantages [8]. The same scenario is became true in the selected university, Eastern Province, Sri Lanka students too, internet connection is a general problem faced by all most all the developing country students.

4.6 Accessing study material

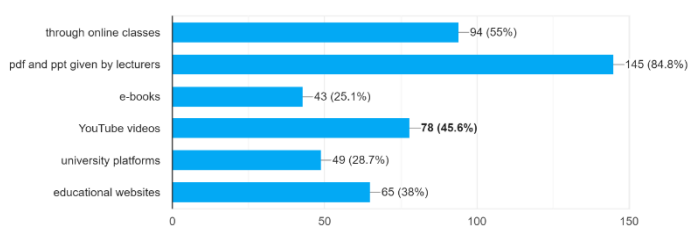


Figure5: Way of getting study material

As per figure 5, students main way of getting the study materials depend on the PDF and PPT given by the lecturers (84.8%) next to that through the online classes(55%) and YouTube videos then educational websites university platforms and e-Books respectively.

Notably , most of the students in the selected university are rely on pdf and ppt given by the lecturers and online classes for the studies compared with e-books for the students, lecturers should ensure the standard in providing the study material and online classes.

4.7 Perception of online teaching based on students' experiences.

Table 2: Statements

Statement	Mean	SD
I find it easy to engage in the online lesson	3.09	1.095
I feel able to ask the questions and doubts, I had	3.58	1.144
The teachers are well prepared for the teaching sessions	3.23	1.190
I feel online assessment methods are flexible and easy to access	3.16	1.042

Students gave high scores (3.58) to the statement "they able to ask the questions and doubts during the lecture hours in online learning. Next to that, the perception of students regarding the teachers preparation for the teaching sessions also shows relatively high scores (3.23). It indicates that students in the selected university

are satisfied with their lecturers teaching delivery during the online teaching

6. CONCLUSIONS AND RECOMMENDATION

The emergence of the COVID-19 pandemic has placed the world of higher education under tremendous pressure. At the same time, this condition has exposed the number of opportunity to the existing higher education system. The results of this survey, in light of the effectiveness of online teaching and learning in students perspectives and the findings reflects how the selected university, education system has reacted to COVID-19 disruptions. As per the study's findings, the selected university did comparatively well in handling the education during the COVID19. However, based on the certain findings of this phenomenon, the following recommendations may serve to better education delivery of the university in future.

The findings shows that students in the selected university prefer face to face learning than online, it is clear that shifting some of the programmed courses online is the most efficient and suitable short-term solution. However, in the long run, this method should rethink about better methods of assessing and grading to ensure the standard of education. Online learning can be effective ^[9]. The concept of mixed learning or flipped classrooms has been promoted and researched as highly effective teaching models.^[10]

Indeed, It cannot ignore the fact that not all students have equal access to technology, both in terms of hardware and digital competency. The digital gap is still a significant problem all over the world, particularly in developing country like Sr Lanka. Despite the abruptness of the move, staff and students were able to adapt to the online mode. The findings shows that ability to learn from own pace and no travel requirement are some of the major advantages of this transition. It is recommended that, in order to enhance online education in general, to provide online learning tools, and to provide students with electronic technology to access the internet provide affordable or even free broadband packages, and increase internet speed are few ideal ways to ensure the effectiveness of online teaching and learning.

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