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# Awareness of Online Learning of Undergraduates during COVID 19 with special reference to South Eastern University of Sri Lanka

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**Abstract.** During this COVID 19 pandemic situation, all sectors including education is also conducting its services via online. Most of the undergraduate in Sri Lanka are very familiar with class room traditional learning process. This paradigm shift has caused advantages and disadvantages in their education activities. A study on awareness of online learning of undergraduate is very much important to measure their present performances, finding pitfalls and draft online learning policies and guidelines for a successful learning environment. This research paper involved both Quantitative and Qualitative methods; where these two methods were used to determine the factors of awareness of students about online learning among the undergraduates of the South Eastern University of Sri Lanka (SEUSL). There were around 400 questionnaires were sent to the students via WhatsApp and received 310 responses that can be used for this study. Students mentioned that they were facing the internet connectivity issues (40.2%) during this COVID-19 lockdown period. Most of the students pointed out that their monthly expenditure (69.4%) and internet bill (48.5%) have increased due to this online learning system. More than 50% of the students were happy with online education during this lockdown. Only 19.6% of them preferred the offline learning. Most of the students already had the experience in Zoom (51.2%) but, they preferred to use WebEx for their online education due to the user friendliness of WebEx. It is recommended to develop any virtual reality applications to conduct practical sessions. Also, universities can conduct online training programs about online education tools. Furthermore, government should consider to provide internet connection with free of charge to the students also internet providers should analyses the coverage issues in the rural areas. Furthermore, researcher can conduct survey about students' perception and expectation about online learning in future.

**Keywords.** COVID-19, Education, E-learning tools, Lockdown, Online learning



## 1. Introduction

Almost all the sectors moved to online platform while the Coronavirus Disease (COVID-19) pandemic such as Education, grocery shops, Information Technology (IT) industries and much more, as a result of this, all the schools, educational institutes and Universities mostly started online teaching and stopped Medical and engineering related practical, which resulted over 1.2 billion students are out of the classroom in 186 countries (World Economic Forum, 2020).

Information and Communication Technology (ICT) is the inevitable and most rising matter which is influencing all the fields such as Education, Medical, Engineering, Politics, and everywhere. Among all these, ICT plays an immense and foremost starring role in the education sector. This has controlled educational organizations to adopt with modernized technologies in both teaching and learning practices.

Online learning or Electronic learning (E-Learning) is the major concept in education which converts the traditional educational shape into a new form that transforms in person or physical learning into a virtual approach of learning, where students or teachers doesn't need to be available all the time but the learning resources can be obtainable 24/7 in the form of video or audio or any other file formats. Furthermore, there are tools accessible to conduct classes online & offline such as Moodle, Zoom, Google Classroom, YouTube, and many countries introduced new systems and websites in collaboration with World bank such as Educ.ar, Eduthek, and many more (The World Bank, 2020). Meanwhile, there are negative perspectives of these new technologies in terms of internet connectivity, device compatibility, adapting to technological tools, and immediate response from the lecturers or instructors.

SEUSL is the 10<sup>th</sup> Government University in Sri Lanka which is having six faculties whereas five faculties situated in Olivil except one in Sammanthurai which is around 25 km away from the main campus. Furthermore, the total number of internal students nearby 5500 while the external number of students about 11500 enrolled in various degree programs in both English and Tamil medium. SEUSL is offering both Undergraduate and Postgraduate programs, and the majority of the mode of study is face to face, except the use of Virtual Learning Environment (VLE) mainly for upload notes. Even though, the usage of VLE is varying in between faculties due to Staff and Students acquaintance of the VLE. But, in recent pandemic issues of COVID-19, SEUSL has started Online Education almost in all the faculties not only via ZOOM, and VLE, but also through Google Classroom, Whatsapp and YouTube, according to the awareness and acceptance of Staff and Students. It is suggested to conduct online education methods in future too in case of any issues which leads to stop academic activities. Therefore, we, as researchers have decided to capture the perception of undergraduates on Online Learning: with special references to the Undergraduates of SEUSL to fill the gap if anything needs to be improved in this concept, so that, the online education method can succeed wherever SEUSL wish to continue as well start in future too.

## 2. Literature Review

Mature student prefer online education, but the biggest challenging for them is to use technology and receive timely feedback and communication from faculty (Mather & Sarkans, 2018), in the meantime majority of students take in online education over the traditional method even there are many problems on account of adaptability and accommodation available in that (Alsaaty, Carter, Abrahams, & Alshameri, 2016).

Medical students believe that the online education will give better improvement in their academic career (Mahajan & Kalpana, 2018). Also there are positive experiences from online learning such as availability of technological information, convenience of learning distance and online assessment methods while there are negative sides such as lack of technical support, insufficient feedback from instructors, poor online platform design, and wearisome training methods (Cristina, Petru, & Petru, 2017). Furthermore, Bachelor of Surgery (MBBS) in China for the course module "Traditional Chinese Medicine (TCM)" reveals that most of the students prefer online education when there is a

special need to suspend all face to face learning environment. On the other hand, online education alone cannot fill in the demand of face to face learning (Zhang et al., 2020).

The Open University of Sri Lanka is in fact the main stage to keep learning through Distance Learning to the individuals who were denied formal instruction because of a few components. Students expecting a blended learning rather than pure online (Selvaras, 2020). Online learning becomes more popular with the increasing number of users of Smart devices apart from Laptop or Personal Computer (PC) along with the rise of Internet facilities. Furthermore, it was suggested that, the blend of both E-learning and conventional learning method can be more benefits for undergraduates (Pirapuraj et al., 2019).

A study found that, learners expecting not only speedy feedback on assignments and examinations but also quality of presentation and delivery of contents from the instructor. (Denis & Simon, 2019). Also Online learning highly depends on two factors such as instructor influence and student influence such as connectedness (Cole, Lennon, & Weber, 2019).

Students' acknowledgment of E-learning is somewhat higher than neutral and younger students with technological skill gave more attention on this concept. Furthermore, it was found that senior students' acceptance of E-learning is higher than first year student (Ngampornchai & Adams, 2016).

E-learning administration quality has a straight consequence on student loyal such as user friendliness of E-learning website, Secondly, Quality of Instructor, thirdly, Administrative and Supportive Service Quality in details (Pham, Limbu, Bui, Nguyen, & Pham, 2019).

Another paper reveals that, majority of students participate in face to face class where students believe that they can interact with instructor and students to get more information and discussion in terms of subject matters while more students enrolling for online courses steadily where they can find flexibility and offering more courses across the world. Apart from above matters author suggested to use ZOOM to conduct live online sessions where both instructors and students can interact virtually (Smith, Hoderi, & Mcdermott, 2019). But in another study, there is no significant different between Virtual learning and Person to person learning even though Online learning observed as less social collaboration, lacking social nearness, and the synchronicity in correspondence among students (Bali & Liu, 2018).

Students use video tutorials to increase their subject knowledge meanwhile, universities must consider creating a common place to access those videos to students who do not have devices (Boateng, Boateng, Awuah, Ansong, & Anderson, 2016). In addition to this, Video Learning is very useful among the higher education students unless the content of the video is the same thing which are in the book or already discussed in the other lecture materials (Scagnoli, Choo, & Tian, 2019).

The Researcher said, Instructors should motivate students to use E-learning by giving training to the less skilled users as well provide interesting contents through E-learning systems, while universities help students to get internet and handheld devices within less prices. Furthermore, students' behavioral intentions to use of E-learning systems influenced by the factors, Exertion anticipation, Social impact, Performance hope, Work life quality, Internet experience and Hedonistic motivation (Sabraz & Rusith, 2019), and also writer suggested that, government should provide free internet and online learning devices to the students as many of them are from poor families, also, teachers need training on online platforms as many of them are unaware about it, and furthermore, it's not good to fully depend on online platform since classroom learning create opportunities for interact one with another across the social and cultural boundaries and most of the students doesn't have a learning environment at their home even in this COVID-19 pandemic (Ft.lk, 2020).

In a news article, 80% of Indian population uses the internet through mobile devices, among 96% students using mobile internet for educational access. Furthermore, panelists mentioned that COVID-19 brought a "second wind to higher education in India." So using this opportunity to improve the internet speed across remote areas, teacher training for online education and increase the number of tech-savvy educational institutes (Observer Research Foundation, 2020).

Authors mentioned that there are technical troubles and limitations in the online learning. Meanwhile, they enjoyed E-learning because resources can be retrieved at any time and flexible time table, furthermore students never worried about their health issues about COVID-19 (Agarwal & Kaushik, 2020). Although, the majority of the students want to continue in face to face learning because they feel they can concentrate on their studies and course work more than online learning (KEVIN KELLY, 2020). Author conducted a SWOC analysis in the time of COVID-19 and suggested that, any tool use for online teaching learning have to be less cost, can be work for slow internet connection and user friendly as majority of the teachers and students are very new to this online platform (Dhawan, 2020).

Lack of technical knowledge, poor planning of online lectures and the expensiveness of internet causes the majority of the students to have negative perceptions on online learning. It was also noticed by the researchers that the imbalance in lecture and assignments make the students not to involve in online learning process effectively. The researcher recommends to implement online learning with proper planning and training as it is unavoidable in a situation like COVID-19 pandemic (Rohman, Marji, Sudjimat, Sugandi, & Nurhadi, 2020). The need of online learning in higher education institutes is apparent as the future is unforeseeable. The online learning is highly depends on how convenient the Online learning to be used by students and the courage they get from their lecturers (Ali, 2020).

It was found in a research in USA, that resident educations like surgical study needs to be offered through distance learning methods such as online practice questions, flipped classroom model, telemedicine clinics, providing surgical videos for free, explanation of procedures etc. Even though this cannot replace practical surgical studies, it is a better alternative to adopt whenever the classroom exposure is not allowed due to many reasons. This can also result in development of new hypotheses which can be more advanced in future (Chick et al., 2020).

It was identified from the research carried out to find the perceptions of online education from Ghanian students living in China, that the online learning program is a very good initiative to continue academic activities during this COVID-19 pandemic as many students had awareness on the spread of disease. Still the drawback is students had to spend a huge amount of money to get the internet access. Also some of them faced slow internet access problems (Demuyakor, 2020). A study has been conducted among 420 Vietnamese students to observe their learning activities during the COVID-19 lockdown period. For this purpose, their socioeconomic level and perceptions of self-learning are measured (Tran et al., 2020; Trung et al., 2020). It responds to another study of the possible effects of coronavirus infection (Elsevier, 2020).

Another study has examined the 96 undergraduate students' online education approach and skills. Online education approach changes, and the association between the self-learning skill, online communications, attitudes, and purpose of the online education are investigated. The results showed that students' online education approach has positively increased. And effective self-learning skills are also discussed to improve their future online education (Zhu, Zhang, Au, & Yates, 2020). Students Internet self-efficacy had a medium effect on learning perceptions and course satisfaction (Wei & Chou, 2020).

### 3. Methodology

This research paper involved both Quantitative and Qualitative methods; where these two methods were used to determine the factors of awareness of students about online learning among the undergraduates of the SEUSL. All the four years of students from all six faculties of SEUSL were chosen as the exploration test to direct this inspection. The questionnaire was sent to undergraduates in the year 2020. There are about 1100, 700, 2600 and 600 number of students registered for different streams such as Science, Management, Arts, and Technology respectively. Among this total population, the sample was designated based on a stratified sampling technique from all streams.

The population involves about 5000 students from all faculties. The understudy populace would have the option to address the investigation issues as the majority of undergraduates have more than a semester partial experience in online learning at least through a Virtual Learning Environment and

Whatsapp. There were around 400 questionnaires were sent to the students via Whatsapp and received 310 responses that can be used for this study. Collected data through Google form was imported to SPSS and required statistical analysis was accomplished using this statistical tool. Based on this exploration, student awareness about online education tools, issues that students facing during online learning, and students' expenditure after started online learning were tested and the outcomes were enlightened using tables and charts. This investigation could have been good if more data was collected from students while the number of responses from students is equal to the student ratio according to the number of students in each faculty. Further, it could be better researched if the study focuses on staff awareness too.

#### 4. Results and Discussion

The personal demographic profile of the students is shown in Table 1. The majority of respondents were females (70.1%). But it contradicts to the previous study in 2012 that found that more male students preferred the online education (OE) (Alam, Waqar, Zaman, Shehzadi, & Mehmood, 2012). Only singles prefer the online learning system (OLS) (92.4%). According to Frimpong's study, the online education mostly encourages the married students than singles (Kwapong, 2007). The results show that mostly the Arts stream students preferred the OE rather than other streams (73.1%). Additionally, the respondents were asked about their education level, the final year (4.3%) and first-year (6.6%) students showed the less preference in this learning process while 59.5% of the second year students preferred this.

**Table 1.** Students' Demographic Profile

| Variables       | Frequency | Percentage |
|-----------------|-----------|------------|
| Gender          |           |            |
| Male            | 90        | 29.9       |
| Female          | 211       | 70.1       |
| Marital Status  |           |            |
| Single          | 278       | 92.4       |
| Married         | 21        | 7.0        |
| Widow           | 2         | 0.7        |
| Stream of Study |           |            |
| Science         | 39        | 13         |
| Arts            | 220       | 73.1       |
| Management      | 23        | 7.6        |
| Technology      | 19        | 6.3        |
| Year of Study   |           |            |
| 1 <sup>st</sup> | 20        | 6.6        |
| 2 <sup>nd</sup> | 179       | 59.5       |
| 3 <sup>rd</sup> | 89        | 29.6       |
| 4 <sup>th</sup> | 13        | 4.3        |

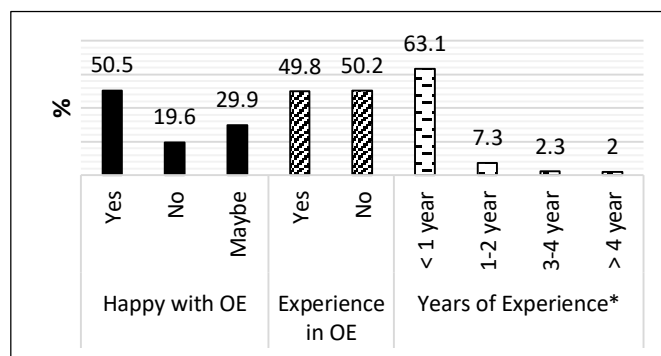
Majority of the students used smartphones (86.4%) for their education (Ngampornchai & Adams, 2016). It proves that 100% of the undergraduates have devices to access the online education (Selvaras, 2020). Furthermore, students mentioned that they were facing the internet connectivity issues (40.2%) during this COVID-19 lockdown period. It is equivalent to the recent study says that students face may problems in using the internet because of internet slow, power failure and high rate

(Liyaganawardena, Adams, Rassool, & Williams, 2014; Nafrees & Roshan, 2018). Most of the students pointed out that their monthly expenditure (69.4%) and internet bill (48.5%) have increased due to this online learning system. These results are shown in Table 2.

**Table 2.** Access to the Internet

| Variables   | Frequency | Percentage |
|---|-----------|------------|
| Device  |           |            |
| Computer/ Laptop  | 40        | 13.3       |
| Smart Phone   | 260       | 86.4       |
| iPad/ Tab   | 1         | .3         |
| Internet connection speed enough during COVID-19 lockdown |           |            |
| Yes   | 82        | 27.2       |
| No  | 121       | 40.2       |
| Maybe   | 98        | 32.6       |
| Increase monthly expenditure                              |           |            |
| Yes   | 209       | 69.4       |
| No  | 92        | 30.6       |
| Increase internet bill                                    |           |            |
| Yes   | 146       | 48.5       |
| No  | 33        | 11.0       |
| Maybe   | 122       | 40.5       |

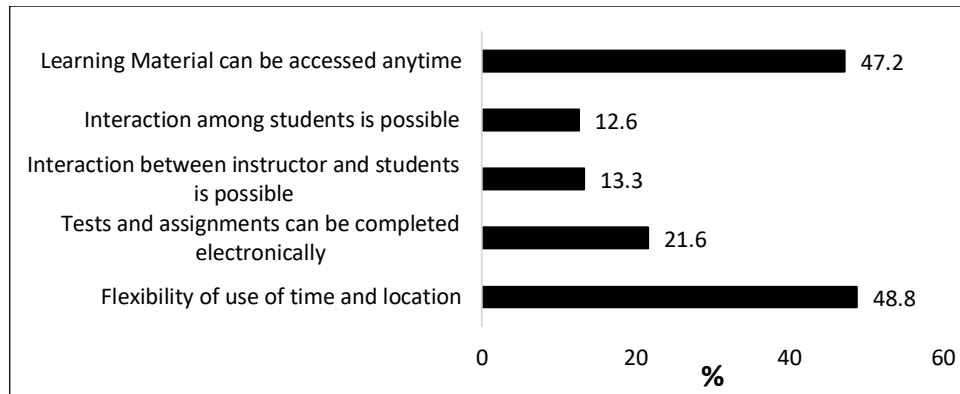
According to the Figure 1, more than 50% of the students were happy with online education during this lockdown. It proves that undergraduates prefer to use the online education system (Selvaras, 2020). Also, students expect to continue their courses in online mode during this pandemic lockdown rather than postpone. Only 19.6% of them preferred the offline learning. And majority of them had less than 1-year (63.1%) of prior experience (49.8%) on this learning process. It also declares that students are aware about OE but there are significant amount of pupils are unaware on this (Pasha & Gorya, 2019).



**Figure 1.** Awareness on Online Education

\*N=301 due to unmarked fields by respondents

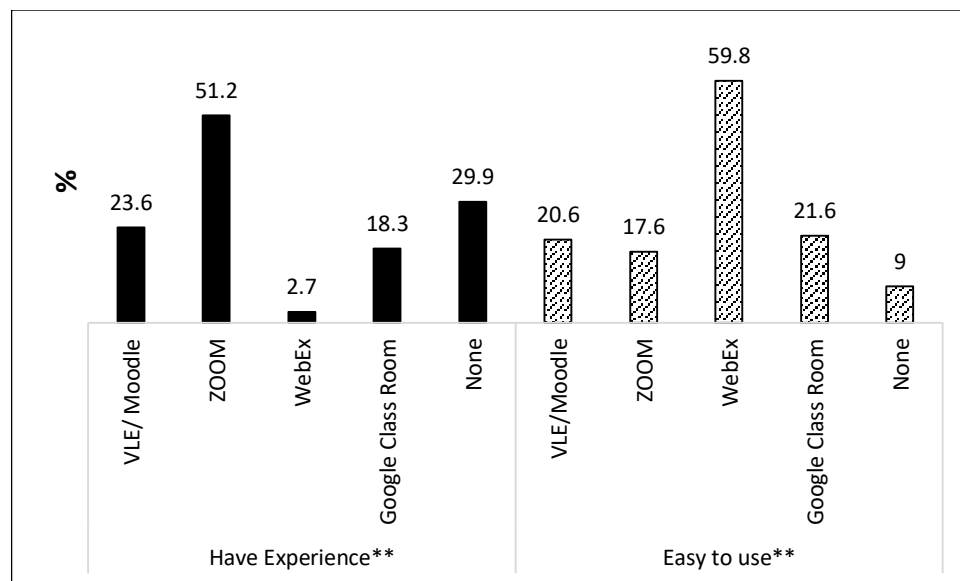
The undergraduates were asked to mention the reasons regarding their selection of online classes. Mostly they preferred because of their flexible time and location during COVID-19 pandemic (48.8%) plus learning materials can be accessed anytime (47.2%).



**Figure 2.** Reasons for choosing online classes\*\*

\*\*Multiple choice questions

Most of the students already had the experience in Zoom (51.2%) but, they preferred to use WebEx for their online education. Only 17.6% of them were interested in Zoom to use for their education.



**Figure 3.** Awareness on Online education tools

**5. Conclusion**

Comparatively Arts stream undergraduates prefer online learning than other stream as they have less practical subjects, however male students have more technical knowledge. Furthermore during lockdown internet speed was slow compare to before COVID-19 which confirms that the number of users and usage amount has increased during this lockdown, but the reason why so many students like online education rather than postpone, despite their limited experience is that they can continue their academic work while being safe, also course materials can be accessed at any time. Due to the user

friendliness of WebEx majority of the undergraduates prefer to use WebEx Even though they are familiar with ZOOM.

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