Readiness for Online Learning among Students Amidst COVID-19: A Case of a Selected HEI in Sri Lanka

D. A. Akuratiya*, D. N. R. Meddage

Department of Accountancy, Department of Information Technology, ATI-Dehiwala, SLIATE, Sri Lanka *Corresponding author

Abstract: With the emergence of coronavirus, online learning has become the promising solution for the tertiary educational institutes which are currently in an environment of intense change. Considering students' readiness for online learning under this situation is important to continue education without interruption and for the success of students especially in tertiary education. One of the aspects of online learning readiness is technological readiness. Hence present survey investigated the technological factors, ICT skills, and competencies influencing readiness in online learning and challenges faced during online learning among diploma students at the selected HEI in Sri Lanka. A self-administrated online questionnaire (Google Form) was distributed among Accountancy and Business Finance diploma students in the selected institute during the period of closure. Results show that respondents rely heavily on smartphones (62.4%) and mobile data to connect internet (74.4%). The results revealed that the respondents are familiar and experienced with the required ICT such as basic and advanced computer skills, using online tools, and online communication. However, the students' overall readiness for online learning is moderate. The biggest challenges for the students are a poor internet connection, high cost for data, and limited broadband data. It can be concluded that students are well equipped in using technology in formal environments and are ready to use these technologies to support and continue their learning.

Keywords: Online learning, Online learning readiness, Challenges, Diploma students, COVID-19

I. INTRODUCTION

A t present everyday life has transformed radically from business to education due to modern technological innovations and the immense use of information and communication technologies (ICT) (Akuratiya & Meddage, 2020). The advent of ICT and the internet has played an enormous and leading role in the education sector and has undergone tremendous changes in recent years globally. Currently, online learning has grown beyond smart acronyms and is a mainstream education (Chung, Noor & Mathew, 2020).

Modern technologies have recreated teaching and learning practices and changed the landscape of education. Singh & Thurman (2019) defined online learning as "learning experienced through the internet / online computers in a synchronous classroom where students interact with the

teacher and other students and are not dependent on their physical location for participating in this online learning experience" (as cited in Akuratiya & Meddage, 2020, p.756). Online learning or E-learning is a major concept in education where traditional face-to-face learning method has completely transmitted into the virtual approach of learning which direct towards learning in a digital world. Online learning can be experienced synchronously or asynchronously by connecting to the internet and different devices like computers and smart mobile phones (Akuratiya & Maddage, 2020).

Although Sri Lanka also rolls with these new changes in tertiary education, it is much slower compared to the rest of the world. But the sudden outbreak of novel coronavirus has abruptly transformed most of the global activities from tourism to education, to a standstill (Chung et al., 2020). Most governments around the world have momentarily closed educational institutes from primary to tertiary in an attempt to curtail the spread of the COVID-19 pandemic. According to UNESCO schools and higher education institutes were closed in 185 countries and 89.4% of total learners were affected (Kumari & Jayasinghe, 2020). This crisis can generate long term effects on education such as disruption of student cognitive learning process, loss of motivation, increased dropout rates, inflated unemployment rates, delay in student graduation, tendencies of postponing academic sessions (Kumari & Jayasinghe, 2020; Oleyami, Adamu, & Oleyami, 2020). Online learning has become the hero of the day as the preferred teaching and learning method because it can surpass country wise-lockdown, physical isolating, and social distancing.

Sri Lanka is no better than the rest of the world and also experienced the harsh reality of the COVID-19 and faced the largest educational crisis ever occurred. After WHO announcing COVID-19 as a global pandemic, the Sri Lankan government also decided to shut down schools and Higher Education Institutes (HEIs) on March 12, 2020. The relevant authorities informed the higher education institutes and universities to create alternative platforms to continue the delivery of higher education. Even though online learning was important before COVID-19, less importance is given by the Sri Lankan higher education sector to online learning. Almost all the Sri Lankan degree and diploma courses were carried

under a traditional face-to-face learning approach and the selected HEI is no exception to this. So, all diploma students in this institute are very familiar with the classroom traditional process. With no choices leftover, the selected institute also had to incorporate online education into its education system. Nevertheless, shifting fully to online learning would be challenging and change their study behavior drastically (Popovici & Mironov, 2014).

Selected HEI used Learning Management System (LMS) prior to COVID-19 also to upload and download learning materials for students. But it was not so popular among students because it is not compulsory to use and both courses were carried under traditional face-to-face teaching and learning method. With the outbreak of coronavirus lecturers were first instructed to upload recorded lecture materials to the LMS, then to carry virtual lectures to continue the education of the students. At that time, they used user-friendly, free of charge, more attractive online learning platforms like Google Classroom, Google Meet, and Zoom to name a few. Also, lecturers used e-mail, WhatsApp to communicate with the students.

Even though lecturers and higher authorities are ready to implement online teaching to continue students' education without any interruption, there is a lack of data to suggest that students are ready to learn online. Therefore, before implementing online learning, it is important to identify whether students are ready and prepared to adopt online learning and cope with challenges associated with online learning. This study investigates the students' readiness for online learning and the challenges that hamper the effective participation of students in online learning during the COVID-19 pandemic. This study will investigate under following subobjectives:

- 1. To investigate the readiness of students towards using online learning during the COVID-19 pandemic.
 - 2. To assess ICT skills and competencies students need to have for using online learning.
- 3. To recognize challenges faced by the students while participating in online learning during the COVID-19.

II. LITERATURE REVIEW

II.I Student Readiness for Online Learning

The umbrella term 'digital learning' which brings under online learning, distance learning, blended learning, and mobile learning, has greatly influenced higher education globally (Blayone, 2018). According to Sopu, et al. (2016), digital learning readiness refers to the measures of the degree to which a nation, country, or economy is prepared to obtain benefits from digital education technologies (as cited in Blayone, 2018). In summary, past literature on readiness for online learning explores the preparedness of learners, teachers, and context for successful technology-rich education (Blayone, 2018).

However, to gain the full benefits of online learning, students need to be ready to learn online. Warner, Christie, and Choy (1998) first defined online learning readiness in terms of three facets: (a) student preferences for the form of delivery, (b) student confidence in electronic communication for learning, and (c) a learner's ability to engage in autonomous learning (Blayone, 2018; Hung et al., 2010; Küsel et al., 2020; Martin, Stamper & Flowers, 2020). Borotis and Poulymenakou (2008) defined e-learning readiness as the mental or physical preparedness of teachers as well as learners to implement e-learning successfully (as cited in Küsel et al., 2020; Widodo et al., 2020).

Ever since various studies were carried on this concept to identify and validate various dimensions of online learning in a different context (Atkinson & Blenakenship, 2009: Chung et al., 2020; Hung et al., 2010). Hung et al. (2010) developed and validated a multidimensional instrument called Online Learning Readiness Scale (OLRS) to measure students' readiness for online learning. This includes five dimensions: self-directed learning, motivation for computer/internet self-efficacy, learner control, and online communication self-efficacy. Chapnick (2000) developed an e-learning assessment and listed eight dimensions to measure e-learning readiness such as psychological, sociological, environmental, human resources, finance, technological skills, equipment, and content readiness (Widodo et al., 2020). So and Swatman (2006) as cited in Widodo et al. (2020) also developed an e-learning readiness assessment that contains six components: student preparedness, teacher preparedness, IT infrastructure, management support, school culture, and faceto-face.

Kayaoğlu, & Akbaş, (2016) used the same OLRS developed by Hung et al. (2010) to collect data from 189 medical students in Turkey. Even though overall results for online learning are significant, yet the participant students need to be further developed their computer and internet self-efficacy. Chinaza, et al., (2015) studied the relationship between self-efficacy, computer-related technology computer dependence, and online learning readiness and found a correlation between computer self-efficacy, computer-related technology dependence, and online learning readiness (as cited in Kayaoğlu, & Akbaş, 2016). Al-Araibi et al. (2016), Chipembele (2016), Demir & Yurdugül, (2015) together highlighted ICT-related skills as a significant factor in learner readiness (Blayone, 2018).

II.II Students' Readiness for Online Learning during COVID-19 Pandemic

Within a short time, the outbreak of COVID-19 has changed the way education is done by students around the world and resulted in the biggest shift in the history of education with the online movement under a new normal situation. Chung et al. (2020) researched 399 participants to examine students' readiness for online learning during COVID-19 in UiTM, Malaysia. Further, they investigated if demographic factors make any difference in their readiness to learn, online learning

experiences, and intention to continue using online learning. They adopted Online Learning Readiness Scale (OLRS) developed by Hung et al (2010) for the study and tested five dimensions; self-directed learning, learner control, motivation for learning, computer/ internet self-efficacy, and online communication self-efficacy to measure student readiness for online learning. Overall study depicted respondents are generally ready for online learning and found female students are more ready than male students and degree students are readier than diploma students. Also, the study highlighted the biggest challenges for online learning as internet connectivity and difficulty in understanding the content of the subject.

Another study has examined the issues of university student's readiness for online learning during the COVID-19 pandemic. Study focus on comparing German university students' readiness for using digital media and online learning in their tertiary education with students from the United State. With Student Readiness of Online Learning (SROL) questionnaire, researchers found substantial differences between the two groups of students, with U.S. students being readier for online learning (Küsel et al., 2020).

Olayemi et al. (2020) investigated the perception and readiness of students towards online learning in Nigeria during the COVID-19 pandemic. The study revealed that the majority of the respondents are ready for online learning and indicated a high level of ICT skills and competencies are needed for online learning. Further, the study highlighted perceived challenges to effective online learning as fear of the high cost of data, poor internet services, erratic power supply, inaccessibility to online library resources, and limited access to a computer.

Callo & Yazon (2020) revealed that Polytechnique students' familiarity and capability, preparation, device and access connectivity, self-efficacy, and experience with technology significantly influenced the readiness for online learning modality. They concluded that the online learning readiness of students can be determined by their capacity to access and use technology as well as their e-learning self-efficacy. Similarly, the e-learning readiness of university students in Turkey was examined by Kalkan (2020) using the e-learning readiness scale of Yurdugül and Demir (2017). He reported that computer, internet, and online communication self-efficacy were the top-ranked factors that significantly affected the e-learning readiness of students, followed by self-learning, learning control and motivation.

Rafique et al. (2021) conducted a study on library and information sciences (LIS) students to determine the factors that affected their readiness for online learning during the COVID-19 pandemic. They found that LIS students were not fully personalized and successful in decisions about their online learning during the pandemic. Further, they revealed that students are motivated to learn through online learning and confident in performing basic functions of computers and the internet. They also observed significant differences in computer/internet self-efficacy and online communication

self-efficacy and learning motivation among gender, levels of degree programs.

Kumari and Jayasinghe (2020) investigated undergraduate students' readiness for blended learning during COVID-19 in Sri Lanka. Under four factors communication, interaction and study habits, technological skills, availability of resources, and their belief in the blended learning were tested. Results which are above 50% indicated a moderate amount of readiness in each area.

Previous literature has highlighted different models which provide the basic framework to understand the students' readiness for online learning. Past studies also highlighted potential challenges for the effectiveness of online learning. However, not many papers have attempted to understand the students' readiness and challenges for online learning in the Sri Lankan context. Understandably, a limited number of distance learning platforms were used in the selected HEI before the COVID-19 pandemic in Sri Lanka. Further, to the researchers' knowledge, this kind of study has not been attempted in the field of Accountancy and Business Finance. Therefore, researchers try to fill this gap through this study, drawing insights from the literature in conceptualizing the problem, exclusively focusing attention on students' readiness and challenges for online learning in fields of Accountancy and Business Finance during the COVID-19 pandemic.

III. METHODOLOGY

This study was constructed under the descriptive survey research design as most of the previous studies have used the same design method. There are 15 state universities and about 40 other state and non-state institutes in tertiary education (ADB Briefs, 2020). The selected HEI is the only state institution that operates under the Ministry of Education in Sri Lanka and awards Higher National Diploma (HND). The population of the study comprises diploma students in the Department of Accountancy and the Department of Business Finance of this institute and used a convenient sampling method to collect data. From this population, only the secondyear students were selected as the sample due to the convenience. The target group had no or little experience regarding online learning prior to the COVID-19 pandemic. Data was collected through a structured questionnaire which is designed after a thorough investigation of past literature and related studies (Chung et al., 2020; Hung et al., 2010; Olayemi et al., 2020; Rafique et al., 2021).

The link of the online questionnaire (Google Form) was sent to the students' group e-mail and student coordinators to be circulated among concerned students for data collection. A sample of 133 out of 186 second-year students in the two diploma programs was used for this study.

The questionnaire included three parts. The first part of the survey asked demographic details and the technological aspects of respondents. The second part inquired students' readiness for online learning using the four-point Likert scale (1 = strongly disagree, 4 = strongly agree). There is no neutral

scale to avoid the effects of central tendency. Part three assessed respondent's ICT skills and competencies on a four-point Likert scale ranging from 1 to 4 respectively: very proficient, proficient, fairly proficient, and not proficient. Information on challenges they faced while participating in online learning during the COVID-19 pandemic was also captured.

Statistical Package of Social Science (SPSS version 20) was used to enter and analyze the final collected data. Descriptive statistics like mean, standard deviation, frequency, and percentage were used to analyze the data. Reliability and validity were calculated by Cronbach's alpha value, which was 0.83.

IV. RESULTS

As per Table 1, the majority of the participants were female (79, 59.4%) while 54 (40.6%) were male. All the participated students were under the age category of 20-24 years while more than half of the participants (80, 60.2%) from the Accountancy department and 53 (39.8%) from the Business Finance department.

Regarding technological aspects most of the students were using smartphones (83, 62.4%) following laptop or desktop 31 (23.3%), least amount used both smartphone and laptop/desktop (18, 13.5%) and tablet (1, 0.8%) as device(s) used for online learning. Further, 99 students out of 133 used mobile data whereas 33 (24.8%) had WiFi connection as a connection mode of the internet at home. Even though they have devices to connect internet, 65 (48.9%) reported the quality of the internet connection was average while 49 (36.8%) said very good and good and 19 (14.3%) said their internet connection was poor quality. Responses to the affordability of mobile data plan majority said it is moderately or somewhat affordable (51, 38.3%; 63, 47.4%) whereas 8 (6%) stated data plan is highly affordable and only 11 (8.3%) said they cannot afford it.

Table 1 Demographic factor	rs and technological	aspects $(N = 133)$
----------------------------	----------------------	---------------------

Responses		f (%)
Gender	Male	54 (40.6%)
	Female	79 (59.4%)
Discipline	Accountancy	80 (60.2%)
	Business Finance	53 (39.8%)
Device/s use for learn online	Smartphone	83 (62.4%)
	Laptop/ Desktop	31 (32.3%)
	Both smartphone &laptop/desktop	18 (13.5%)
	Tablet	01 (0.8%)
Internet connection	WiFi	33 (24.8%)
	Mobile data	99 (74.4%)
	Landline connection	01 (0.8%)

Quality of online connectivity	Very good	06 (4.5%)
	Good	43 (32.3%)
	Average	65 (48.9%)
	Poor	19 (14.3%)
Affordability of mobile data plan	Highly affordable	08 (6.0%)
	Moderately affordable	51 (38.3%)
	Somewhat affordable	63 (47.4%)
	Not affordable	11 (8.3%)

In the existing literature, technical competencies play a vital role. Be ready and competent in dealing with computers and the internet is crucial for students because online learning is delivered via technology-enhanced devices (Chung et al., 2020). Hence the second part of the questionnaire considers the students' readiness towards online learning under technology and availability of resources and infrastructure which is similar to the concept of computer-internet self-efficacy. Hung et al. (2010) proposed the computer-internet self-efficacy concept by combining computer self-efficacy (Compeau & Higgins, 1995) and internet self-efficacy (Eastin & LaRose, 2000). Past research highlights technical competencies are essential to meet learning expectations and outcomes in higher education.

Table 2 Students' readiness towards online learning during COVID-19

Statement (N = 133)	Mean	Standard deviation
I have sound knowledge of ICT to operate on any online learning platform	2.65	0.73
Using online learning platform is not a problem because I have good internet knowledge	2.58	0.74
I have good knowledge in general web browsing/surfing, so using online learning platform would not be a problem	2.67	0.68
I have a sound electronic device (computer/smartphone) required to register for an Online learning class	2.68	0.73
I have access to good internet broadband to connect to an online learning class	2.32	0.66
I have a regular power supply to support my online learning class	2.41	0.71
I did not face any form of distraction in using online learning during this Covid-19 period	2.32	0.69

As depicts in Table 2 seven items were loaded to test the online learning readiness of the students during the COVID-19 pandemic. It includes the responses of participants for each item with means scores(M) and standard deviations (SD). According to the results, the top-ranked statement under readiness for online learning during COVID-19 had a sound electronic device (computer/smartphone) required to register for an online learning class with a mean score of 2.68 (0.73). The second highest was having good knowledge in general web browsing/surfing (M = 2.67, SD = 0.68), followed by having sound knowledge of ICT to operate on any online learning platform (M = 2.65, SD = 0.73), and have good internet knowledge (M = 2.58, SD = 0.74). Having access to

good broadband connection and distraction faced during online learning were ranked the lowest with means scores of 2.32, and regular power supply (2.41). These findings revealed that the majority of the respondents agreed on having a sound electronic device, good knowledge in web browsing, good ICT knowledge, and internet knowledge. While the fear of not having a stable internet connection, not having a consistent power supply, and distraction faced during online learning.

Section three of the questionnaire includes information about respondents' ICT skills and competencies for online learning (Table 3). This is to better understand the degree of readiness for online learning by the students. Under this section students' skills and competencies were evaluated against set standards to determine their level of proficiency in the use and handling of ICTs in general (Olayemi et al., 2020).

Table 03 ICT skills & competencies of students towards online learning

Statement (N=133)	VP	P	FP	NP
Basic computer skills (e.g. typing and editing)	53 (40.0%)	68 (51.1%)	12 (09.0%)	0
Advanced computer skills (Internet use)	41 (30.8%)	71 (53.4%)	21 (15.8%)	0
Managing multimedia contents skills (power point, keynote)	29 (21.8%)	76 (57.2%)	26 (19.5%)	2 (1.5%)
Using the Web for education skills (Screen recording)	28 (21.1%)	67 (50.4%)	28 (21.1%)	10 (7.5%)
Using online tools in education skills: Video chat (e.g., Skype) Web Video (e.g., YouTube)	32 (24.1%)	75 (56.4%)	23 (17.3%)	3 (2.3%)
Online communication skills: Social Media (e.g. Facebook, Twitter, E-mail)	26 (19.5%)	80 (60.2%)	24 (18.0%)	3 (2.3%)
Time management	25 (18.8%)	79 (59.4%)	26 (19.5%)	3 (2.3%)

VP=Very Proficient; P=Proficient; FP=Fairly Proficient; NP=Not Proficient

The ability to type and edit under basic computer skills was first identified and the majority claimed to be very proficient and proficient (53, 40%; 68,51.1%) respectively. All the respondents are aware of how to use the internet under advanced computer skills. A large number of respondents were familiar and proficient (76, 57.2%) with multimedia content skills such as PowerPoint, keynote while only 2 (2.3%) said not proficient. Another important skill for online learning is using the web for education such as screen recording. The majority of the respondents were proficient, very proficient, and fairly proficient while only 10 (7.5%) said they are not proficient. To be effective in online learning, skills for using online tools such as Skype, YouTube, Zoom, Web video are important. Only 3(2.3%) were not proficient while the rest of the respondents were proficient to a certain extend.

Computer-mediated communication is involved with Online learning. MaVay (2000) said online communication is crucial to happen for students to reflect internalize what they have learned by posting questions, express their emotions and

thoughts (Chung et al., 2020). The majority of the respondents 80 (60.2%) were proficient to use E-mail, Facebook, WhatsApp while 3 (2.3%) said they are not proficient. Time management is also identified as an important factor in online learning because of the use of scarce resources to accomplish goals. A large number of respondents were proficient (79, 59.4%) while 3 (2.3%) not proficient in time management skills. Findings suggest the respondents had the highest level of readiness in ICT tools, ICT skills, and competencies.

A list of challenges faced while online learning was also included in the questionnaire. Respondents were allowed to select more than one challenge. Also, respondents were given the chance to mention additional challenges they faced during online learning. These challenges were ranked based on the percentage of responses (Table 4).

Table 4 Challenges faced during online learning

Challenge	f (%)	Rank
Poor internet connectivity	87 (65.4%)	1
High data cost	86 (64.7%)	2
Limited broadband data	70 (52.6%)	3
Looking at a phone/computer is boring	59 (44.4%)	4
Slow personal computer and devices	52 (39.1%)	5
Difficulty to focus due to distractions	40 (30.1%)	6
Difficulty in understanding the content	33 (24.8%)	7
Maintaining interaction with lecturer & classmates	28 (21.5%)	8
Lack of online learning technical skills & knowledge	18 (13.5%)	9
Limited / no access to devices	16 (12.0%)	10
Other (having smartphone only / heavy rain with thunder & lightning	02 (01.5)	11

The number one challenge was poor internet connectivity, followed by, high cost of data (64.7%), limited broadband data (52.6%), looking at phone/computer is boring (44.4%), and slow ICT devices 52 (39.1%) which come under top 5 challenges. Other challenges are difficulty focusing due to distraction, difficulty in understanding content, maintaining interaction with lecturer and classmates, lack of technical skills and knowledge, limited access to devices. By these findings, it can be confirmed that connectivity, high data cost, and limited broadband data are the major challenges faced by the respondents.

V. DISCUSSION

The main objective of this study is to investigate the students' readiness for online learning and the challenges that hamper the effective participation of students in online learning during the COVID-19 pandemic. The above results have answered the sub-objectives of the study. The first research objective focused on investigating students' readiness towards online learning during COVID-19. The results showed that respondents rely heavily on smartphones and mobile data to connect internet which is similar to the findings of Callo & Yazon (2020). Where they had reported Philippine students

also heavily depend on smartphones and mobile data to connect internet and for online learning. To successfully participate in online learning students have access to various ICT tools such as a desktop computer, laptop, smartphone, smart device, an internet connection, and online learning platforms (software/mobile apps). Technology is essential and plays a key role during the online learning process (Rafique et al, 2021).

The respondents' mean scores for online learning readiness statements are between the range of 2.32 and 2.68. This falls between the moderately disagree to moderately agree regarding readiness for online learning. The findings show that students' readiness towards online learning is high in ownership of electronic devices, sound knowledge in web browsing, internet, and ICT knowledge. Popovici & Mironov (2015) stated that students' perceptions towards using technology might influence their perception of using technology in educational contexts. Based on responses can say the majority of the students are ready to continue their education online basis except for the fear of unstable internet connectivity, power supply, and distractions.

The second sub-objective of the study accessed ICT skills and competencies of students that are needed to have for using online learning. Because for the success of online learning students' level of skills and competencies (proficiency) in ICT is important (Olayemi et al., 2020). Considering the experiences students had using ICT in their everyday lives during the COVID-19 is fairly notable (Akuratiya & Meddage, 2020). Most of the respondents said they are having digital devices, have average to high basic and advanced computer skills, internet usage, using online tools, and online communication. In general, findings show that respondents are proficient with the use of online learning. These results are more similar to the Olayemi et al. (2020) where they reported the majority of the students claimed to be proficient with the use of online learning.

Similar results were reported by Callo & Yazon (2020), Chung et al. (2020), Kalken (2020), Olayemi et al. (2020), Kumari & Jayasinghe (2020), and Rafique et al. (2021) regarding students' readiness for online learning during the COVID-19 pandemic. They found that computer, internet, and online communication as the top-ranked factors that impact the students' readiness for online learning. Callo & Yazon (2020) concluded that students' readiness for online learning is determined by their competence, accessibility of ICT tools, preparedness, confidence in the ability to use technology, and exposure to e-learning materials. Past literature on E-learning readiness and models identify access to the internet, technical skills, access, and availability of hardware and software as the most important factors to adopt online learning.

The last sub-objective of the study was to recognize the challenges faced by the students during online learning. There were a lot of challenges faced by the respondents. From the final results were identified poor internet connectivity, high cost of data, limited broadband data, looking at

computer/smartphone is boring, and slow personal devices as the major challenges faced by the students during online learning.

These findings are more similar to Chung et al. (2020), Chung, Subramaniam, and Dass (2020), and Olayemi et al. (2020). Chung et al. (2020) found the biggest challenges that hindered online learning among university students in Malaysia as poor internet connectivity and limited broadband data. According to ADB Briefs (2020), almost half of surveyed students responded that mobile data plans were not affordable, or somewhat affordable while poor internet connection was the top challenged students faced during online learning. All internet service providers in Sri Lanka provided free access to university web services during COVID19 until 17 August 2020, to boost online learning as mobile data was critical (ADB Briefs, 2020). But still, most students had concerns over the affordability and stability of the internet. This is obvious if lectures were delivered via livestreaming using platforms like Zoom and Google Class. Also, online learning access through smartphones limits accesses to reading materials and writing assignments.

VI.CONCLUSION

With the closure of educational institutes with the onset of the COVID-19 pandemic, Sri Lanka made a remarkable, quick shift to online tertiary education (ADB Briefs, 2020) including the selected HEI. This study investigated students' readiness towards online learning during the COVID-19 pandemic in Sri Lanka. Even though the responses are not high, 133 valid replies provided a quite good understanding of students' readiness for online learning during the pandemic.

Based on the findings above, it can be concluded that the respondents in this study indicated a moderate level of readiness except for the lack of stable, high-speed internet access, high data cost, and distractions during online learning. Some students had to access online education through smartphones, using mobile data packages that many could scarcely afford (ADB Brief, 2020). Among all these, it is clear that students are well equipped to use technology in formal environments and are ready to use these technologies to support and continue their learning despite the challenges they face.

VII. IMPLICATIONS AND RECOMMENDATIONS

Poor internet connectivity, high data cost, and limited data were the biggest challenges students faced while learning online. So, it is suggested that the Government invest more in communication infrastructure to become more resilient to overcome these unforeseen challenges in higher education. Also, providing laptops for the students who do not own one can eliminate the problems faced by smartphone users for online learning and it will create a more favorable environment for online learning. Apart from internet connectivity problems, selected HEI needs to revise their curriculum, assessment, and pedagogy for blended learning to manage a seamless education for the students in the future. In

such a case, the selected HEI must provide further training for their lecturers and students regarding technical aspects of online learning.

This study is not without any limitations. Future studies should look into the effectiveness of conducting practical subjects through online learning. Future studies can investigate the online learning readiness of broader groups of respondents from different departments and different geographical locations.

REFERENCES

- Akuratiya, D. A., & Meddage, N. R. (2020). Students' perception of online learning during COVID-19 pandemic: A survey study of IT students. *International Journal of Research and Innovation in Social Science (IJRISS)*, IV(IX), 755-758.
- [2]. Atkinson, J.K., & Blenakenship, R. (2009). Online learning readiness of undergraduate college students: A comparison between male and female learners. *International Journal of Learning in Higher Education*, 5(2), 49-56.
- [3]. Atkinson, J.K., & Blenakenship, R. (2012). College student readiness of students in China. China-USA Business Review, 11(3), 438-445.
- [4]. Blayone, T. (2018). Reexamining digital-learning readiness in higher education: Positioning digital competencies as key factor and a profile application as a readiness tool. *International Journal on E-Learning*, 17(4), 425-451.
- [5]. Callo, E.C., & Yazon, A. D. (2020). Exploring the Factors Influencing the Readiness of Faculty and Students on Online Teaching and Learning as an Alternative Delivery Mode for the New Normal. *Universal Journal of Educational Research*. doi: 10.13189/ujer.2020.080826
- [6]. Chung, E., Noor, N. M., & Mathew, V. N. (2020). Are You Ready? An Assessment of Online Learning Readiness among University Students. *International Journal of Academic Research* in Progressive Education and Development, 9(1), 301–317.
- [7]. Chung, E., Subramaniam, G., & Dass, L. C. (2020). Online learning readiness among university students in Malaysia amidst Covid-19. Asian Journal of University Education. doi https://doi.org/10.24191/ajue.v16i2.10294
- [8]. Hayashi, R., Maddawin, A., Garcia, M., & Hewagamage, K. P. (2020). Online learning in Sri Lanka's higher education institutes during the COVID-19 pandemic. ADB Briefs. doi: http://dx.doi.org/10.22617/BRF200260-2

- [9]. Hung, M.-L., Chou, C., Chen, C.-H., & Own, Z.-Y. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers & Education*, 55, 1080-1090.
- [10]. Kalkan, N. (2020). Investigation of e-learning readiness levels of university students studying in different departments. *African Educational Research Journal*, 8(3), 533-539.
- [11]. Kayaoğlu, M. N., & Akbaş, R. D. (2016). Online learning readiness: A case study in the field of English for medical purposes. *Participatory Educational Research*, IV, 212-220.
- [12]. Keramati, A., Afshari-Mofrad, M. and Kamrani, A. (2011). The role of readiness factors in E-Learning outcomes: An empirical study. *Computers & Education*, 57, 1919-1929.
- [13]. Kumari, K. W. S. N., & Jayasinghe, G. J. M. S. R. (2020). Undergraduate students' readiness for blended learning during COVID-19 pandemic in Sri Lanka. SSRN. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3831219
- [14]. Küsel, J., Florence Martin, F., & Markic, S. (2020). University Students' Readiness for Using Digital Media and Online Learning—Comparison between Germany and the USA. *Education Sciences*. doi:10.3390/educsci10110313
- [15]. Martin, F., Stamper, B., & Flowers, C. (2020). Examining student perception of their readiness for online learning: Importance and confidence. *Online Learning*, 24(2), 38-58.
- [16]. Olayemi, O. M., Adamu, H., & Olayemi, K. J. (2021). Perception and readiness of students towards online learning in Nigeria during Covid-19 pandemic. *Library Philosophy and Practice (ejournal*). Retrieved from https://digitalcommons.unl.edu/libphilprac/5051
- [17]. Popovici, A., & Mironov, C. (2015). Students' perception on using eLearning technology. *Procedia - Social and Behavioral Sciences*, 180, 1514 – 1519.
- [18]. Rafique, G. M., Mahmood, K., Warraich, N. F., & Rehman, S. U. (2021). Readiness for online learning during COVID-19 pandemic: A survey of Pakistani LIS students. *The Journal of Academic Librarianship*. Retrieved from https://www.sciencedirect.com/science/article/pii/S009913332100 0379
- [19]. Topal, A. D. (2016). Examination of University Students' Level of Satisfaction and Readiness for E-Courses and the Relationship between Them. European Journal of Contemporary Education, 15(1), 7-23.
- [20]. Widodo, S. F. A., Widodo, Y. E., & Wagiran, W. (2020). Online learning readiness during the Covid-19 pandemic. *Journal of Physics: Conference of Series 1700 012033* doi:10.1088/1742-6596/1700/1/012033