THE DIGITAL TRANSFORMATION IN LEARNING AMIDST COVID-19 PANDEMIC IN SRI LANKA

R.P. Gunasekara[*1], *D.W. Nisansala*[1], *S.G.H.M.A.D. Herath*[1], *W.A.R. Senevirathne*[2], *W.M. Nilwala*[2]

[1]*Faculty of Education, Horizon Campus, Malabe (WP), Sri Lanka*
[2]*Department of Accounting and Finance, The Open University of Sri Lanka*

INTRODUCTION

The Internet revolution has made online learning an alternative option to face-to-face learning. As a form of distance education, online learning can be defined as any class that offers its entire curriculum via an online course delivery mode, thereby allowing students to participate regardless of geographic location, independent of time and place (Richardson & Swan, 2003, p. 69). Most, if not all, aspects of a course, including discussions, assignment submission, and communication with the instructor, tends to be facilitated through online courses management platforms such as Moodle, Blackboard, Web board, and supplemental communication technologies such as Elluminate, Skype, and others. Given this context, online courses are different from their on-campus counterparts in several aspects (Muilenburg& Berge, 2005). When the COVID-19 pandemic rapidly spread all around the world, schools, colleges and universities have suspended in-person teaching to maintain social distancing. Online learning at present has increased student numbers, retention and grasping information at a faster pace (Li and Lalani,2020). Government organizations and technology-led start-ups have introduced online courses. Those are free and some have minimal fees. Those are help students and educators to temporarily cope with stress due to lockdown and shutdown of all workspaces. Some of the online courses are www.moe.gov.lk,www.doenets.lk, www.enenapiyasa.lk,/www.youtube.com/channel/UCaXHgF7cAdDEIEtgG2XSlw,www.dpuni.org. www.,Byju"s.com. The study was conducted because most of the universities and higher educational institutes in Sri Lanka, as well as the rest of the world, are using online teaching and learning tools particularly online platforms and software to bridge the gap between teachers and learners. One of such is "Zoom". It seems to be the most convenient online platform preferred by users. Apart from that, there are many other popular platforms and technologies which are going to be discussed in this study.

METHODOLOGY

This research adopted quantitative methods which include the techniques associated with the gathering, analysis, interpretation, and presentation of numerical information (Johnson & Turner 2003). The present study focuses on learners who are engaging in certificate courses, diplomas, undergraduate degrees, and postgraduate degrees of higher educational institutes in Sri Lanka. The sample size of this study is 447 respondents. The primary data was gathered by using a self-administrated questionnaire. The data was gathered during November 2020 amidst in COVID-19 second wave in Sri Lanka. The questionnaire was distributed via Google Forms and it consists of multiple-choice, Likert scale, and open-ended questions related to the prevailing trends in online learning in Sri Lanka. The data collected from the questionnaire were analyzed and evaluated with the descriptive statistical analysis covering frequencies, mean, range, and percentages by Statistical Package for Social Sciences SPSS-25 and Microsoft Excel. In addition, tables, charts, and graphs were used to demonstrate the observation for interpretation. Attempts were made to design and integrate graphic aids into research reports to enhance readers" comprehension and identify the trends in online learning at present.

DATA ANALYSIS

There were four age categories for the respondents who were between the ages of 20-29, 30-39, 40-49, and 50 above. The majority of them were undergraduates representing 83.5% out of

total respondents. The second-highest percentage of 5.4% of respondents were students of Master Degrees Programs. In the sample, gender distribution among females and males was 70.4% and 29.6% respectively. This indicated that more than two-thirds of the respondents were females.

The nature of online engagement of learners has been changed after the COVID-19 pandemic. This may be simply because of the concept of social distance applied by the country where higher educational institutes initiated online academic programs. See figure 1 below.
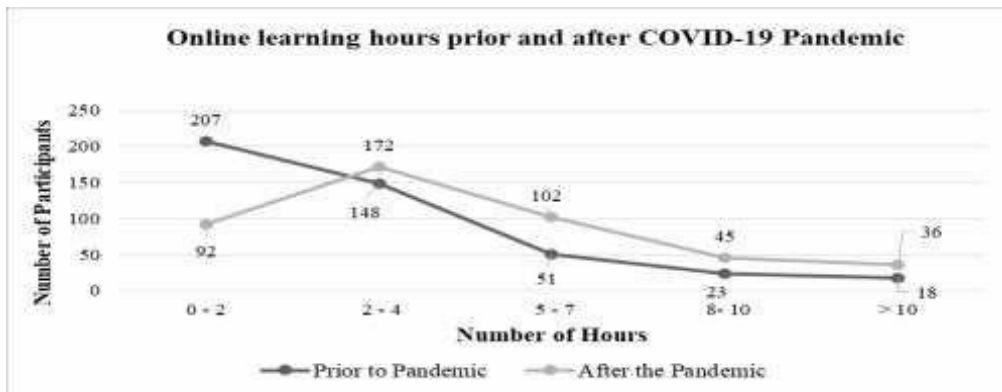

Fig.1: Online learning hours prior and after COVID-19 Pandemic

Source: Empirical Evidence

There was clear evidence of an increase in engagement of 0-2 hours in online learning after COVID – 19 outbreaks. The majority of the learners had mostly engaged in 2-4 hours. 10% of the learners had used 8-10 hours where 8% had engaged more than 10 hours for online activities.
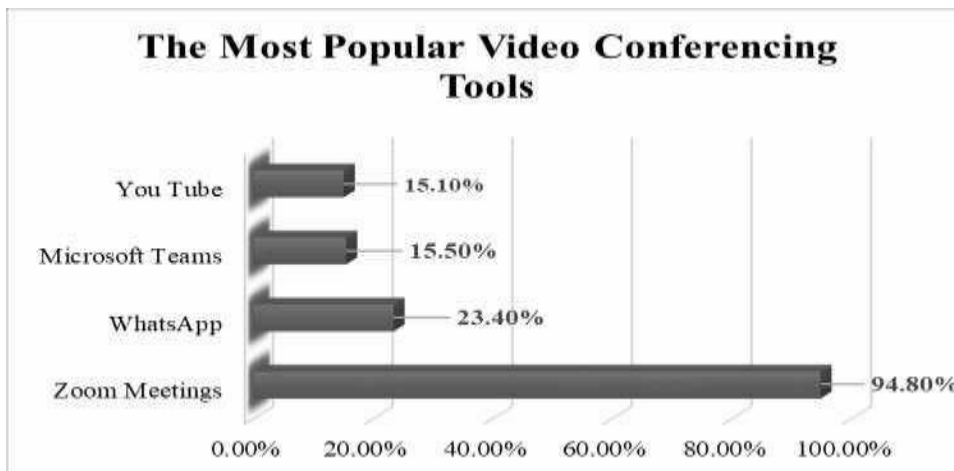

Fig.2: Trends in Video Conferencing
Source: Empirical Data

Figure 2 exhibits the percentages of the best popular video conferencing tools utilized in online education for the period of COVID -19. The highest percentage 94.80% was detailed as usage of Zoom Meetings. There was a significant rise of 23.80% in WhatsApp. Microsoft Teams and YouTube are accounted for 23.40%, 15.50%, and 15.10% respectively.

Online resources and E – portals significant space for online learning. Google 82.4% is the leading segment and YouTube Channel was accounted for 35% and Spoken Tutorial and Microsoft were accounted for 9.20% and 8.50% respectively.

Test of Homogeneity of Variances		Levene Statistic	df1	df2	Sig.
Digital literacy	Based on Mean	1.099	3	425	.349
	Based on Median	.501	3	425	.682
	Based on Median and with adjusted df	.501	3	421.102	.682
	Based on trimmed mean	.926	3	425	.428

Table 1: The Relationship between Age Category and Digital Literacy
Source: Empirical Data

Homogeneity test's P-Value is greater than 0.05 and ANOVA P-value is more than 0.05 [0.145], Then it can be concluded that age categories does not impact digital literacy on learning. That means all four categories of respondents, irrespective of age differences, had used digital devices in online accessing and service consumption.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
A/L Level	110	3.42	1.152	.110	3.20	3.64
Diploma	208	3.60	1.054	.073	3.45	3.74
Graduate	89	3.74	1.143	.121	3.50	3.98
Post Graduate	40	4.14	.889	.190	3.74	4.53
Total	447	3.61	1.100	.053	3.50	3.71

Table 2: Education Category and Usage of LMS
Source: Empirical Data

ANOVA P-value is less than 0.05 [0.021], Then it can be concluded that education categories had an impact on LMS Usage. That means postgraduate students are using LMS more than the, students in other categories.

DISCUSSION, CONCLUSION, AND RECOMMENDATION

Educational institutes have shifted to online learning eliminating the traditional classroom-based pedagogy. The learners are willing and likely to change their studying behavior patterns according to the pandemic situation. The most notable fact is that amount of online learning login hours has immensely accelerated after the COVID-19 pandemic. Leaners have become familiarized with online learning. Thus, almost 33% (172) learners" login 2-4 hours per day, and approximately 4% of learners (36) spent more than 10 hours per day. However, more login hours solely do not reflect the quality of learning. Figure 02 demonstrates the trends in video conferencing. The Zoom is the champion amongst all the video conferencing tools at contemporary, taking 94.8% highest preferences. What Sapp is the second-highest gaining 23.6% of the preferences and Microsoft Team is the third-highest gaining 15.6%

preferences. 82.5% have logged. The second-largest logging is YouTube occupying 35.7% of preferences.

The investigation undoubtedly determines the fact that the number of participants the level of participation on internet platforms has increased. According to various research, online courses are beneficial to students who prefer self-directed learning.(You & Kang, 2014).

Nevertheless, that digital illiteracy may lead to technical difficulties. The most important challenge of online learning is domestic barriers. 43.1% of learners had stated that they experience domestic barriers. These include inadequate space at home, unexpected interruption of people and pets, background sound and interruptions, login problems, issues with installation of software, problems with audio and video are the common barriers t h a t learners encounter at home. (Baticulon et al,2021) support of the literature on the domestic barriers and community barriers.

The learners have undoubtedly indicated why they desired online learning amidst covid-19 pandemic. These preferences are evident and pave the way for recommendations. The Government can construct policies and make available guidelines on which service providers and educators can implement action plans. Online courses should be dynamic, interesting, interactive, relevant, student-centered, and group-based. Personal attention should be provided to students so that they can easily adapt to an online learning environment. Positive arguments related to online learning pedagogy are accessibility, affordability, flexibility, life-long learning, and independent learning. Therefore, online education should be promoted in such a way that learners get maximum benefits.

REFERENCES

Baticulon, R.E., Sy, J.J., Alberto, N.R.I. et al. Barriers to Online Learning in the Time COVID-19: A National Survey of Medical Students in the Philippines. Med.Sci.Educ. 31, 615–626 (2021).

Hansson, H., & Mozelius, P. (2009). Critical Issues for e-Learning Telecenters in Sri Lanka and India.

LEWIS, N. (2020). Coronavirus lockdown could give online education a lasting boost in India. *Published: April 8*, 2020.

Li, C., & Lalani, F. (2020, April). The COVID-19 pandemic has changed education forever. This is how. In *World Economic Forum* (Vol. 29).

Muilenburg, L. Y., & Berge, Z. L. (2005). Student barriers to online learning: A factor analytic study. *Distance education*, *26*(1), 29-48.

Richardson, J., & Swan, K. (2003). Examing social presence in online courses in relation to students' perceived learning and satisfaction.

You, J. W., & Kang, M. (2014). The role of academic emotions in the relationship between perceived academic control and self-regulated learning in online learning. *Computers & Education*, *77*, 125-133.