

**IMPACT OF COVID-19 ON SECONDARY SCHOOL EDUCATION:
LESSONS LEARNED FROM KARAVEDDY EDUCATION DIVISION,
JAFFNA, SRI LANKA**

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ABSTRACT

Sri Lanka's school education system shifted from classroom-based education to distance learning education during the COVID-19 pandemic lockdown period. The current study scrutinized the impact of COVID-19 on senior secondary school education in Karaveddy Education Division (KED), Jaffna in Sri Lanka. Data were obtained through a questionnaire survey from 16 schools in KED, with teachers (105) and senior secondary students (171) selected as the survey sample. Positive and negative impacts were analyzed using SWOT metrics (Strengths, Weaknesses, Opportunities, and Threats). The findings revealed that students' average household income varied across a broader range. Respondents continued their distance education with their existing resources was considered a strength. Among weaknesses, a lack of devices (63.7%), financial issues accessing the internet (59.2%), and poor network connectivity (40%) were highly agreed upon by students. Similarly, lack of student engagement (65.7%), lack of teacher training to conduct online classes (51.9%), and students' irregular attendance in online classes (75.5%) were reported by teachers. A large number of the students stated that online learning provided opportunities to connect with teachers and peers from distant places on one platform (86.2%) and offered a good experience in facing future calamities (80.8%). However, digital device addiction and health issues were mentioned as major threats. In conclusion, while online learning can produce effective results to a certain extent, the vast majority of KED students were unable to obtain benefits from online education. It is suggested that hybrid learning can be adopted in the future to overcome the weaknesses and threats of distance learning.

KEYWORDS: *Challenges, Covid-19, Education, Opportunities, School, Swot*

1. INTRODUCTION

The situation in general education in the country changed in 2020 when COVID-19 reached a serious level in Sri Lanka. This global pandemic has caused large-scale disruption to the continuation of structured in-school education in Sri Lanka for approximately 4.2 million

students and 235,000 teachers (UNESCO, 2021). In response to the first wave of the COVID-19 pandemic, all educational institutions in Sri Lanka, including schools and universities, were closed on March 13 (Gangahagedara et al., 2021).

The COVID-19 pandemic has disrupted our long-standing educational practices and has precipitated an urgent need for many institutions to rapidly implement alternative educational and assessment strategies (Longhurst, 2020). Sri Lanka, along with the rest of the world, rapidly adapted to the “new normal” of distance learning during the school closure due to COVID-19 without any prior training or preparation (UNESCO, 2021). Distance learning offers individuals educational environments independent from time and space with the support of advancing web-based platforms and technologies (Bilgiç & Tüzün, 2015). It has helped provide continuity of education while minimizing students’ exposure to the virus (Policy Brief, 2021).

Based on a non-representative survey with teachers in Sri Lanka, Gamage & Zaber (2021) reported that while only fourpercent (04%) of students could be reached using online real-time classes via Zoom/Teams, and 41% could be taught via messaging platforms such as WhatsApp/ Viber to send notes and assignment as images or PDF files. This means that less than half of all households in Sri Lanka can benefit from e-learning opportunities. This is because children have varying access levels to laptops, mobile phones, tablets, TV, radio, and the broader infrastructure that supports these systems. This has, however, also created inequalities in access to education (Policy Brief, 2021).

Sri Lanka has made efforts to mitigate the impact of countrywide school closure as prevention action against COVID-19. Jekhan (2020) stated that the COVID-19 chaos has created a ladder for those who would climb it. Many education-related centers offered their tools and solutions for free to help support teachers and students (Christopher, 2020). It provides the opportunity to practice online learning and teaching. Even though distance learning brings out an innovation the school education, there are lots of difficulties to overcome. Are these opportunities available for all students in Sri Lanka, is an important question. The most vulnerable children including those in the most remote areas, with limited or no access to online learning and other platforms, infrastructure can increase educational inequality within the country. The poor learning environment, students themselves are faced with isolation, anxiety, and stress related to a deadly virus, uncertainty about the future, less effectiveness of teacher-student interaction, and lack of skill and technological knowledge in online education are major negative impacts of distance learning (Jim et al., 2020). Therefore, it is necessary to study the positive and negative sides of school education during COVID-19.

This study focused on the Karaveddy Education Division (KED) as a case study to examine how different stakeholders used distance learning and highlight the lessons learned from such a rapid shift from classroom-based free education to online-based distance learning. KED is one of the Education Divisions in the Vadamardchy education zone located in Jaffna district in Sri Lanka. This study was conducted in the KED which comprises 30 government schools. The impact of this epidemic was strongly felt by General Certificate of Education (G.C.E) A/L, and O/L candidates whose examinations are usually written in August and December of each year respectively. So, the senior secondary group was more vulnerable to COVID-19 school closure and this study mainly focused on the impact of senior secondary school education.

2. Literature Review

The COVID-19 pandemic is the major catastrophe of the century and is a global threat to the entire humankind (Coalition for Educational Development, 2021). The COVID-19 pandemic in Sri Lanka is part of the worldwide pandemic. Education Forum Sri Lanka (EFSL) is responsible for initiating a series of conversations on “Distance Education in the time of Calamities and Beyond”. The sudden closure of schools to tackle the spread of COVID-19 saw the education system responding swiftly with a slew of interim measures to seek to continue education through online and other methods of distance education. Distance learning is an educational experience where instructors and learners are separated in time and space (Keegan, 1998). Online learning is defined as “learning experiences in synchronous¹ or asynchronous² environments using different devices (e.g., mobile phones, laptops, etc.) with internet access (Shivangi, 2020). These learning approaches exhibit both positive and negative impacts.

SWOT which stands for strengths, weaknesses, opportunities, and threats. According to Hightower et al. (2011), a SWOT analysis relates to an in-depth and concurrent study of both the internal as strengths, and weaknesses and the external as opportunities and threats that may affect the success of a system positively or negatively. A SWOT analysis was originally developed as a business tool to aid decision-making but has since been used to analyze strategies in education (Sharma, 2005; Gupta et al., 2020). This method can be used to identify favorable and unfavorable factors and conditions, solve current problems in a targeted manner, recognize the challenges and obstacles faced, and formulate strategic plans to guide scientific decisions. (Jia and Zhifeng, 2020)

	<i>Positive</i>	<i>Negative</i>
<i>Internal Factors</i>	S Strengths	W Weaknesses
<i>External Factors</i>	O Opportunities	T Threats

Figure 1: Diagram of SWOT Analysis – Strengths, Weaknesses, Opportunities, and Threats

Positive Impacts

COVID-19 has become a catalyst for educational institutions to search for innovative solutions in a relatively short period (Gloria and Diana, 2020). In response to the first wave of the COVID-19 pandemic in Sri Lanka, classes were primarily conducted via online and television broadcasts initiated by the Ministry of Education in collaboration with the National Institute of Education (Ashani, 2021) in Sri Lanka. The ‘Guru Gedara’ distance learning program of the Ministry of

Education broadcast by Channel Eye/Nethra TV, ART TV, and Ada Derana, for students from Grade three (03) to GCE (A/L) are both in Sinhala and Tamil (Wimal,2020). It provided opportunities for students to learn from home (Tadesse and Muluye, 2020).

Many education-related companies offered their tools and solutions for free to help support teachers and students. It provided the opportunity to practice online learning and teaching. Private internet service providers, like STL, Lanka Bell, Hutch, Mobitel, Dialog, and others, provided special e-learning student data packages allowing children to study at home (UNICEF and UNESCO, 2021).

Teachers also improved and developed their teaching skills and upgraded themselves by attending webinars on ICT (Yaseen and Joshi, 2021). Mobile applications like WhatsApp, Messenger, and Viber were also used by teachers to keep in constant communication with their students. Many teachers volunteer to teach students online for free (Panchami, 2020). There is a new opportunity where collaborative teaching and learning can take on new forms. Most studies have revealed that online education is interactive and innovative, enhancing traditional teaching and homeschooling.

Negative Impacts

Sri Lanka wasn't fully equipped to ensure education reached all corners of the state via digital platforms. Owing to the disparities between the urban, rural, and estate sectors in Sri Lanka, there is a wide difference between the availability of devices, connectivity, and digital literacy leading to a digital divide in Sri Lanka (Liyanagunawardena and Williams, 2021). In the survey of the annual Computer Literacy³ Statistics of Sri Lanka, 30.8% of Sri Lankans were computer literate: 43.6% urban, 29% rural, and 12.6% in estates (Department of Census and Statistics, 2019). Students at Plantations' schools experience several problems in the online learning system. Specifically, they lacked the necessary devices, technological expertise, and resources to follow the course online (Sirikanth, 2021).

Monica and Priya (2020) also noted that for the children in plantation communities, access to e-learning during the COVID-19 school closures has simply not been viable. Because, parents have had to either mortgage or acquire small loans to first buy mobile phones, and then subsequently top these with data packages to support their children's connection to the internet.

The COVID-19 crisis hit at a time when most education systems were not ready for digital learning opportunities. According to LIRNEasia (Learning Initiatives on Reforms for Network Economies Asia), in Sri Lanka, only about 40% of students aged 5-18 have access to the Internet of this group, about 37% use this via mobile phones, and it's only 4% or less use wireless Internet. Only about 20% of students in this age group have access to laptops/desktops and less than three percent (03%) have access to tabs (Tara, 2020). The inequality gap between students in different financial situations, which has been present in education systems for a long time, is being further exacerbated by the COVID-19 pandemic.

The lockdown in the COVID-19 catastrophe has interrupted conventional learning in the education system in Sri Lanka. A large proportion of teachers especially in rural areas had little use and knowledge of online resources before the outbreak. Many teachers had no previous experience in online teaching. Teachers have been forced into teaching in a system that is not prepared.

Teachers and students experienced high levels of stress when engaging in online teaching and learning with no former and proper experience in using the platforms (Coalition for Educational Development, 2021). As the mode of learning shifts to online delivery, the risk of poor children falling further behind in their studies has increased (Ashani, 2021). At home, a scarcity of basic facilities, external distractions, and family interruption during teaching were major issues. In Sri Lanka, 69% of parents of primary school children said their children were learning less or a lot less (UNICEF and UNESCO, 2021). Students' writing and reading skills and habits are also declining these days (Panchami, 2020).

Another issue related to this pandemic is the postponement of examinations. Sri Lanka decided to postpone some of their high-stakes examinations at a later stage, depending on the evolution of COVID-19. Two key school-level 2021 examinations (The grade five (05) scholarship and the G.C.E Advanced Level examinations) in Sri Lanka that had previously been rescheduled in 2021 have been postponed once again to 2022. Passing A/L is a general requirement to enter Sri Lankan State Universities.

3. Materials and Methods

Primary data for the research were obtained from KED school students and teachers. This study employed a questionnaire survey to collect data regarding the research problem on the positive and negative impact of distance learning during the COVID-19 pandemic lockdown. Figure 2 shows the KED, which contains 30 schools with circular dots (16) representing the schools selected for the survey and triangular dots representing the rest. The target population for the study consisted of all school students and teachers in KED public schools. From the population, 276 respondents were selected for this research. This consists of 105 senior secondary class teachers and 171 students from grades 10-13.

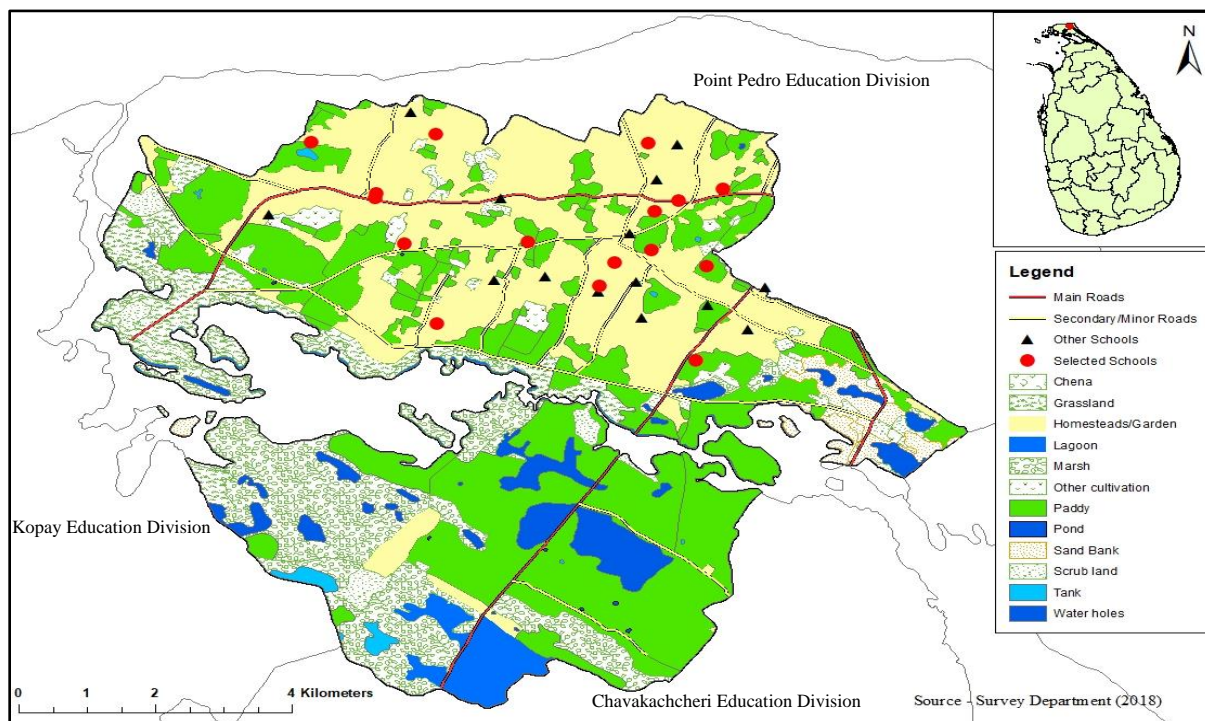


Figure 2: Distribution of the sample schools in KED, Jaffna

Sri Lankan public schools are classified based on the number and type of functioning classes. They are coded as 1AB, 1C, T2, and T3 schools. Classification 1AB offers education from Grades 1 to 13 or 6 to 13 in all subjects. Classification 1C offers education from Grades 1 to 13 or 6 to 13, and GCE Advanced Levels in Arts, Technology, and Commerce subjects. T2 offers education from Grades 1 to 11 or 6 to 11, and GCE Ordinary Levels, and T3 offers education from Grades one (01) to five (05) or Grades 1 to 8 (Annual School Census of Sri Lanka Final Report, Ministry of Education, 2018).

Secondary data were collected from various sources. Details of senior secondary students and teachers were gathered from the records of the Zonal Education Office Vadammaradchy in Jaffna. In addition to that, books, magazines, reports, experts' newspaper articles, research papers, journals, and several websites were used to collect data and information for this research.

Both positive and negative impacts were analyzed using SWOT analysis metrics (Strengths, Weaknesses, Opportunities, and Threats). This method has been used to identify favorable and unfavorable factors and conditions. This research tool is used for analyzing the data gathered from different sources for this study and the research method is descriptive research analysis. The survey results are interpreted in the form of graphical and tabular presentations.

4. Results

Considering the sample characteristics, Table 01 shows, out of the 276 respondents, the majority (64.49%) were female while 35.51% were male. This is because the female population is high in Sri Lanka; 51.8 percent of Sri Lanka's population is female, while 48.2 percent of the population is male (Digital 2023: Sri Lanka). The average age of teachers was between 40 and 50 years. The teachers' household income did not show any variation, but students' average household income varied in a broader range. It is worth noting that the average household income of 1AB school students was higher than that of 1C and T2 school students. The average household income of 1AB and T2 students was significantly different.

TABLE1: DEMOGRAPHIC OVERVIEW OF SURVEY PARTICIPANTS

	Students			Teachers		
	1AB	1C	T2	1AB	1C	T2
Age	N/A	N/A	N/A	41.42	44.45	47.6
Female %	66.97	46.15	69.4	61.02	70	69.23
Male %	33.03	53.85	30.6	38.98	30	30.76
Income *	31,995.4	19,423.1	16,985.3	65,466.1	67,500.0	67,361.1
N	109	26	36	59	20	26

Note: * represents respondents' average household income (in Sri Lankan rupee). N- Number of respondents, N/A- Not applicable

Strengths

Results of the questionnaire survey with students and teachers indicate that teaching-learning methods such as Television broadcasts, YouTube videos, and distributing learning materials

played a major role during school closure. As per the data presented in Figure 3, learning materials for their children were collected from the school by the parents of over 70% of students. It was a strength because students who could not access the internet could benefit from this method. It was a flexible and effective method where students could get feedback from teachers once they got their papers corrected. The second most popular learning method among the students was YouTube. They watched teaching videos that were uploaded by the Computer Resource Centre, Vadammaradchy Zonal Education Office on their website. Not only that, but other education-related YouTube videos also supported self-study during the COVID-19 pandemic. Students reported the benefits of being able to view YouTube resources multiple times.

On a positive note, making more commonly available technology such as television could reduce inequalities created in the longer-term pandemic. More than 40% of students watched educational TV programs during the school closure in this zone. Although the overall percentage reached by TV is low, the fact that students in less well-endowed schools were better reached by TV than by Internet. This shows that TV has the potential to reach out to children who lack access to the Internet.

Respondents continued distance education with their existing learning resources was considered a Strength. Based on the survey, 36.3% of students accessed their own digital devices, 59% of students used their family devices and 4.7% borrowed smartphones from others to continue their distance learning during COVID-19.

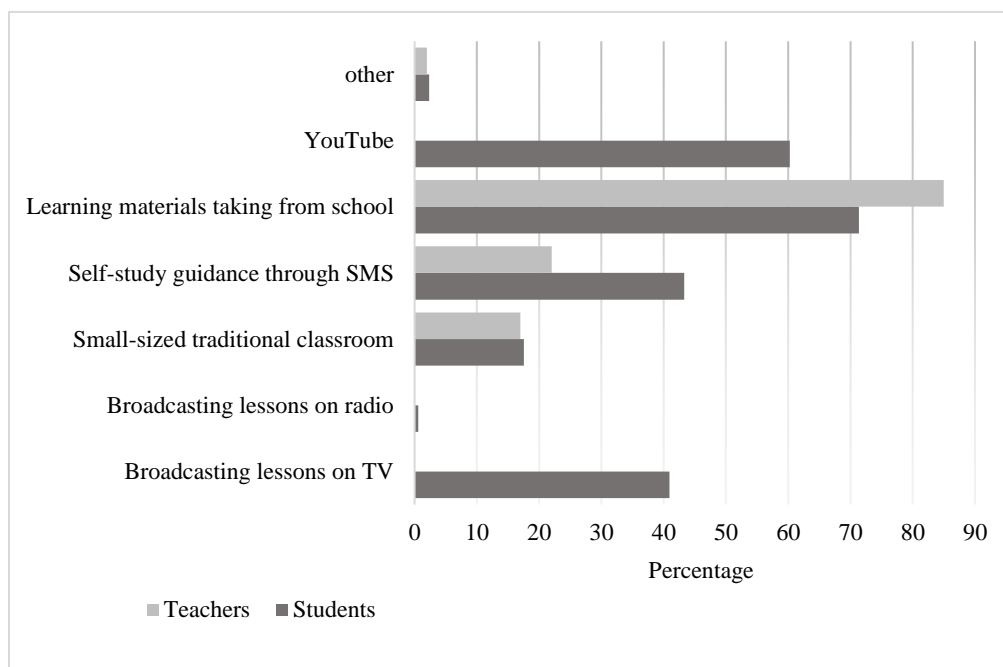


Figure 3: Distance learning methods during the pandemic in KED, Jaffna

Weaknesses

Common problems associated with online education in general include the limited availability of the internet, the slow speed and high cost of the internet bills, and the lack of interaction between students and teachers.

TABLE 2: ISSUES ENCOUNTERED BY STUDENTS DURING DISTANCE AND ONLINE CLASSES

	Strongly agree %	Agree %	Neutral %	Disagree %	Strongly disagree %
Financial problems	12.3	26.4	20.5	26.3	14.6
Looking at a phone or computer screen for a long time was stressful	22.3	36.7	16.3	21.1	3.6
Looking at a phone or computer screen for a long time was boring	19.9	35.7	23.4	18.7	2.3
Too many students online at once were making noisy or disturbing	9.9	30.2	29.1	22.7	8.0
Students were not under the direct supervision of the teacher	23.8	40.2	20.1	9.8	6.1
Miss out on social relationships and peer-to-peer interactions	21.9	31.4	20.7	19.5	6.5
Inadequate studying environment or distractions at home	8.8	44.1	17.1	14.1	15.9
Not feel the classroom atmosphere	27.2	42.0	11.2	16.6	3.0

Source: Author, Field survey, 2022

As shown in Table 02, 59.2% of students reported that internet services were too expensive for regular online connectivity. This might be attributed to financial difficulties on the part of students and their parents. Moreover, teachers sometimes continued classes for hours. Looking at a phone or computer screen for a long time was stressful and boring and more than 50% of learners faced this problem. 69.2% of students addressed too many students online at once was noisy and distracting. Network coverage is not equal across Sri Lanka. Many students faced disturbances due to poor connectivity.

TABLE 3: CHALLENGES IDENTIFIED BY TEACHERS DURING ENGAGEMENT IN DISTANCE AND ONLINE TEACHING.

	Strongly agree %	Agree %	Neutral %	Disagree %	Strongly disagree %
Lack of training	8.8	43.1	36.3	10.8	1.0
Less engagement of student	25.5	40.2	29.4	4.9	0.0
The poor condition of computer device accessories/ Smartphone	12.7	42.2	26.5	14.7	3.9
Students' irregular attendance in the online classes	36.3	39.2	19.6	4.9	0.0
Less reliability of online exams	29.4	49.0	16.7	4.9	0.0
Lack of parental assistance	14.7	40.2	36.3	7.8	1.0
Inadequate teaching environment or distractions at home	9.8	50.0	33.3	5.9	1.0

Source: Author, Field survey, 2022

Some other key problems that teachers identified while they were engaging in distance and online teaching (Table 03). When asked if teachers received any training on distance learning modalities, it was widely agreed that due to the sudden nature of school closures, most schools did not have time to train teachers and ensure they had adequate capabilities. 88.2% of the teachers in the sample have no sufficient training to conduct online classes. Teachers who were close to retirement had struggled due to the lack of digital skills in IT. Even after months of Zoom lessons, some teachers were not able to schedule their meetings on time or not at all. Furthermore, more than 95% of teachers agreed that students' attendance in online classes was irregular. This may be due to the lack of devices, network problems, or a decrease in students' interest in the classes due to various difficulties. 78.4% of teachers noted that they were not reliable for online classroom examinations. Also, some of them faced difficulties due to a lack of parental support (55%) due to various issues faced by them.

Opportunities

On a positive note, distance learning is a good opportunity for teachers, students, and families. Table 04 points toward the opportunities provided by the COVID-19 pandemic as perceived by secondary school students. Most of the students (86.2%) agreed that it enables students and teachers from faraway places to join on one platform. It could be because, during the lockdown, students were at their homes in different places, yet they were able to join their classmates and teachers for online classes. Therefore, they realized that this was a great opportunity to meet people. If online learning had not been there, the students might have lost their whole school days for a year. A large majority of the students (75.1%) also opined that online learning was the best option during the lockdown. They acknowledged that due to the exclusive use of online learning, they were able to continue their classes. Students felt that online learning allowed better accessibility to teachers, with 80.5% expressing that frequent meetings were possible. Further, 80.8% believed that it provided a good experience to face future calamity, enabling schools to continue education without interruption during this kind of school closure and 80.7% of teachers identified that it helped them upskill in new technology.

TABLE 4: THE OPPORTUNITIES FOR SECONDARY SCHOOL STUDENTS CREATED BY THE COVID-19 PANDEMIC.

	Strongly agree %	Agree %	Neutral %	Disagree %	Strongly disagree %
Online education allows students to learn about new technology	29.7	55.8	9.7	4.2	0.6
Online learning was the best-suited option during lockdown situations	21.8	53.3	16.4	7.9	0.6
Allowed students to contact teachers when the need arises	22.5	58.0	15.4	3.6	0.6
Provided one platform to connect students and teachers from faraway places	31.7	54.5	7.8	6.0	0.0
Provided a good experience to face future calamities	26.3	54.5	15.0	3.6	0.6
Cultivate students' independent learning abilities.	27.5	46.7	16.2	6.0	3.6

Source: Author, Field survey, 2022

The overwhelming majority of students stated that online education allowed students to learn about new technology: the increased use and familiarity with online communication tools such as Zoom. Furthermore, students learned to study independently. About three-quarters of students agreed that with the help of teachers' guidelines, they engaged in self-study during the lockdown. In addition to that, it also allowed the use of audio/visual content like animation, pictures, and video from the internet, which helped teachers teach with proper examples and explanations.

Figure 04 shows the teaching aids used by KED teachers during the COVID-19 pandemic lockdown for distance teaching. The utilization of PowerPoint presentation slides and voice recordings by teachers was minimal compared to other teaching-learning process. The typeset documents method was more dominant than the handwritten method because it was more convenient. As described in Figure 04, about 69% of the total sample of students received these typeset handouts. Almost a similar number of students studied with the help of video clips which were shown by teachers. Teachers were very likely to upload handwritten documents on online platforms. Not only this, some students mentioned that they downloaded past papers for their studies and online exam links. E-Thaksalawa and E-Kalvi websites were very supportive pages for accessing exam papers. This is specially designed according to the syllabuses of the students from grades 01 to 13.

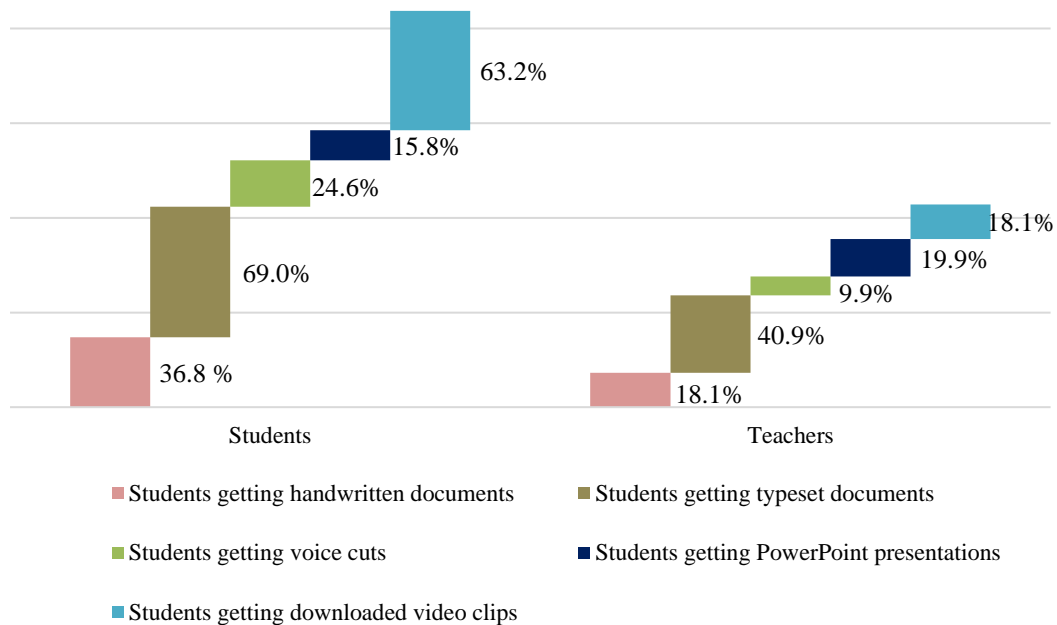


Figure 4: Teaching aids used by stakeholders during the COVID-19 pandemic lockdown for distance and online learning

Threats

This study highlights some key points concerning the threats of online learning. One of the major threats was health-related issues. Both teachers and students mentioned attending continuous classes without breaks, led to eyesight issues, headaches, and back pain. Moreover, learners with less determination and self-motivation were highly prone to distraction.

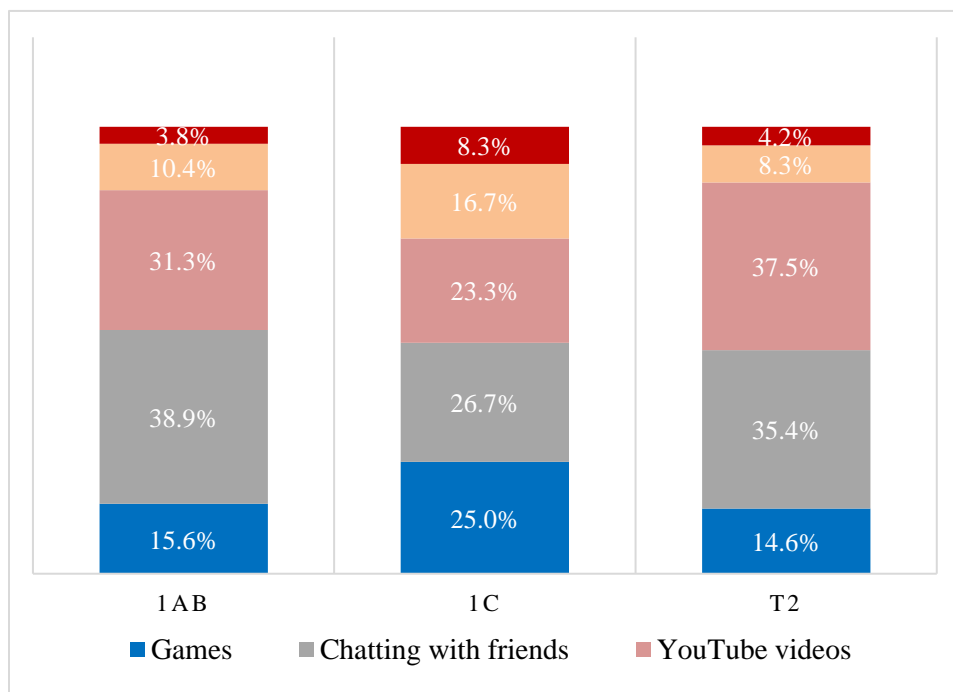


Figure 5: Purpose of using smartphones/computers during COVID-19 school closure,apart from learning.

According to Figure 05, students engaged in activities such as playing games, using Facebook, chatting with friends, watching YouTube videos, and creating TikTok videos during the online teaching hours. Some parents were not very techno-friendly. Thus, they were unaware of this novel learning system.

5. Discussion

The present study aimed to investigate the positive and negative impacts of distance and online education during the COVID-19 pandemic in Karaveddy Education Division, Jaffna. The COVID-19 pandemic hit us without a warning, posing a huge challenge to the education system. A 2018 survey conducted by the Department of Census and Statistics of Sri Lanka revealed that only 52% of Sri Lankan households with school-aged children owned a smartphone or computer, essential for online learning. This statistic reflects the reality of the digital device availability in Sri Lanka. According to this survey, 36.3% of students accessed their own digital devices, 59% of students used their family devices and 4.7% borrowed smartphones from others to continue their distance learning during COVID-19. The availability of digital devices hindered smooth study from home.

On a positive note, the sudden shift from traditional classrooms to distance learning has resulted in a completely different learning and teaching experience for students and teachers. However, online learning may seem viable or desirable in certain areas or circumstances, but there are large parts of Sri Lanka that are not set up for this form of educational delivery (Liyanagunawardena and Williams, 2021). However, students continued their education with the existing resources which is identified as a major strength. This is in line with the assertion by Gamage and Zaber

(2021) that TV broadcasts of lessons by the Government of Sri Lanka first introduced in March 2020 reached 28% of students in Sri Lanka.

The common problems associated with online education in general include the availability of the Internet, the speed and cost of the Internet, IT knowledge, and the lack of interaction between students and teachers. Network coverage is not equal across Sri Lanka. Many students faced disturbances due to poor connectivity, especially in remote rural areas. Financial problems were also the major challenge faced by secondary school students. Due to their poor economic background, 59.2% of students reported that internet services were too expensive for regular online connectivity. A recent needs assessment by Save the Children (2022) showed that children from two (02) out of five (05) households in Sri Lanka were unable to continue their online learning with families unable to afford internet data. Moreover, the students in an online class did not have direct contact with the teacher. As a result, they found it difficult to ask their questions due to the impersonal nature of the interaction. For this reason, students especially those from 1C and T2 schools, were not very serious about this learning method in this study area. Further, teachers noted that students often chose to keep their cameras off to avoid being visible as they were not in presentable forms. This practice contributed to a lack of discipline and ritual in online education.

As online teaching was not yet a major form of education in Sri Lankan schools, many teachers in the study area lacked previous experience in this method. Although teachers received various types of training during the outbreak, the short-term effect of such training remains arguably minimal. Further, the urban-rural disparity, different levels of knowledge about information technology acquired by teachers, and teachers' differing attitudes towards and ability to learn, information technology, were all having an impact on the general effectiveness of online education in the study area.

Distance learning is a good opportunity for teachers, students, and families. Since March 2020, public schools in this area have resumed working through online-based learning with the aid of apps such as Zoom, Viber, WhatsApp, and Google Classroom. In addition, the pandemic enhanced the level of collaboration/ cooperation and team working more strategically. The pandemic resulted in thinking seriously about the vision of education, the importance of strategic planning and goals, and how to plan for getting out of the comfort zone and looking at the challenge as an opportunity for growth. Schools, teachers, parents, and other companies supported each other to overcome the struggles on the education side due to COVID-19.

Distance learning provides an unlimited source of learning material whereas in traditional the learning sources are limited. They are mainly handwritten documents, typeset documents, voice cuts, PowerPoint presentations, and downloaded video clips. Not only that some schools provided necessary accessories such as phones and SIM cards to the underprivileged students to continue their education during COVID-19. Further, flexibility in terms of time and location in online learning is beneficial in times of crisis-like situations. E-education allows students to work and learn in one classroom despite the dispersed geographical location. It also has provided an experience to face future calamities where schools can continue education without interruption.

This study also highlights some key points concerning the threats of online learning. One of the major threats was health-related issues. In-door activities (classes or sessions) can negatively influence the health of learners (Magomedov, 2020). Moreover, the learners with a lack of self-motivation were highly prone to distraction. The learners lose track of their studies and end up

doing something else. Children were not given much time on devices before the lockdown, the novelty of devices has excited them as well as distracted them from lessons. Liyanagunawardena et al. (2021) mentioned that parents struggled to motivate their children to stay in front of the computers. Once they were at the computers they got distracted by other applications.

The school's closure due to COVID-19 may not affect students equally. Students from less advantaged backgrounds suffered more during COVID-19 than advantaged students (Di Pietro et al., 2021). There is inequality among urban and rural students; students from low-income or high-income and literate or illiterate parents. Poor and digitally illiterate families, characterized by lower educational levels and children with poor learning motivation, suffered more during this situation, exacerbating inequality.

To synthesize, identify, and prioritize the main strengths, weaknesses, opportunities, and threats of distance and online education and to offer an answer to problem questions, this study offers a body of knowledge focusing on a strategic planning process. This analysis is extremely useful for understanding the current educational situation, and creating a structure with the most crucial points that influence the improvement of this new type of education.

Limitations of the Study

Similar to other research, this study also has some limitations. Based on the study's objectives, the results solely reflect the perspectives of students and teachers, the inclusion of parents' opinions in future studies might help in understanding the issues faced by households regarding online education. Furthermore, respondents may lack extensive experience with the pandemic situation, potentially influencing the variability in their responses.

6. Conclusions

The current study showed that the COVID-19 pandemic lockdown affected the educational performance of most senior secondary students with varying degrees in KED, Jaffna. This is because of the average household income levels and it caused a gap between the 1AB and T2 Schools categories. Distance and online learning have played a role as a bridge between teachers and students in the COVID-19 pandemic crisis in this selected study area. It has both positive and negative effects. KED students continued their distance education with their existing resources which was considered as a major strength. But most of them faced difficulties mainly due to lack of internet connection, lack of devices, financial issues, lack of digital skills, and lack of training. This online teaching method has worsened existing education inequities in KED, Jaffna. At the same time, online teaching was dissatisfactory, according to the participants' attitudes. And also, this pandemic exposed their disaster unpreparedness, education-wise including teaching, learning, and administration in Jaffna. However, the new urgency for distance learning caused by the COVID-19 pandemic has created an intellectually enriched opportunity for the participants to accelerate Hybrid learning and teaching. It also gave chance to the students and teachers in KED to up-skill new technology and provided a great experience to face future calamities. In this study area, students learned to use digital devices to search beyond their subject and adapted to self-study. They also received downloaded materials such as exam papers and handouts during this school closure. However, this innovative learning method caused threats such as health issues, addiction to digital devices, and lower achievements in understanding subjects and practical knowledge. Thus, it can be concluded that online learning can produce effective results to a certain extent but a vast majority of KED students were unable to obtain benefits in online

education due to their lack of technical skills and monetary issues. Not only Sri Lanka's education system but other under-developed countries' education systems were also severely affected by the COVID-19 outbreak. Sri Lanka made an effort to manage the situation with so much of difficulties. People in under-developed countries are living at high risk of disaster potential. Hence, it is always better to find solutions to cope with disaster than worry about its negative impacts.

7. Recommendations

This study recommends the following suggestions to be prepared for future crises. There is a possibility to happen this kind of pandemic situation, natural disasters, and lockdowns in the future. So, it is very important to be ready and have a strong online education system for facing those situations without interrupting education.

- I. Mainly 1C and T2 schools' students' parents (specifically daily workers) especially from Srinaratha, Yakkaru, and Thunnalai areas in KED were most vulnerable during the COVID-19 period. To ensure free education and to avoid the economic burden on those parents, the government should allocate the necessary capital to ensure sufficient resources to support their children's online education.
- II. School teachers and students should get the proper training to handle online classes without interruption to face similar situations in the future.
- III. Some illiterate parents in KED were unaware of online learning especially those who live in rural areas (Valvetty, Srinaratha, Yarkkaru, Thunnalai, and Thevariya). They should have proper training to support their children in homeschooling during the pandemic. They should maintain a proper communication system for teachers to know about the most important information regarding their children's distance learning. Moreover, this communication will support avoiding the students' smart device addiction.
- IV. All the teachers in this KED were using the free version of Zoom, in the middle of the classes the whole class had to re-join to continue the lesson. Schools should take necessary action to continue classes without interruption.
- V. An island-wise survey is needed to prioritize the most vulnerable students who gained the minimum learning experience during COVID-19. It will provide equal opportunities for every student in Sri Lanka to continue their learning even during the disaster situation. For instance, free internet connection and digital devices should be provided to economically marginalized students and teachers.

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