

## ORIGINAL ARTICLE



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## PRIMARY SCHOOL TEACHERS' PERCEPTIONS TOWARDS THE REMOTE TEACHING AND LEARNING ACTIVITIES (RTLTA) DURING LOCKDOWN PERIOD IN SRI LANKA

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### Abstract

Remote Teaching and Learning Activities (RTLTA) have emerged in the aftermath of the sudden closure of schools due to the Covid-19 pandemic around the world. Multimode RTLTA is slightly suited to the students of secondary and tertiary education. Nevertheless, it is questionable to use with primary school children whose learning is designed mostly child-centred. In addition, it is vital to investigate teachers' readiness and training and access to facilities for conducting remote learning activities. Therefore, this study aimed to evaluate Primary school teachers' perception towards RTLTA during the lockdown period in Sri Lanka. This study was employed a survey research design, and data were collected using a google form-based questionnaire. The questionnaire contained 40 items to collect teachers' demographic information, facilities and training available to them, attitudes towards RTLTA, teaching methods and techniques they used, and participation of parents and students in RTLTA. Sixty-two primary teachers were selected using the snowball sampling technique from two districts, namely Gampaha and Kandy. Collected data were analyzed using mean and standard deviations and percentages. The analysis of results shows that most of the respondents (92.9%) used mobile broadband services to access the internet and 69.5% of the respondents used pre-paid services to access the internet. Furthermore, most respondents (69.4%) claimed they could afford it. Data analysis in terms of devices and apps for RTLTA showed that most respondents (72.6%) relied on their smartphones for conducting RTLTA. Likewise, many of them (64.5%) had been used WhatsApp and Zoom (64.5%) to reach their students who were at home. However, it is revealed that 98% of the respondents mentioned that they did not receive any facilities and training from authorities to conduct RTLTA. Teachers' attitudes toward RTLTA ( $M=3.52$ ,  $SD=1.21$ ), parental participation ( $M=3.2$ ,  $SD=1.14$ ), and student participation ( $M=3.89$ ,  $SD=1.13$ ) had lower mean values. Moreover, most of the respondents claimed that the RTLTA is not suited to the students in Primary education. Many primary teachers stated that they faced challenges regarding access to the internet and devices, getting parental support for the RTLTA. Therefore, researchers recommended that the National and Local authorities

provide clear guidelines, training, and necessary facilities and resources to conduct a meaningful RTLA to the primary education teachers.

**Keywords:** Covid-19, Perception of Teachers, Primary School Teachers, Remote Teaching & Learning.

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## Introduction

Due to the sudden outbreak of Covid -19 from December 2019, World Health Organization declared a pandemic around the world on 11 March 2020 (UNICEF & UNESCO 2021)<sup>1</sup>. The pandemic situation has created unheard-of challenges all over the world. All sectors of the nations, including education around the globe, have been severely affected. The provision of school education has been significantly hampered due to the closure of schools. Countries worldwide, especially developing countries, do not have adequate infrastructure facilities and resources to meet these unforeseen challenges. However, the pandemic situation forced the countries to come up with innovative strategies to overcome those challenges. The formal education system also started to adopt remote learning or distance learning strategies to educate students. For example, the Ministry of Education in Sri Lanka with the collaboration of National Institute of Education and the National Rupavahini corporation has launched a Television-based educational programme named *gurugedera*, which aimed to ensure students 'learning in distance mode. In addition, school teachers also voluntarily came up to teach their students using available technologies with them. Therefore, teachers gradually started to transit their teaching from on-site teaching to virtual instruction. Multimodal remote learning (World Bank 2020)<sup>2</sup> activities also were being used by teachers to teach their students by using smartphones, social media, and conference videos. The remote learning activities mainly include teaching online using free video conference apps, sending teaching notes, and learning activities to the students' WhatsApp groups so forth. It is relatively appropriate for students in secondary and higher education. However, it is debatable whether these remote learning activities are appropriate for primary school children because teaching and learning methods are mainly based on play and activities in primary school education. In addition, the World bank (2020)<sup>2</sup> states that access to the devices needed for remote learning, internet connectivity, prior experience with the delivery system, teacher preparedness and capacity, and quality of content needs to be evaluated when designing and deploying remote education programmes.

## Primary school education in Sri Lanka

The present school structure in Sri Lanka consists of primary education (Grades 1-5), secondary education (Grades 6 -11) and collegiate education (Grades 12-13). Children who complete their age 5 are eligible to admit into Grade 1. School education is provided free of charge in Sri Lanka. The curriculum of primary education is child-centred and consists of integrated subjects. Primary

education is organized into three key stages: Key Stage 1 (Grades1-2), Key Stage 2 (Grades3-4) and Key Stage 3 (Grade5). Teaching and learning processes at the Key stages 1 and 2 are mainly with guided play and activity-based. More desk works are in place at key stage 3 (Nawastheen 2019)<sup>3</sup>. According to the school census of Ministry of Education (2020)<sup>4</sup>, there were 1,640,647 primary school children in the country, and they faced unprecedented challenges to continue their education due to the sudden closure of schools in the pandemic period.

### **Statement of the Problem**

All schools in the country have been closed due to the spread of the Covid-19 epidemic since 2020. Therefore, students from primary to higher education faced challenges in receiving their school education. However, realizing the situation, most teachers who teach in secondary and higher school education voluntarily came forward to teach their students using various remote learning methods. Nevertheless, primary school education's teaching and learning methods are completely different from secondary education's teaching methods. Teaching and learning methods of Primary education is mostly activity-based and more learner-centred. In such a context, it is vital to find out what the Primary teachers used teaching methods to engage their students in learning at home through remote teaching and learning activities. Moreover, it is also very important to identify how teachers obtained cooperation from the parents of the students. Therefore, this study aimed to investigate primary school teachers' perception towards the remote teaching and learning activities (RTLTA) during the lockdown period.

### **Research questions of the study.**

To achieve the main purpose of the study, the researchers have developed the following research questions:

1. What are the facilities and training of respondents to conduct remote teaching & learning activities to the primary school children?
2. What are the supports received from local and national authorities to conduct remote teaching & learning activities to the primary school children?
3. What are the respondents' perceptions of their attitude towards RTLTA, teaching methods & techniques, parental support, and student participation in RTLTA?

### **Review of Literature**

In the aftermath of the COVID-19 Pandemic, there are many studies on students' remote learning or virtual learning emerging around the world. The major concern of providing virtual education was the availability of devices and facilities to access the remote learning activities. According to Zainudeen and Amarasinghe (2020)<sup>5</sup>, 66 percent of Sri Lankan households with school-aged children did not have access to the internet, and only 48 percent had a smartphone or computer. It means that only 34% of households could benefit from RLA distribution via the internet.

Furthermore, it was discovered that most households (78%) own mobile phones, while only 12% own a computer or laptop. Nonetheless, approximately 52% percent of households with children (under 18) do not have a smartphone or computer in their homes. According to the

findings of Nawastheen et al. (2020)<sup>5</sup>, the majority of school students were aware of various remote learning activities and were informed about them by schoolteachers, peers, and social media. In response to COVID-19, most students believed that they had plenty of time at home for self-learning while maintaining physical distance in the safety of their home. In general, they were pleased with the remote learning activities in which they participated.

Further, approximately 40% of students learned through educational programs broadcast on television and radio. Approximately 91.7% of school students used smartphones to access RLA, conducted via Zoom/Microsoft meetings, webinars, and some live social media programs hosted by various interest groups. However, it was discovered that half of the students could not afford the cost of data to participate in remote learning (Nawastheen et al., 2020)<sup>6</sup>. Lucas (2020)<sup>7</sup>, in his editorial notes, listed out the major social and economic factors severely impacted the people due to the sudden closure of schools. Interrupted learning, poor nutrients of children as they disconnected from free meals of schools, Confusion and stress for teachers, Parents being unprepared for distance and homeschooling, Challenges in creating, maintaining, and improving distance learning, Gaps in childcare, parent's wage loss, Rise in dropout rates and children's social isolation are the some of the factors (Lucas 2020)<sup>7</sup>.

Rasmitadila et al. (2020)<sup>8</sup> conducted a study on primary school teachers' perceptions of online learning in a program developed in Indonesia called School from Home during the COVID-19 Pandemic. Rasmitadila et al. (2020)<sup>8</sup> evaluated teachers' perceptions about the instructional strategies, challenges, support, and motivation of teachers regarding online learning in a program School from Home during the COVID-19 Pandemic Indonesia. They found that primary teachers believed that instructional strategy needed change and that all stakeholders, including governments, schools, social organizations, school committees, parents, must sit together to determine and formulate online learning goals in line with a national curriculum based on humanism. Furthermore, concerning instructional strategies, teachers stressed that technological readiness, including technology capacity, whether online use (TV learning, radio, online applications) or offline (printed teaching materials, modules, textbooks), was necessary to support the success of online learning (Rasmitadila et al., 2020)<sup>8</sup>.

In their study, Ramadan and Xhafari (2020)<sup>9</sup> investigated teachers' experiences with virtual teaching using the zoom platform. They found that majority of teachers used the zoom platform for their virtual teaching. Moreover, they found that teachers faced difficulties in assessing and grading the students virtually. According to Ramadan and Xhafari (2020:151)<sup>9</sup>, virtual learning can never replace traditional learning, and face-to-face learning is more effective. In contrast, Ćlic (2021)<sup>10</sup> in his study on Online Learning Readiness, Phubbing and Sofalizing Levels of Pre-Service Teachers amidst Pandemic, found that pre-service teachers' readiness for online learning was high.

## **Methodology of Research**

The study aimed to determine perceptions of Sri Lankan primary school teachers towards the remote teaching and teaching activities (RTLTA) during the closure of schools in the country. Remote teaching activities are referred as the various learning and teaching activities carried out by teachers for the students at home during the pandemic time, including online teaching and providing activities using social media such as WhatsApp and YouTube. This study was employed

a survey research design to collect data from the primary teachers' perceptions towards the remote teaching and learning activities conducted by them. Data were collected using a google form-based questionnaire in which 40 items were included to collect teachers' demographic information, facilities and training available to them, attitudes towards RTLA, teaching methods and techniques they used, and participation of parents and students in RTLA. Five Likert scale scales1 (Totally disagree) to 5 (Totally agree) was used to assess the respondents' perceptions. The developed questionnaire was evaluated by two experts and improved according to their feedbacks. Cronbach alpha reliability was calculated to ensure internal consistency of the instrument and obtained overall value for 25 items was .0869. In addition, the following results of Cronbach alpha for each category of the tool: attitudes towards RTLA (.628), teaching methods (.690), teaching techniques (.748), participation of parents (0.904), and students' involvement in RTLA (0.801). Sixty-two primary teachers participated in this study from Gampaha (48.3%), and Kandy (51.5%) selected from the snowball sampling technique. The districts were selected based on proximity and distance to the capital city. Collected data were analyzed using mean and standard deviations and percentages.

## Results of Research

### The Respondents' Demographic Background

Respondents' demographic background is illustrated in Figure 1. Respondents were representing two districts. They were from Kandy (51.5%) and Gampaha (48.3), and the majority of them were female (95.2), and they were from rural schools (67.6%). In addition, percentage of respondents in term of their teaching grades were Grades 1 & 2 (29%), Grade 3 (21%), Grade 4 (24.2%) and Grade 5 (25.8%). Many respondents had more than five years of teaching experience (43.5%) and 3-5 years of experience (35.5%).

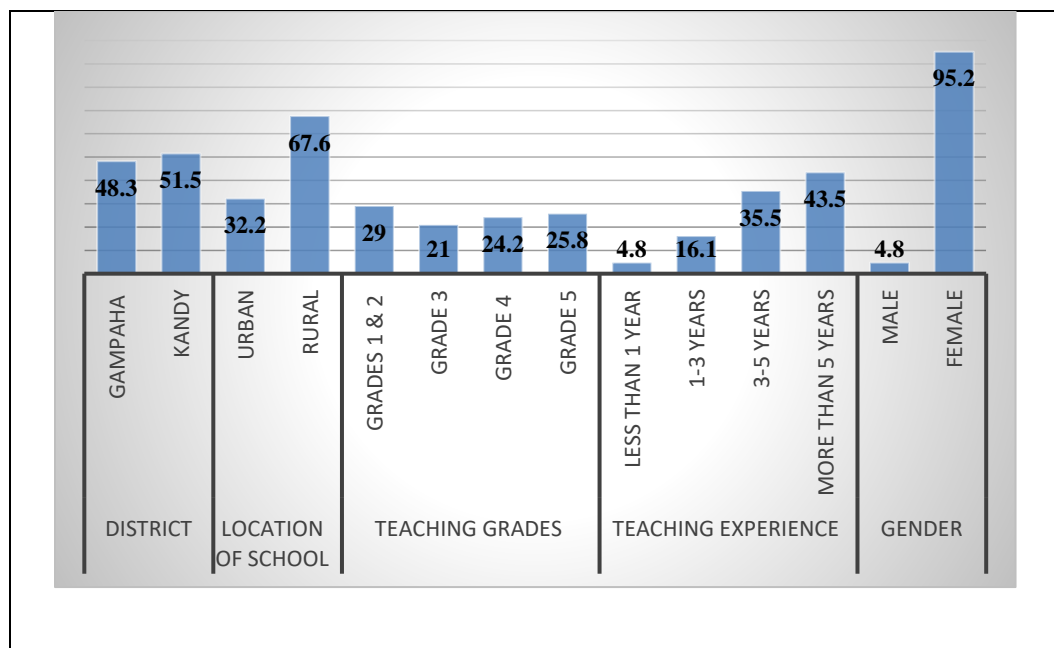


Figure 1 Respondents' district, school location, teaching grades and experience (%)

### Facilities and Training of Respondents

Due to the sudden closure of schools, it is important to know the facilities available to teachers to teach students from their homes. Figure 2 depicts the basic facilities accessible to respondents regarding internet connectivity at home and internet access costs. According to the analysis, most of them (92.9%) used mobile broadband services to access the internet. It is worth noting that 69.5% of the respondents use pre-paid services to access the internet. Furthermore, most respondents (45.2%) indicated their monthly internet access costs were between Rs. 1000 and Rs. 1,500, and the most (69.4%) claimed they could afford it. Further, most of the respondents (72.6%) mentioned that their internet coverage was normal.

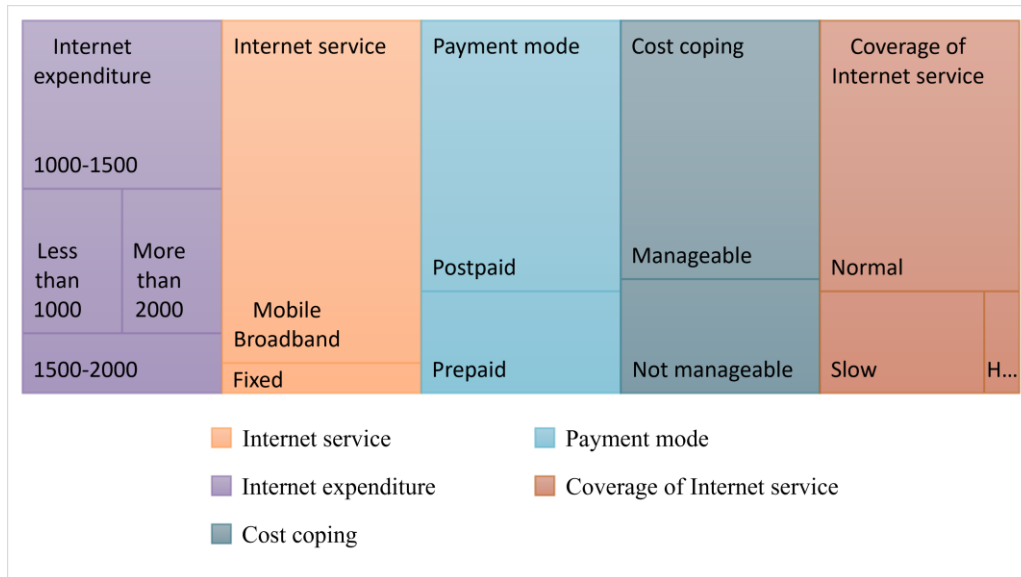


Figure 2 Respondents' facilities available and cost coping

Furthermore, data analysis in terms of devices and apps for RTLA showed that most respondents (72.6%) relied on their smartphones for conducting RTLA. Likewise, many of them (64.5%) had been used WhatsApp and Zoom (64.5%) to reach their students who were at home. Again, it was because of sending zoom links and learning activities to the WhatsApp groups. Finally, it is worth noting that 38.7% of the respondents spent 1-2 hours, and 53.2% of respondents spent more than 2 hours per day for the RTLA (Figure 3).



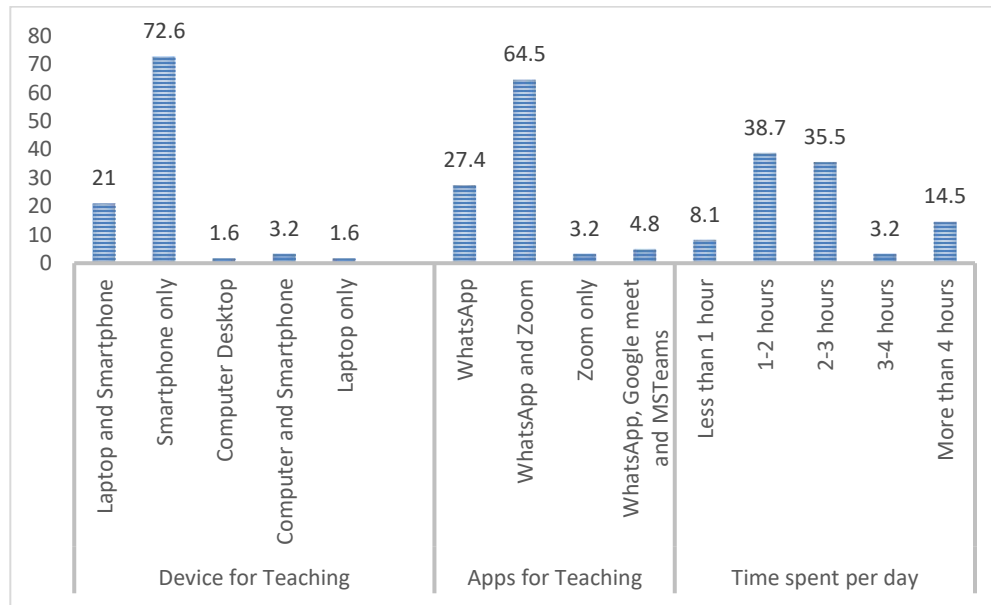


Figure 3 Devices & Apps and Screen time for RTLA (%)

### Supports of Local and National Authorities

Teachers should have received the necessary supports for RTLA from the local and national authorities such as the Divisional Education Office and the Zonal Education Office, the Ministry of Education, and the National Institute of Education throughout the pandemic period. Figure 4 illustrates the supports received from local and national authorities to the respondents during the lock-down time. However, it is revealed that 98% of the respondents mentioned that they did not receive any facilities to conduct RTLA. Likewise, most respondents stated that they were not provided with any trainings (87%) and guidelines (60%) to conduct RTLA.

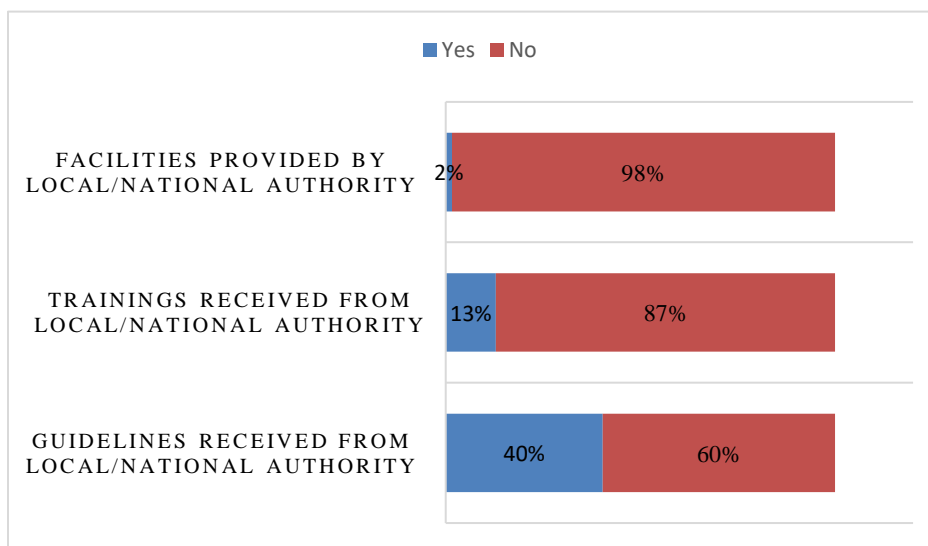


Figure 4 Supports from Local or National Authorities (%)

## Primary school teachers' perception on RTLA

Table 1 shows that the respondents' perceptions on RTLA with self-attests (attitudes), teaching methods, teaching techniques, participation of parents and students were assessed using five-point Likert scale items with responses ranging from "totally disagree" (1) to "totally agree" (5). The mean and standard deviation of primary school teachers' perceptions towards RTLA, in which they engaged during school closures in response to the COVID-19 Pandemic, are shown in Table 1. Teachers' attitudes toward RTLA (M=3.52, SD=1.21), parental participation (M=3.2, SD=1.14), and student participation (M=3.89, SD=1.13) had lower mean values than teaching methods (M=4.10, SD=1.18) and teaching strategies (M=4.05, SD=1.2). It suggests that the respondents were dissatisfied with their involvement in RTLA and parental and student participation in the RTLA.

Table 1  
*Primary school teachers' perception on RTLA*

	Mean	Std. Deviation
Teachers' attitudes towards RTLA	3.52	1.21
Teaching methods used in RTLA	4.10	1.18
Teaching strategies used in RTLA	4.05	1.2
Participation of Parents	3.2	1.14
Participation of Students	3.89	1.13

In addition to the above analysis based on mean and standard deviation, Table 2 shows teachers' response rate for each item under their attitudes towards RTLA. It is essential to assess primary teachers' attitudes towards RTLA during the country's lockdown period. The majority of the respondents (79.1%) accepted that RTLA is necessary for primary students, while 4.8% of teachers did not agree. Nearly half of the participants believed that they have the potential to conduct RTLA for primary students. Only few teachers (22.6%) were insecure that they have abilities to conduct RTLA. A considerable number of respondents (24.2) were unsure about their potential to teach using remote learning techniques. A few respondents (27.4%) agreed that they considered students' maturity and individual differences in organizing RTL activities. Whilst majority of the respondents (33.9%) were not uncertain about their decision regarding this. 12.9% of participants agreed that they did not consider students' maturity and individual differences in their preparation of RTLA. Similar responses were observed in the question related to their engagement with their students in learning activities at their home by using RTLA. However, most of the respondents (68.2%) believed they were very passionate about providing RTLA.

Table 2  
*Attitudes on RTLA of Primary School Teachers (%)*

Item	1	2	3	4	5
1. RTL activities are essential for primary school students during the lockdown period.	6.5	4.8	9.7	22.6	56.5



2. I have the ability/training to perform RTLA.	11.3	11.3	24.2	27.4	25.8
3. I can organize my RTL activities according to the students' maturity and individual differences.	12.9	14.5	33.9	22.6	16.1
4. I can engage my students actively in learning activities at their homes by using RTLA.	12.9	16.8	38.7	22.6	9.7
5. I am very passionate about providing RTLA	6.5	6.5	19.4	30.6	37.6

The results of Table 3 show that how primary teachers perceived their usage of teaching methods of RTLA. The majority of the primary teachers (72.6%) created WhatsApp groups that consisted of parents and students for regular communication related to the learning activities. Similarly, many of them (77.4%) totally agreed to send various learning activity sheets to the WhatsApp groups. However, only half of the respondents (53.2%) agreed with using video conferencing techniques for teaching and learning activities. Similar results were found related to direct students to watch television educational programmes which telecasted on *gurugedera* TV.

Nevertheless, most of the respondents (16.1% and 61.3%) agreed that they searched useful educational videos on the internet and shared them with their students. In addition, an open question was asked about their other teaching methods used during the lockdown periods. Some teachers said, "*I create short videos using smartphones and send those to my primary students*". However, some other teachers said, "*I invite children in small groups near my home to teach them*". It is very useful to engage with their learning rather than conducting lessons in remote". Likewise, some said they asked slow learners to visit their homes and engage with the learning activities prepared by the teachers. It is noteworthy that a certain number of teachers claimed that they asked their students who did not have smartphones at home to read textbooks using their normal phones.

Table 3

*Primary Teachers' perception on their teaching methods of RTLA (%)*

Item	1	2	3	4	5
1. I created WhatsApp groups exclusively for the students or parents and maintained regular communication.	3.2	6.5	6.5	11.3	72.6
2. I send relevant learning activity sheets that involve students in learning in the WhatsApp group.	00	3.2	11.3	8.1	77.4
3. I carry out teaching and activities for the students using zoom or any other video conferencing apps.	17.7	12.9	16.1	11.3	41.9
4. I direct my students to watch the programs for primary education students that are aired in the Gurugedera TV programmes	6.5	12.9	22.6	14.5	43.5
5. I search for good educational videos on YouTube and share them with my students.	6.5	1.6	14.5	16.1	61.3

Teaching strategies are also crucial when teaching for primary students. Teachers have to carefully select appropriate strategies for the students in primary education. In the remote learning context, however, it is not easy to conduct sessions for the students in primary education as they learn through activities. The results of Table 4 indicate what primary teachers thought about their

teaching strategies used in RTLA. Most of the respondents (72.6%) agreed and totally agreed that they prepared and sent the necessary lessons notes and activity sheets to the students in an attractive manner.

Similarly, 74.2% of respondents allowed students to present their creative activities such as songs, poems, and storytelling so forth, and they encouraged students to record their creative activities as short videos. Furthermore, around 22% and 40% of respondents were agreed and totally agreed that they used role-play, storytelling and questioning techniques in their zoom-based contact sessions accordingly. In addition, 19.5% and 58.1% of respondents agreed and totally agreed that they used appropriate videos and images for their students during the remote teaching lesson accordingly. Furthermore, many teachers provided the following responses to an open question regarding teachers' teaching strategy:

- I am sending a series of videos or audio clips related to the lessons I taught.
- I received answer sheets for certain learning activities via WhatsApp and marked them.
- I asked my students to create small videos of their creative activities and share them within the group.

Table 4

*Primary Teachers' perception on their teaching strategies using in RTLA (%)*

Item	1	2	3	4	5
1. I prepare and send the necessary notes and activity sheets to the students in an attractive manner	4.8	6.5	16.1	25.8	46.8
2. I provide the opportunity to present creative activities.	4.8	3.2	17.7	32.3	41.9
3. I encourage students to film their songs, speeches and send them as short videos.	3.2	3.2	12.9	17.7	62.9
4. When teaching on Zoom meetings, I use a lot of role play, storytelling, and quiz techniques.	16.1	3.2	17.7	22.6	40.3
5. I use the appropriate videos and images for the students during the lesson.	6.5	9.7	6.5	19.4	58.1

The support of parents is very important to engage their children in learning. Therefore, questions were also asked from teachers regarding parental participation in the RTLA. Analysis of results is depicted in Table 5. Around 22.6% and 19.4% of the teachers were agreed and totally agreed with the statement on getting out of parental involvement in RTLA. However, nearly 30% of teachers were neutral, and 19.4% and 8.1% of teachers did not agree and totally disagreed with the statement. It shows that the majority of teachers are dissatisfied with the involvement of parents in the RTLA. Similar results were found in other statements about providing necessary guidance and supports to their children, assisting their children to do their homework and co-curricular activities at home, and parental attention on their children's participation in RTLA. However, most teachers agreed (agree 32.3% and totally agree 19.4%) that parents showed their interest in receiving lessons notes/activity sheets they provided to the students using WhatsApp. Even though parents were concerned about their children learning at home, they could not cooperate with teachers due to their other commitments with the breadwinner for their family. Furthermore, most teachers expressed the following responses related to the open question about parental

involvement: Parental involvement is low due to their educational ignorance and backwardness in dealing with modern equipment and technical advancement.

Table 5

*Primary Teachers' perception about parental participation in RTLA (%)*

Item	1	2	3	4	5
1. I get the best out of parental involvement in RTLA.	8.1	19.4	30.6	22.6	19.4
2. Parents provide necessary guidance to their children when teaching through Zoom meetings.	17.7	17.7	38.7	17.7	8.1
3. Parents assist me to provide homework /extra & co-curricular activities to their children.	8.1	9.7	43.5	24.2	14.5
4. Parents show their interest in receiving lesson notes/activity sheets I provided to the students.	6.5	9.7	32.3	32.3	19.4
5. Parents pay more attention to making their children participate in RTLA.	11.3	8.1	38.7	30.6	11.3

As with parental involvement, it is important to know what teachers realize about student participation. Unlike teachers' opinions about parental participation, most teachers were positive about student participation. Table 6 shows teachers' perceptions about the participation of students in RTLA. The majority of the teachers including both agreed and totally agreed with the questions related to the students' enthusiasm in participation in RTLA (64.5%), students' questioning (62.9%), students' responses to teachers (61.3%), engaging actively in home-based learning activities (64.4%) and involving with co-curricular activities (74.2%). Primary students are more interested in co and extra-curricular activities; therefore, the majority of the teachers felt that their students were involved with those activities.

Table 6

*Primary Teachers' perception about the participation of students in RTLA (%)*

Item	1	2	3	4	5
1. The student enthusiastically participates in all the lessons taught through Zoom meetings.	4.8	16.1	14.5	22.6	41.9
2. Children ask their doubts and more questions related to the lesson when taught through Zoom.	3.2	9.7	24.2	21.0	41.9
3. Students respond as per my expectation when I teach in zoom meeting	4.8	4.8	29.0	29.0	32.3
4. Participate enthusiastically in home-based activities.	3.2	8.1	19.4	33.9	35.5
5. Participate enthusiastically in the co-curricular activities provided.	3.2	4.8	17.7	27.4	46.8

## Challenges faced by Teachers in RTLA

The teachers were asked about the challenges they faced in conduction RTLA, using open-ended questions in the questionnaire. Table 7 shows the major challenges teachers faced and solutions they suggested to overcome those challenges.

Table 7  
Challenges faced by Teachers

Challenges	Teachers' Statements	Suggestions
Challenges related with internet Connectivity	<ul style="list-style-type: none"> <li>• <i>Continuity is very vulnerable when conducting classes using the internet where internet coverage is very low in my village.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Increase the coverage of the internet around the country.</i></li> <li>• <i>Internet should be given at an affordable cost to the schoolteachers and children</i></li> </ul>
Challenges related to devices	<ul style="list-style-type: none"> <li>• <i>With the sudden increase in the prices of capable phones and laptops, I cannot buy them and do better teaching.</i></li> <li>• <i>I used Zoom's free version so that I could not be able to teach students continuously. In addition, I cannot make them into groups virtually and give quizzes.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Authorities should provide necessary devices freely or at affordable prices.</i></li> <li>• <i>Teachers are provided zoom premium account freely, and then we can conduct better teaching-learning activities.</i></li> <li>• <i>Officials must provide us with the premium version of zoom freely then we can conduct the classes uninterruptedly.</i></li> </ul>
Students related challenges	<ul style="list-style-type: none"> <li>• <i>Most of the students are using their parents' smartphones. In a family with more than one child, students face difficulties learning education using a smartphone. Many children report problems with their vision as they spend more time using smartphones.</i></li> <li>• <i>Students quickly get bored of engaging in monotonous learning activities.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Government should provide free tabs to the students.</i></li> <li>• <i>Teachers are to be allowed to conduct face to face sessions for a small number of children who resides close to the teachers' homes regardless the schools which children are studying.</i></li> </ul>
Parents related challenges	<ul style="list-style-type: none"> <li>• <i>. Parental cooperation is very low. Although parents initially showed much interest, their</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Parents should be aware of the importance of virtual learning and</i></li> </ul>

	<p><i>interest and participation then gradually declined.</i></p> <ul style="list-style-type: none"> <li>• <i>Most parents do not know how to use apps on their smartphones.</i></li> </ul>	<p><i>using new devices using mass media by providing demo videos prepared for them too.</i></p>
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**Conclusion**

Schoolchildren have lost their learning opportunities due to the closure of Sri Lankan schools in response to the COVID-19 pandemic since March 2020 (UNICEF & UNESCO 2021)<sup>1</sup>. As a result of the worldwide school closures caused by the Covid pandemic, multi-mode remote Teaching and Learning Activities (RTLAs) have emerged. However, multi-mode RTLA is appropriate to the students at the secondary and tertiary level education. On the other hand, it is comparatively questionable of appropriateness to the children in Primary education, designed with activity and play-based learning. In addition, it is vital to evaluate the access to the devices needed for remote learning, internet connectivity, prior experience with the delivery system, teacher preparedness and capacity, and quality of content needs to be evaluated when designing and deploying remote education programmes (World bank 2020)<sup>2</sup>. Therefore, this study aimed to identify primary school teachers' perceptions about their remote teaching and learning activities (RTLA) during the lockdown period in Sri Lanka. Outcomes of this study would be beneficial to the authority to plan and provide necessary facilities and resources to the teachers and students in the country. The analysis of results revealed that the majority of teachers use smartphones and pre-paid mobile broadband services. However, the majority of teachers expressed that they could afford the cost of internet access.

Nevertheless, the majority of teachers were not satisfied with the coverage of the internet. Aljazeera (2021)<sup>11</sup> also reported the signal problem the school community faced in Sri Lanka. According to Aljazeera (2021)<sup>11</sup>, many students from villages walked two or more miles and climbed trees to access the internet signals. Moreover, data analysis in terms of devices and apps for RTLA revealed that most primary school teachers relied on their smartphones for conducting RTLA. It is consistent with Varma's findings (2021)<sup>12</sup>, according to which the vast majority of learners (94%) used smartphones to access virtual learning during the global pandemic.

Similarly, many of the respondents been used WhatsApp and Zoom to reach their students were at home. It is also consistent with the findings of Ramadan and Xhafari (2020)<sup>9</sup> that "Zoom" is the most used by teachers during the lockdown period. However, data analysis of the study showed that almost all teachers complained that they did not receive any facilities and training from authorities to conduct RTLA. In addition, data analysis of the study showed that there was a lack of teachers' attitudes towards RTLA, parental participation and student participation. Moreover, most of the respondents claimed that the RTLA is not suited to the students in Primary education. Many primary teachers stated that they faced challenges regarding access to the internet and devices, getting parental support for the RTLA.

Therefore, researchers of this study recommend the following actions to be taken to address the issues related to remote teaching and learning activities:

- All teachers, including primary education teachers, should be provided with clear guidelines, training, and necessary resources to conduct RTLA effectively.
- Most of the teachers use non-premium zoom video conference apps, and they should be provided premium versions of video conference apps then conduct their virtual lessons uninterruptedly.
- School teachers and students should be provided with tabs or smartphones freely or consensus prices to promote the RTLA..
- Internet coverage should be expanded further, or student learning labs with high-speed internet should be established in remote areas to ensure all students can access remote learning.
- Parents and the school community should make aware of remote learning or virtual learning process.
- Further studies could be carried out on how primary teachers and students engaged with teaching and learning during the lockdown period of the country.

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