



Education in Emergency (EiE) During COVID-19 Report

April 2021

**Education Monitoring Division
Department of School Education
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Acronyms

BBS	Bhutan Broadcasting service
BMI	Body Mass Index
CDEO	Chief Dzongkhag Education Officer
CTEO	Chief Thromde Education Officer
DEO	Dzongkhag Education Officer
ECCD	Early Childhood Care and Development
EiE	Education in Emergency
EMD	Education Monitoring Division
ICT	Information Communication Technology
MoE	Ministry of Education
NFE	Non-Formal Education
NFEI	Non-Formal Education Instructor
PD	Professional Development
PPD	Policy and Planning Division
SEN	Special Educational Need
SIM	Self-Instructional Material
SPCD	School Planning and Coordination Division
TEO	Thromde Education Officer
TV	Television
UNICEF	United Nations International Children's Emergency Fund
WASH	Water, Sanitation and Hygiene

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This study is conducted by Education Monitoring Division under the Ministry of Education.

Executive Summary

The Ministry with support of the stakeholders including the local media houses and teachers devised all possible strategies to provide continuity in learning, students engagement and support. The Ministry initiated teaching online using social media, Self-Instructional Materials (SIM), video and radio lesson, including psychosocial support through Sherig Counselling services. Despite the challenges posed by the pandemic abruptly, the academic year ended successfully. Therefore, this report is intended to assess the experiences and challenges faced by the students, parents, teachers, and other stakeholders during the pandemic for strategizing interventions to address the learning loss and future responses. The study covers all the Dzongkhags and Thromdes, Schools, ECCDs, NFEs, learners, teachers, school principals, and parent representatives.

The findings from the study revealed that most students had responded that online learning was effective in engaging them, and 74.48% of the respondents said they enjoyed the online lessons. They stated that online learning had instilled the value of learning independently instead of always being dependent on the teachers. Significant number of students felt that they were meaningfully engaged in online learning during the pandemic. Most of the students were of the view that teaching and assessment were most appropriate for the students stationed in remote and rural areas. The data further claimed that 78.60% of parents supported their children in learning during the pandemic.

However, a substantial number of students stated that online learning was challenging, as they did not get constant guidance from teachers due to the lack of face-to-face contact. Students responded that online learning was expensive and some of them were not able to afford it. Students expressed inaccessibility to smartphones and unaffordability of data packages as an issue. Moreover, majority of respondents experienced weak internet connectivity that had hampered their learning processes. Majority of students perceived video lessons on BBS as confusing and sometimes even incomprehensible. The study revealed that the use of SIM as learning material was most vigorously used in the lower classes. This was because most of the higher classes' students had access to other medium for learning. The survey revealed that 119,772 students accessed lessons through various social media Apps while mobile 3,301 students accessed lessons through the radio. Obviously, the least used medium was the radio since radio lessons were developed for classes PP-III only. WeChat was the most popular App used by students to access lessons.

Regarding implementation of both Adapted and Prioritized Curriculum during pandemic, schools reported that the guidelines provided by Royal Education Council (REC) were clear and majority of schools found convenient to implement. However, respondents expressed that Adapted Curriculum did not include all the subjects. Despite the Ministry's effort to keep all the students engaged by providing opportunity for continuous learning, schools having students with disabilities faced challenges as the general guidelines provided by the Ministry proved little help to them. Teacher respondents indicated that they had to improvise teaching and learning strategy depending on the students' learning abilities.

The study also attempted to find parent and student engagement besides academic activities. It revealed that students were able to help parents in household chores, weaving and farm work. While some students were productively engaged with parents, some got into excessive video gaming which parents complained as waste of time. With regard to parents' engagement with students, there were a variety of activities that they were engaged in such as-getting involved in guiding their children in completing assignments, communicating with teachers, supporting teachers by providing vehicles to facilitate teachers in mobile teaching. While some parents were actively engaged in their children's education, some opined to withdraw their children from schools because of their inability to afford smart phones, data packages, etc.

Many teachers were confident in using Google Classroom as a medium for teaching, although a few asserted discomforts because of ineffective orientation on use of Google Classroom through webinar and limited ICT knowledge. Similarly, some students expressed difficulty in coping with teaching provided through Google Classroom.

With the outbreak of COVID-19, all the schools were concerned about effective preventive measures using hand washing stations as they did not have adequate facilities at that time, and accelerated interventions includes:

- Installation of handwashing stations in all relevant places;
- Ensured clean and continuous supply of water;
- Provided sufficient and safe drinking water; and
- Strict adherence to COVID-19 safety protocol.

Despite the initiatives taken by schools to maintain students' health and hygiene as a preventive measure, relocated schools faced shortage of hostel space whereby some students had to sleep on the floor while others had to share beds.

The study concludes that most of the students felt online learning was not as effective and affordable compared to classroom teaching. Students anticipated reopening of schools to attend regular classes as usual. This report has detailed findings and suggestive recommendations at the end.

1. Background

The COVID-19 pandemic has forced universities, colleges, and schools all over the world to make modifications in their systems of delivering classes (Zhou et al., 2020). More than ever, the use of technology to leverage online learning has increased dramatically (Adarkwah, 2020; Bergdahl & Nouri, 2020; Hill & Uribe-Florez, 2020). Online education continues to become the primary tool in delivering uninterrupted lessons around the globe (Kerres, 2020; Onyema, 2020). Also, one of the major impacts to the education systems was the indefinite closures of schools in more than 100 countries worldwide (Ahmed, 2020; Kerres, 2020; Onyema, 2020).

Bhutanese education system, for the first time, witnessed a substantial pedagogical shift in the teaching and learning processes. Online learning is fairly a new concept in Bhutan. Teachers in Bhutan, like in many other countries, were pushed beyond their comfort zones, and were compelled to replace the instructional time-loss through online learning (Dorji, 2020). As a result of COVID-19, regardless of teacher-student readiness, in many countries, schools have resorted to remote teaching, using online learning platforms (Bergdahl & Nouri, 2020; OECD,2020).

Bhutan had the first COVID-19 case on 5th March 2020. Although the government established that the first case was imported, yet speculations and fears spiraled out of it. For a nation of only about eight hundred thousand people with a subsistence economy, it became a major concern.

One of the first steps taken by the government was to close the schools including ECCD and NFE centres in high-risk Dzongkhags/Thromdes, namely, Thimphu, Paro and Punakha on 6th March and, schools in Wangdue, Chhukha and Phuntsholing Thromde on 9th March 2020, as a preventive measure and also to trace the primary contacts. On 18th March 2020, the government ordered schools across the nation to close. However, it was comforting to learn that there was no community transmission of COVID-19. In line with Education Disaster Response Plan, Education Emergency Operation Centre (EEOC) was activated to respond to emergencies. Teacher across the nation started to engage the students in their respective schools. Some teachers volunteered to provide their services in times of emergency.

Subsequently, Ministry of Education in collaboration with Royal Education Council (REC) introduced Adapted Curriculum as an EiE contingency plan. They introduced remote or home-based

learning for children from classes PP-XII throughout the country by recording lessons using Adapted Curriculum. The sessions enacted by teachers were recorded using local audio-visual firms to broadcast on the national television that started from 25th March 2020. 442 lessons were recorded for all the key stages (Key stage I-Classes PP-III, Key stage II- Classes IV-VI, Key stage III-Classes VII-VIII, Key stage IV-Classes IX-X, and Key stage V-Classes XI-XII). Teachers were invited to prepare video lessons for all the key stages and these videos were made available through Bhutan Broadcasting Service (BBS), Sherig YouTube, Google Classroom and other e-learning platforms.

For ‘**Reaching the Unreached**’, Self-Instructional Materials (SIM) were developed on 27th March 2020 to facilitate education of the students living in remote places with either limited or no access to BBS and Internet for e-learning lessons. The learning activities in the SIM packages were developed considering the class-levels and learning potentials of the students. The designs of the learning activities were intended to promote self-engagement and independent learning of the students at homes. A total of 160,675 SIM booklets were printed and distributed to 32,135 students across the country from 25th April 2020. Similarly, 221 lessons on SIM were broadcast using BBS radio and Kuzoo FM.

Prioritized Curriculum was developed on 15th May 2020 to be implemented for Classes PP-XII as part of second phase of EiE. The most essential learning concepts aligned with the learning outcomes or objectives were selected in the Prioritized Curriculum for each subject and class.

Adapted Curriculum and SIM were implemented during the nationwide closure of schools, while Prioritized Curriculum was implemented when schools reopened for classes IX to XII.

The curriculum is the most fundamental and essential learning contents and concepts that are aligned to the most carefully selected learning objectives and outcomes in each learning area for each class level. It encompasses procedural knowledge, skills, values, strategies, and processes. The Prioritized Curriculum comprises 65% of the actual curriculum content.

This report is intended to study the implementation of EiE during pandemic by examining the effectiveness, challenges and exploring the way forward.

2. Process of data collection by EMD

In order to collect data from schools, District Education Officers (DEOs) and Thromde Education Officers (TEOs) were entrusted with the responsibility, as they were equally concerned about the implementation of EiE in their jurisdictions. Further, it also proved to be efficient if they collected the data rather than EMOs collecting during the pandemic. However, the survey tools for collection of data were designed by EMD according to the need of time. While designing the tools, EMD referred many relevant documents, such as, EiE guidelines, School Performance Management tool, and sample questions about access to learning continuity programs/efforts prepared by UNICEF Regional Office for South Asia (2020). After finalising the survey tools in EMD, wider consultation was carried out involving schools and agencies under MoE. EMD had further virtual consultation with DEOs/TEOs and a few school principals. The tools were refined by EMOs by incorporating their feedbacks.

During the virtual consultation with DEOs/TEOs and Principals, they were provided with certain degree of flexibility to collect the data from their schools within 15th October to end of November 2020. However, EMD mandated DEOs/TEOs to visit all schools in their Dzongkhags/ Thromdes in person or virtually considering the pandemic. With regard to study sample of participant, they were suggested to follow convenience sampling by including at least 20% participant from each school.

Dzongkhags/Thromdes were expected to analyse the data and write the detail report not only to submit to EMD but also for the purpose of their own documentation and consumption in order to provide support to schools. DEOs/TEOs submitted their reports to EMD for producing national EiE report. EMD formed a working team involving officials from MoE and teachers from the schools. The report contains discussion on findings, which are grouped into themes along with demographical information. In addition, challenges of implementation of EiE and recommendations for improvement are highlighted in this report.

3. Demographic

3.1 Schools, Institutes and Centres

TABLE 1. NUMBER OF SCHOOLS, INSTITUTES, ECCD & NFE CENTRES

School/Institutes/Centers	Government	Private	Total
ECCD Centers	432	63	495
Primary Schools	304	15	319
Lower Secondary Schools	60	1	61
Middle Secondary Schools	70	1	71
Higher Secondary Schools	61	21	82
Special Institutes	2	0	2
Extended Classrooms	74	0	74
Schools with SEN program	20	0	20
Non-Formal Education Centres** <i>(The non-formal education centres include CLCs as well)</i>	427	0	427

Source: Annual Education Statistics 2020, PPD, MoE

3.2 Students and ECCD Children

TABLE 2. NUMBER OF STUDENTS & ECCD CHILDREN

	Government			Private			Total		
	Female	Male	Both	Female	Male	Both	Female	Male	Both
ECCD Centres	3,420	3,503	6,923	516	587	1,103	3,936	4,090	8,026
Primary Schools	20,450	20,715	41,165	939	1,061	2,000	21,389	21,776	43,165
Lower Secondary Schools	12,462	12,326	24,788	72	86	158	12,534	12,412	24,946
Middle Secondary Schools	23,185	22,292	45,477	282	274	556	23,467	22,566	46,033
Higher Secondary Schools	23,781	21,495	45,276	4,906	4,619	9,525	28,687	26,114	54,801
Special Institutes	59	70	129	-	-	-	59	70	129
Extended Classrooms	915	817	1,732	-	-	-	915	817	1,732
Total	8,852	77,715	158,567	6,199	6,040	12,239	87,051	83,755	170,806

Source: Annual Education Statistics 2020, PPD, MoE

3.3 Teachers

TABLE 3. NUMBER OF TEACHERS

	Government			Private			Total		
	Female	Male	Both	Female	Male	Both	Female	Male	Both
Extended Classrooms	30	103	133	-	-	-	30	103	133
Primary Schools	1,045	1,556	2,601	133	59	192	1,178	1,615	2,793
Lower Secondary Schools	703	766	1,469	12	7	19	715	773	1,488

Middle Secondary Schools	1,142	1,442	2,584	22	22	44	1,164	1,464	2,628
Higher Secondary Schools	1,000	1,560	2,560	209	348	557	1,209	1,908	3,117
Special Institutes	17	24	41	-	-	-	17	24	41
Sub-Total	3,937	5,451	9,388	376	436	812	4,313	5,887	10,200

Source: Annual Education Statistics 2020, PPD, MoE

3.4 Student Access to Lessons

It was reported that 119,772 students used social media Apps, such as, WeChat, Telegram, WhatsApp and Messenger to access lessons while 88,118 students accessed lessons through television, and 60,507 students accessed through Google Classroom as given in the Table 4 and Figure 1;

TABLE 4 MEDIUM FOR ACCESSING LESSONS

Medium	No. of Stds.
Social Media Apps	119,772
TV	88,118
Google Classroom	60,507

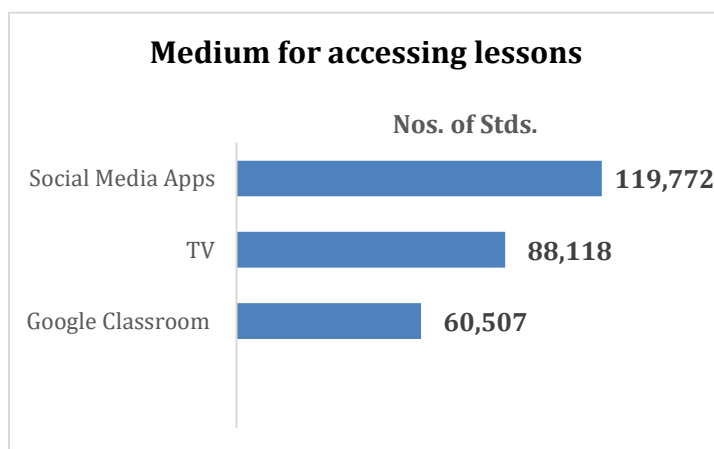


FIGURE 1

The Ministry of Education has also provided Self Instructional Material (SIM) to those students who could not access lessons through the medium mentioned above. SIM is a printed material which is self-instructional, or

learner centered that identifies the ways of teaching learning process designed to meet learners' needs.

It should be noted that some students would have used more than one or more medium to access the lessons. Therefore, the total number of students in the table above might not tally with the information provided in the Annual Education Statistics, 2020, PPD, MoE.

Radio Lessons

A total of 221 radio lessons based on SIM were developed and aired through BBS radio and Kuzoo FM by the MoE. These lessons were especially meant for lower primary classes (PP-III) who do not

have access to Television (TV). As per the AES, 2020, there were 55,089 students in classes PP-III. Of the total, 3,301 students of classes PP-III used radio lessons.

TABLE 5. RADIO LESSONS

Dzongkhag/Thromde	No. of Stds.
Bumthang	24
Chhukha	124
Dagana	10
Gasa	156
Haa	81
Lhuentse	0
Mogar	45
Paro	420
Pemagatshel	13
Punakha	0
Samdrupjongkhar	15
Samtse	31
Sarpang	3
Trashigang	197
Trashi Yangtse	160
Trongsa	7
Tsirang	1,250
Thimphu	29
Wangdue	20
Zhemgang	18
Gelephu Thromde	43
Phuntsholing Thromde	3
Samdrupjongkhar Thromde	35
Thimphu Thromde	617
Total	3,301

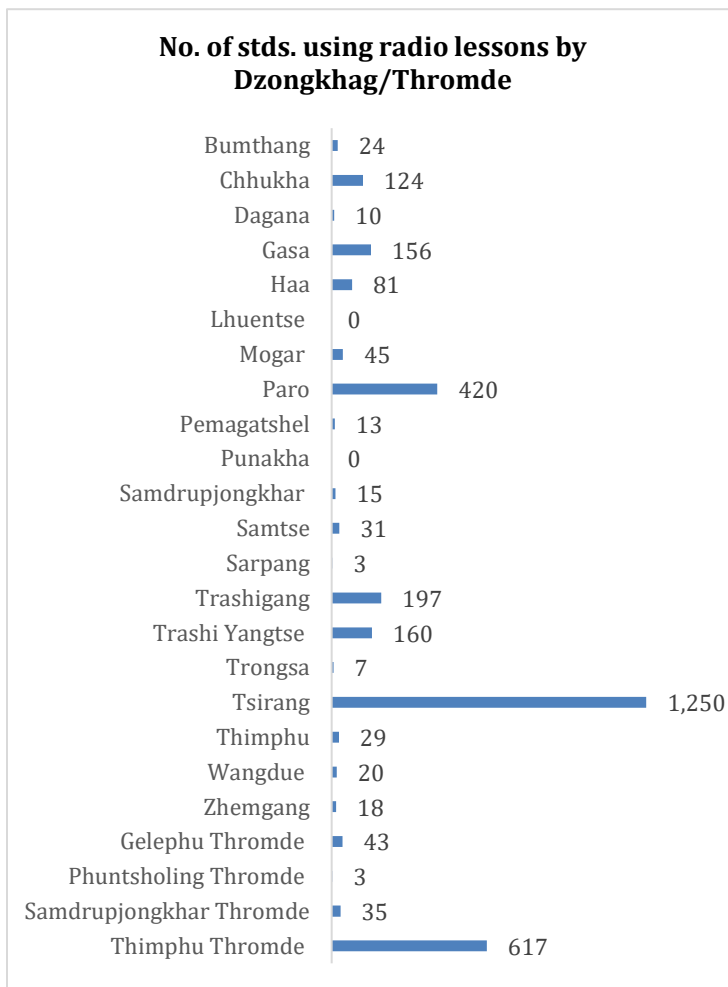


FIGURE 2

From the above table, it can be noted that there were not many students who availed radio lessons as most of them have access to other mediums for remote learning.

Table 6. Number of Stds. Using SIM by Key Stage

Key Stage SIM	Class	No. of Stds
Key Stage I	PP - III	40,648
Key Stage II	IV - VI	25,661
Key Stage III	VII - VIII	19,564
Key Stage IV	IX - X	15,376
Key Stage V	XI - XII	13,840
	Total	115,089

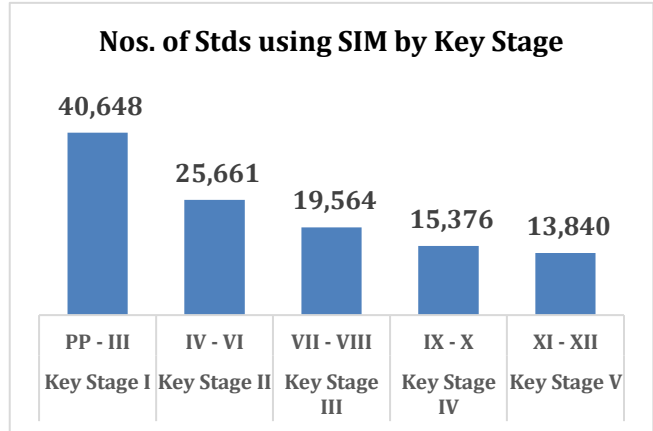


FIGURE 3.

Applications used by students for online learning

TABLE 7 APP USED FOR ONLINE LEARNING

Apps	%
WeChat	44.2%
Google Classroom	31.7%
Messenger	29.6%
Telegram	7.3%
Others	4.1%
WhatsApp	2.6%
YouTube	2.3%

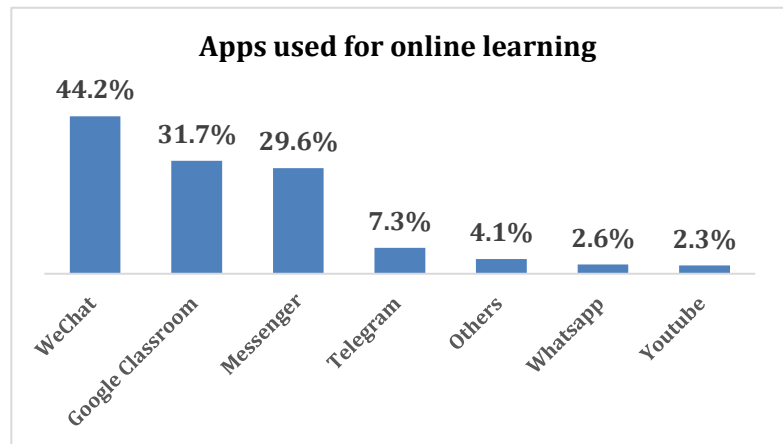


FIGURE 4.

The ‘ability to respond to school closures’ changes dramatically with level of development and leadership. Although some schools in Bhutan immediately switched to online learning on school closure, most of the schools took a while to adjust. Regarding students, 66.1% of them responded that they faced difficulty in using various Apps for learning. Majority of the parents and students in the remote areas did not know how to use other applications besides WeChat.

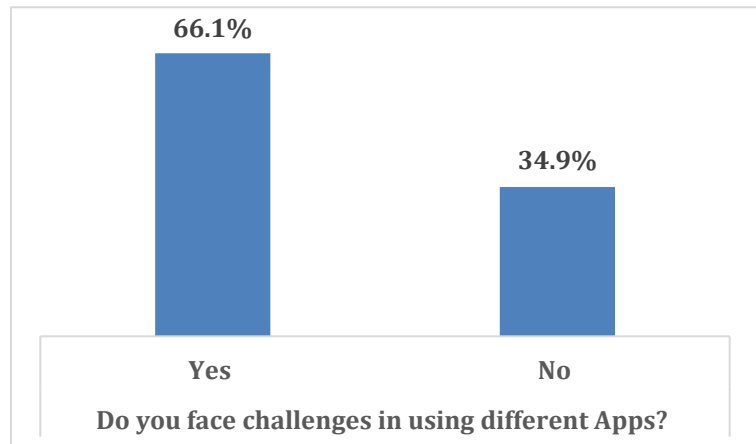


FIGURE 5.

3.5 Early Childhood Care and Development (ECCD)

Table 8 shows that 947 facilitators catered to the needs of 8,026 ECCD children across the nation. During the pandemic, the facilitators continued to engage them through online teaching and learning. Common platforms used by the facilitators across the nation were WeChat, Messenger and Telegram as most parents found them convenient to use.

TABLE 8. NUMBER OF ECCD FACILITATOR

	Government			Private			Total		
	Female	Male	Both	Female	Male	Both	Female	Male	Both
ECCD Centers	676	53	729	209	9	218	885	62	947

Source: Annual Education Statistics 2020, PPD, MoE

All the government ECCD centers remained closed throughout the year. On the other hand, some private centers resumed their face-to-face sessions after the first lockdown. These centers were reopened on the request of working parents ensuring COVID-19 protocols.

3.6 Non-Formal Education (NFE)

TABLE 9. NUMBER OF NFE INSTRUCTORS

	Total		
	Female	Male	Both
Non-Formal Education Instructors	320	111	431

Source: Annual Education Statistics 2020, PPD, MoE

The NFE Centers were also actively involved in teaching and learning during the COVID-19 pandemic. WeChat was found to be the most used application by the Non-Formal Education Instructors (NFEIs) to teach the learners online, followed by Telegram, Messenger and WhatsApp as shown in the Figure 6.

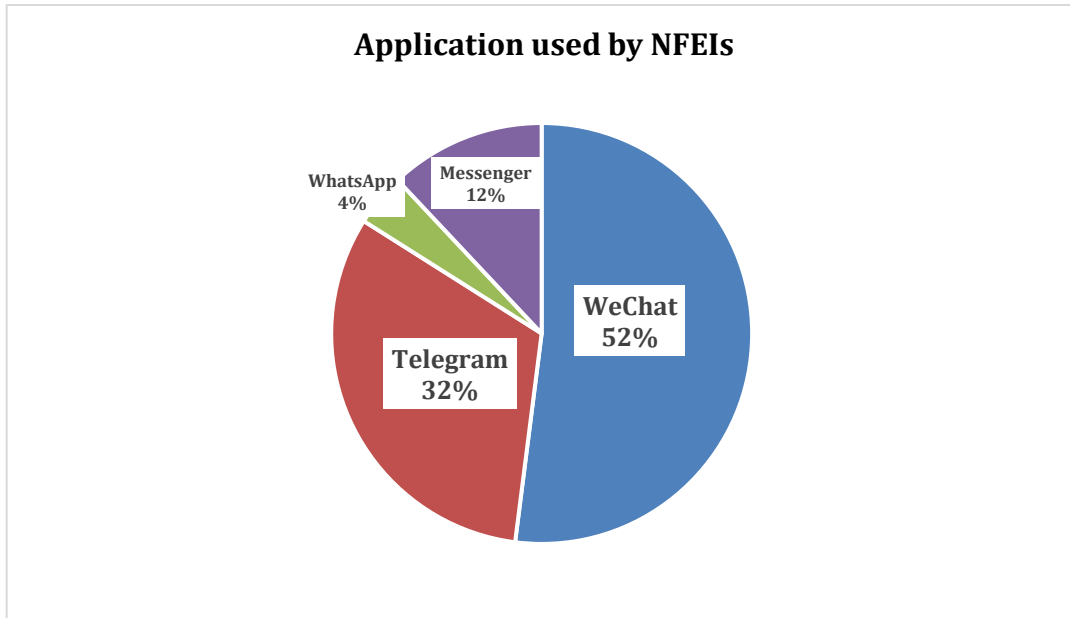


FIGURE 6.

4 Curriculum

4.1 Adapted Curriculum

In order to facilitate students to continue learning and progress to higher class, despite being locked down, initially the “Adapted Curriculum” was embarked as short-term emergency contingency intervention. As per REC (2020) Adapted Curriculum is based on literacy and numeracy at Key Stage I (Classes PP-III) and Key Stage II (Classes IV-VI), and theme-based curriculum for Key Stage III (Classes VII-VIII), Key Stage IV (Classes IX-X) and Key Stage V (Class XI-XII). The most essential learning concepts aligned with the learning outcomes or objectives were selected for all classes. For theme-based curriculum, some learning areas such as science and social sciences have been combined together considering the common themes of the subjects.

4.2 Prioritized Curriculum

According to REC (2020), the Prioritized Curriculum is a distilled curriculum that emphasizes on the primary, most fundamental and essential learning contents and concepts that are aligned to the most carefully selected learning outcomes and objectives in each learning area for each class level.

The main objectives of the Prioritized Curriculum are to

- develop competencies on the selected themes rather than emphasizing on the knowledge;

- provide scope for students to take responsibility for their learning by engaging in exploring specifics and examples of the concepts;
- engage students to explore further on the concepts through interactive learning activities;
- provide assessment for both learning improvement and promotion to next higher classes; and,
- set out a new direction for the school curriculum for the “new normal” – post COVID-19.

The implementation of Prioritized Curriculum had been rolled out to schools across the country with effect from 1st July 2020.

Prioritized and Adapted Curriculum

As shown in the Figure 7, 94.16% of schools reported that Adapted Curriculum provided clear guidelines to teachers and 92.84% of schools said that Adapted Curriculum was convenient to implement.

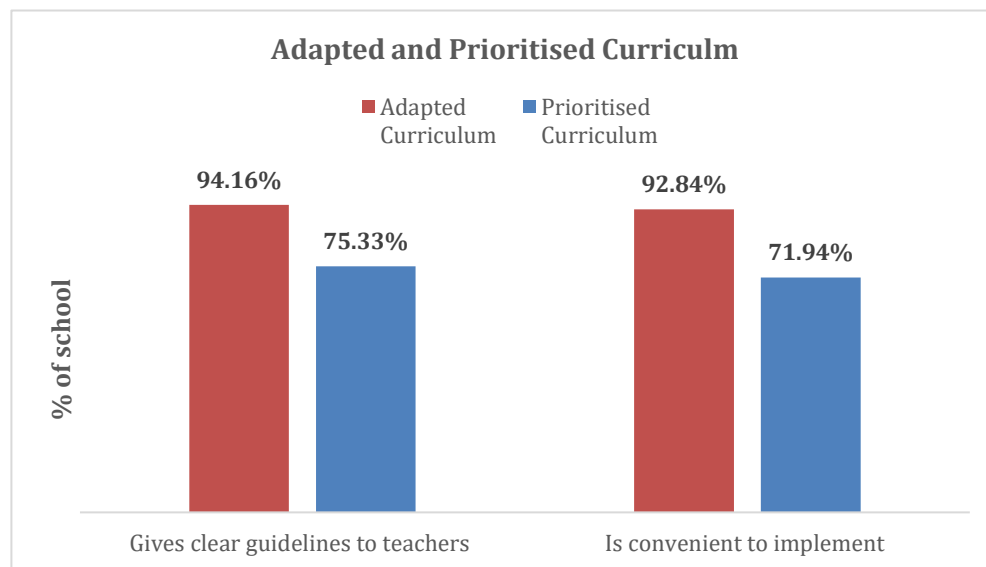


FIGURE 7.

4.3 Planning

95.01% of the teachers have planned weekly and daily lesson plans by following their respective schools’ schedule and BBS lessons. As can be seen from Figure 8, 95.10% of the students in all the schools have access to textbooks. Some students left their textbooks in their schools during the

closure which happened suddenly. It was also reported that some high schools were not able to get enough textbooks from the suppliers although they placed their requisition. Furthermore, the findings indicated that 96.80% of the teachers in schools adapted teaching strategies to suit the needs of diverse learning abilities. 94.16% of the schools provided additional tasks to supplement online lessons. Reading intervention, cluster learning, home visit, YouTube video lessons, PowerPoint, worksheets, voice messages, project work and short video clip recordings were some of the additional tasks provided by schools to students in order to supplement online lessons.

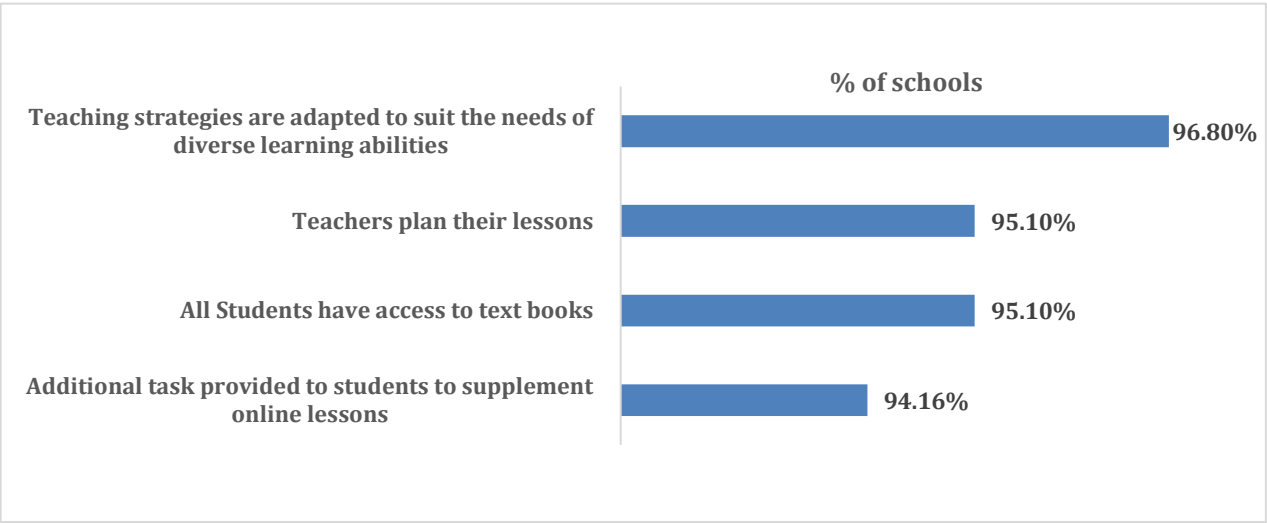


FIGURE 8

Lesson and Activity log

Teachers also maintained lesson logs for their online lessons. Figure 9 represents that 84.13% of the teachers-maintained lesson logs whereas only 43.41% of the students maintained activity logs.

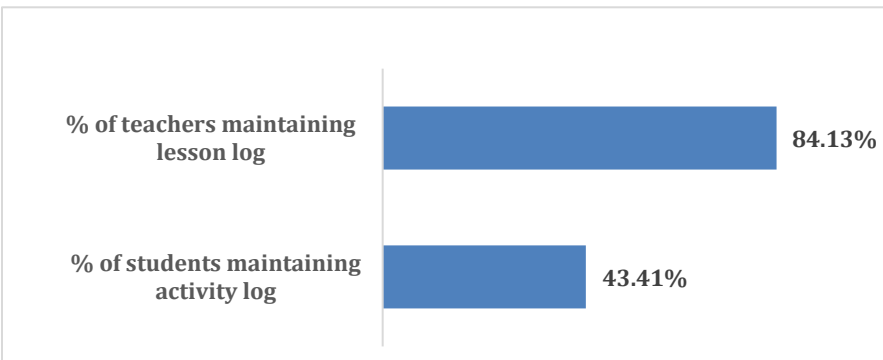


FIGURE 9.

4.4 Assessment

The following figure illustrates the assessment modalities and records maintained by teachers.

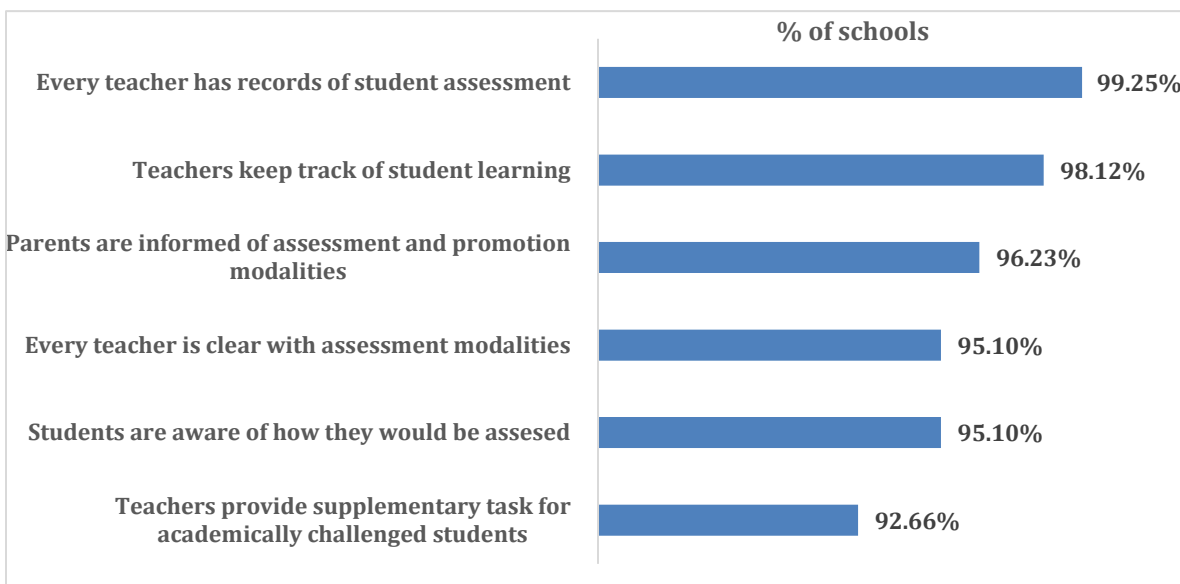


FIGURE 10.

4.5 Students with disabilities

A total of 834 students with disabilities (516 boys and 318 girls) in 62 schools across the country availed the EiE services. The total number of students with disabilities includes those enrolled in general schools as well as schools with Special Educational Needs (SEN) programme. However, the schools under Tsirang, Samdrup Jongkhar Dzongkhag and Samdrup Jongkhar Thromde had not reported of having availed such services. The schools in Thimphu Thromde and Sarpang had SEN related services catered to students but the number of schools was not evident in the reports. Table 10 presents the overall data of schools having students with disabilities across the country.

TABLE 10. SCHOOL HAVING STUDENTS WITH DISABILITIES

Sl.#.	Dzongkhags/ Thromdes	Schools having students with disabilities	No. of stds. with disabilities		Total
			Boys	Girls	
1	Bumthang	6	3	4	7
2	Chhukha	4	18	24	42
3	Dagana	1	15	12	27
4	Gasa	2	2	1	3

5	Gelephu Thromde	4	21	11	32
6	Haa	3	3	2	5
7	Lhuntse	3	5	6	11
8	Mongar	6	34	17	51
9	Paro	2	123	64	187
10	Pemagatshel	1	9	9	18
11	Phuntsholing Thromde	1	23	15	38
12	Punakha	5	0	3	3
13	Samdrup Jongkhar	0	0	0	0
14	S/JongkharThromde	0	0	0	0
15	Samtse	2	24	16	40
16	Sarpang	0	6	2	8
17	Thimphu	0	30	18	48
18	Thimphu Thromde	7	65	34	99
19	Trashigang	1	37	42	79
20	Trashi Yangtse	1	6	3	9
21	Trongsa	1	14	10	24
22	Tsirang	0	0	0	0
23	Wangduephodrang	3	21	13	34
24	Zhemgang	9	57	12	69
	Total	62	516	318	834

As per the reports, most schools had acknowledged the receipt of the guidelines from the ministry for the continuity of learning for students with disabilities. However, some schools reported that they were not aware of the receipt of the guidelines.

Reports showed that the support required by students with disabilities differed depending upon the children's learning abilities and needs. Therefore, schools strategized and provided academic support. It was reported that all 62 schools that catered to the educational needs of students with disabilities employed the following strategies to ensure continuity of learning:

- Modified and simplified activities and video/SIM lessons.
- Contact teaching was given through home visits/mobile teaching service to support students with mild learning disabilities.
- Provided SIM and audio recordings to unreachable students.

- Provided SIM with bigger font size for students with visual impairment (printed by school).
- Remedial classes were arranged.
- Provided time extension to complete the learning activities.
- Called students to the institute for contact teaching (Wangsel Institute for the Deaf).
- Provided laptop, phones, and work sheets to the students (Wangsel Institute for the Deaf).
- Oriented both parents and children on use of curriculum materials and ICT.
- Provided emotional support and counseling services.

5 Engagement

This section presents the information on engagement of teachers, students, and parents during the pandemic.

5.1 Teacher Engagement

According to the reports from the Dzongkhags and Thromdes, teachers were actively engaged in teaching throughout the week. Since face-to-face teaching in school was impossible during the pandemic, teachers taught their students through different online modes. Figure 11 shows an average number of hours spent by teachers in respective Dzongkhags/Thromdes on online teaching.

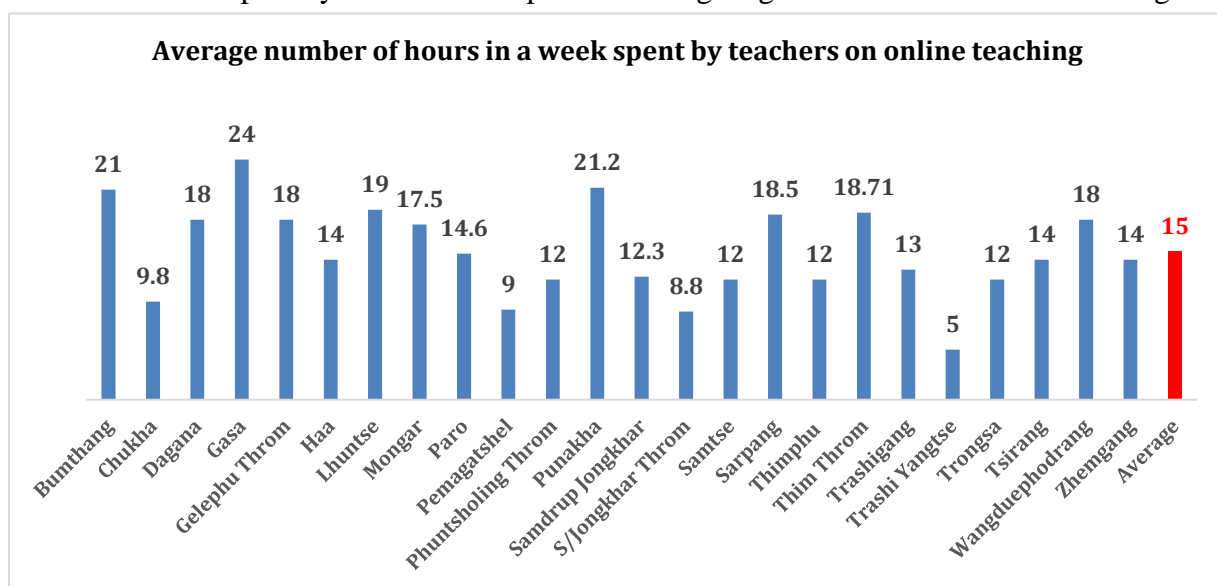


FIGURE 11.

Further, the graph showed that on average, teachers across the nation taught around 15 hours a week. However, there were some students who were not able to continue with their online learning. Therefore, 5,432 teachers were engaged in mobile teaching for these students so that they were able to receive continued education during the pandemic. Mobile teaching particularly benefitted the students with disabilities. There were also 2,250 teachers (1655 males and 595 females) involved in Desuup duty. These teachers carried out their duties without missing online teaching.

5.2 Student Engagement

During the pandemic, students were involved in different activities, such as, academic, non-academic and leisure reading, where students spent on an average of 3.5, 2.6, and 1.2 hours a day respectively for each activity. Despite online learning, students were engaged in non-academic activities such as carrying out household chores and farm works. There were some students who helped their parents financially by weaving and selling clothes and working at construction sites.

However, parents raised concern over excessive screen time. They were found spending more time on online games than online education, which was later confirmed by students themselves.

5.3 Parent Engagement in students learning

Interview with parents revealed that most of them supported their children’s learning by following the EiE guidelines provided by their schools. The study further revealed that the level of engagement deferred from parents to parents as most literate parents were reported to have supported their children

- financially by providing smart gadgets and data package,
- academically by guiding and monitoring children's everyday learning,
- psychosocially by providing moral support and advice, and
- technically by guiding their children through Google Classroom, YouTube videos etc.

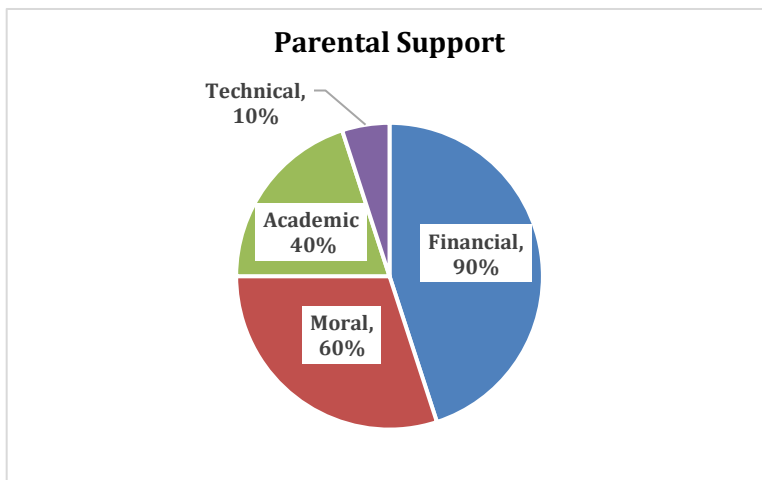


FIGURE 12.

However, the level of engagement of non-literate parents was found to be limited to financial and moral support only while some parents supported their children's learning by

- collaborating with teachers,
- exempting from household chores,
- seeking help from literate friends, and
- reminding to do homework on time.

In some schools, parents provided refreshments to teachers and also supported transportation for their children to and from the designated learning stations identified by the schools during mobile teaching.

The data further revealed that a few parents both literate and mostly non-literate irrespective of their geographical locations did not engage actively in their children's learning due to following reasons:

- Some parents had a belief that learning should take place only in school setting.
- Parents from rural regions also found preferring their children to help them with their household chores.
- There were a few parents who expressed that they did not want their children to continue with their education because of their inability to afford smart gadgets, data packages, etc.
- Some parents could not support their children due to limited time while some have neglected their children.

6 Learning and Effectiveness

In order to ensure the continuity of teaching and learning for children during the pandemic, four modes, such as, BBS TV lessons, SIM, Radio lessons and Google classroom were used to deliver curriculum. Students who did not have access to BBS television, radio lessons and Google Classroom were provided with SIM. Schools were also allowed to use other social media platforms to support teaching and learning.

The use of these learning medium by the schools varied from Dzongkhag to Dzongkhag depending upon the class level of students, location of schools and the user-friendliness of these learning medium. The effectiveness of each medium is discussed below.

6.1 Lesson through Bhutan Broadcasting Service (BBS) TV

Figure 13 shows that most of the schools in the country followed BBS lesson for engagement and learning. The lessons aired through BBS TV were received well with 69.63% of the schools stating that the aired lessons were clear and understandable, 71.30% affirmed the lessons were well sequenced and 76.11% agreed that the contents were presented progressively.

However, reports showed that not all the students could avail lessons telecast through BBS TV since they did not have televisions. About 36% of the schools pointed out that the BBS airing timing was inconvenient for students.

Some schools expressed that TV lessons focused on terminal classes in each key stage posed challenges

for lower class students to comprehend the concepts and language used in the learning activities. 71.2% of the schools claimed to have followed up on the BBS lessons by providing additional information, materials and activities, assessing through online classes, and clarifying doubts through social media Apps. In addition to BBS TV lessons, schools had also prepared and shared a total of 19,005 video lessons for supplementing students' learning. Wangsel Institute for the Deaf in Paro reported preparing their own videos lessons using sign language to teach their students.

6.2 Self-Instructional Materials (SIM)

Self-Instructional Materials (SIM) as mentioned above were developed mainly to facilitate the learning of students in remote parts of the country who were unable to attend e-lessons. The learning activities in the SIM were developed considering the class levels of the students.

As per the reports, some of the strategies employed by schools to deliver SIM contents were through home visits and mobile teaching. In some schools, the SIM contents were also taught online through social media Apps, such as, WeChat, WhatsApp, Telegram, Messenger with the follow up activities.

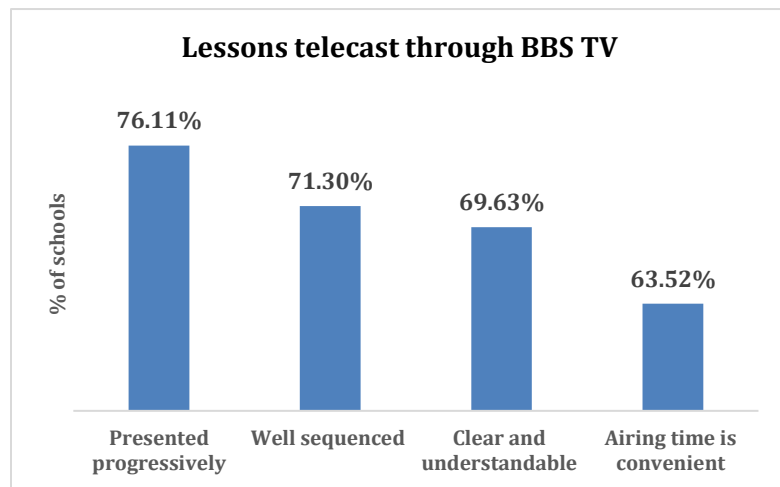


FIGURE 13.

It was evident that almost all schools in the country accessed SIM for teaching and learning and found them effective and user-friendly. However, a few Dzongkhags asserted that the students in lower classes found challenging to use SIM without guidance.

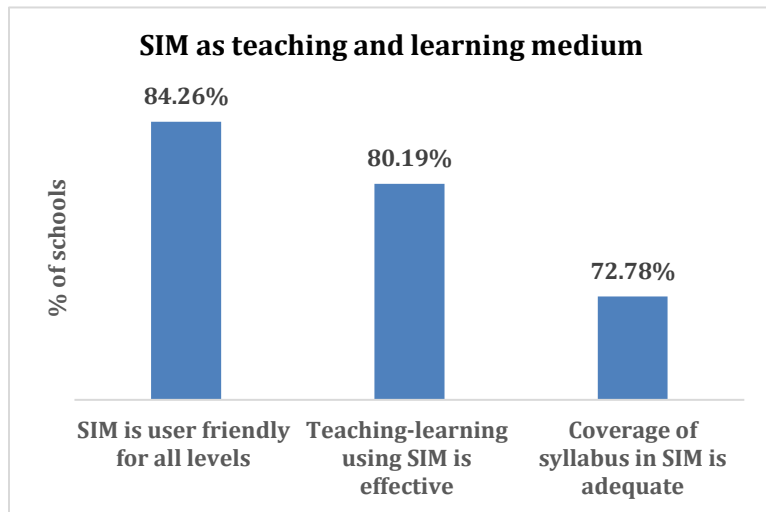


FIGURE 14.

With regard to implementation of SIM, 72.78% of schools reported that

the coverage of syllabus in SIM is adequate and 84.26% found it user-friendly. 80.19% stated that the SIM was effective for teaching and learning. Schools supplied SIM to students, who did not have phones and TV facilities at home. Most importantly, the SIM was found useful for learning for children living in rural locations of Gasa, Laya, Lunana, Lungo, Mendrelthang and Thangza where the mobile and radio network connectivity was weak.

Distribution of SIM

A total of 246,984 SIM booklets were distributed to the schools of which 160,675 booklets were supplied by the MoE, 36,454 booklets by the Dzongkhag and Thromde Education offices in addition to 49,855 copies printed in the schools. There are five volumes of SIM for each key stage. Report submitted by the Dzongkhags and Thromdes indicated that there were a maximum number of users in key Stage I with the decrease in the users for key Stages II to V.

6.3 Use of Google Classroom for teaching-learning

A total of 8,100 teacher have been trained on using Google Classroom by respective school IT teachers who were trained by the MoE in March 2020. Following the training of teachers, schools have oriented students on the use of Google Classroom. The guidelines for EiE curriculum implementation recommended all teachers of classes IV to XII to use the Google Classroom for delivering lessons. Figure 15 gives a summary of the use of Google Classroom as a medium for teaching-learning.

According to the data from the Figure 19, despite having 87.2% of teachers receiving training on Google Classroom, 80.74% of the teachers affirmed that they were confident in using it. Regarding the use of Google Classroom by the students, only 45.56% of schools stated that they were able to use it. The reasons attributed to this incompetency were:

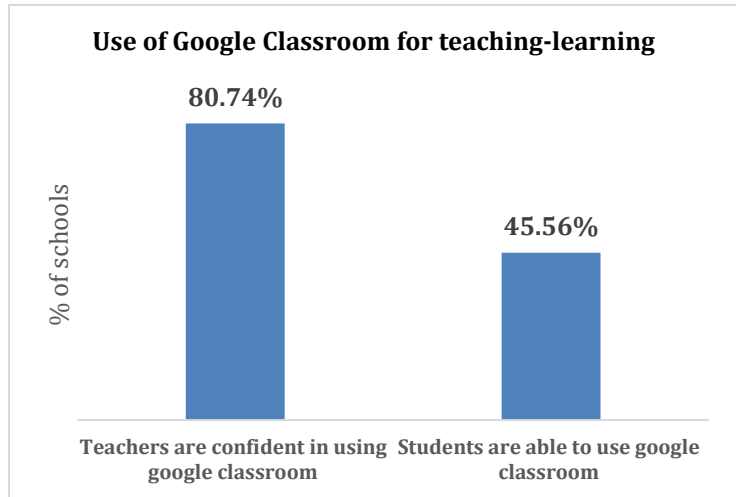


FIGURE 15

- Many of the schools could not orient all students on using Google Classroom prior to implementing online teaching.
- All children of classes IV to VIII could not be called to schools, for safety reasons, to avail the orientation.
- Parents were not able to afford smartphones and data packages.

Reports revealed that the Google Classroom was used more in urban schools due to availability of good internet connectivity.

7 Health and Wellbeing

The schools' health and wellbeing were prioritized to support the school in creating learning environments that enable students to be healthy, happy, engaged, and successful. Schools promoted healthy habits and provided psychosocial services. Furthermore, to ensure the physical health and wellbeing of students and staff, schools were also strictly abided by COVID-19 safety protocols.

Despite the closure of schools due to pandemic, most of the schools took initiative to look after the students' physical health, hygiene and wellbeing. A total of 19,070 students in the country reported to have availed health services for deworming, HPV (Human papillomavirus) and TD (Tetanus & Diphtheria) vaccination and BMI checkup.

The findings revealed that 84.15% of the teachers have been trained on COVID-19 safety protocol and management. It was affirmed from the data received from Dzongkhags/Thromdes that:

1. the national COVID-19 taskforce trained the school COVID-19 focal person;
2. school COVID-19 focal person conducted School Based In-service Programme (SBIP) to create awareness on COVID-19 safety protocols and management; and
3. community health officials trained community teachers and staff.

Figure 16 shows that 83.20% of schools have provisioned sanitary pads and other sanitary items for students. A few numbers of schools have reserved sanitary pads, hand sanitizers and tissue papers for students to ensure proper hygiene and sanitation practices. Besides, some of the schools also provided handwashing soap during home visits. Schools received sanitary pads as *Soelra* from Her Majesty the *Gyaltsuen* and some were donated by Tarayana Foundation, parents of the students, Dzongkhag Education Sectors, Save the Children, MoE, and in some cases managed by schools themselves.

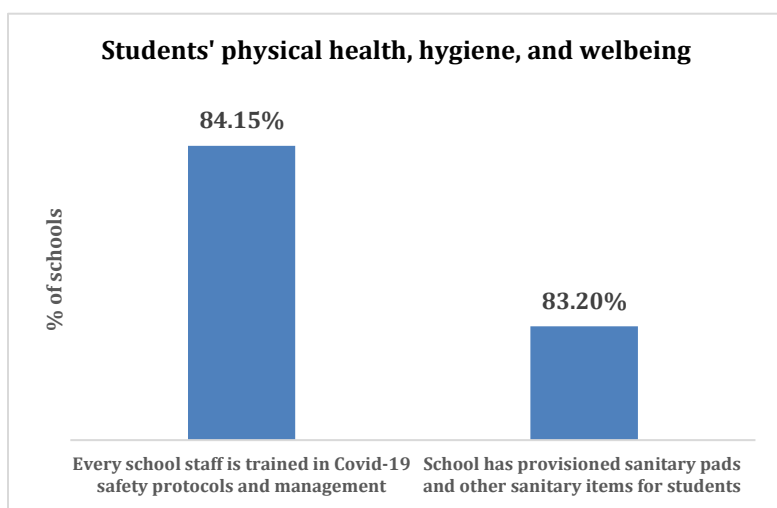


FIGURE 16

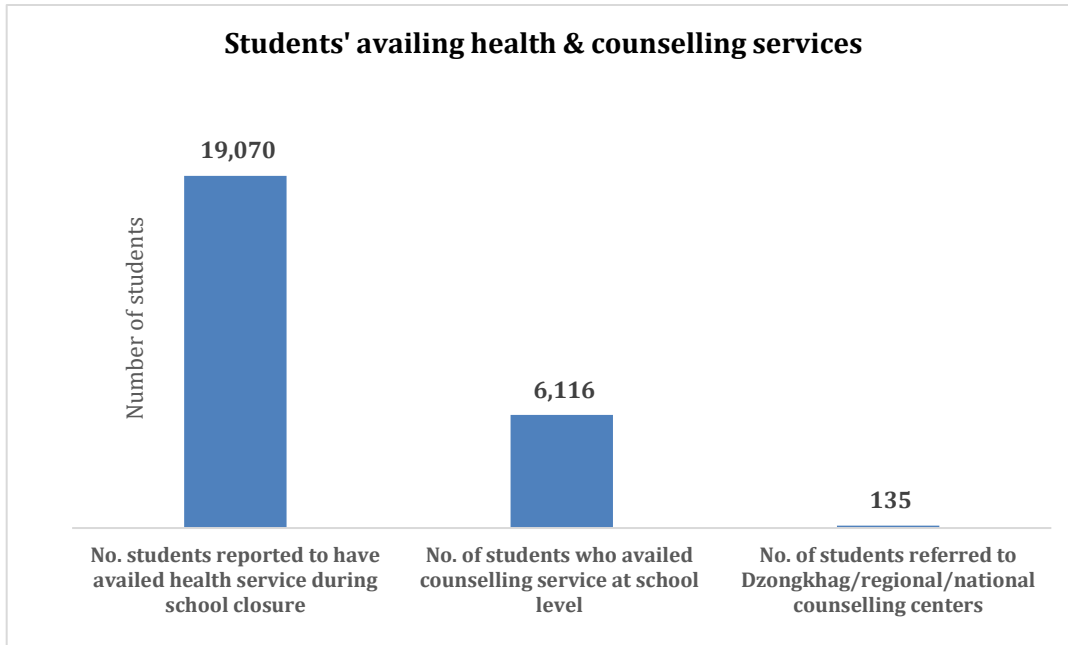


FIGURE 17.

Figure 17 indicated that a total number of 6,116 students availed counselling services at the school level out of which 135 students were referred to the national counselling Centre in Thimphu during the pandemic. The students availed counselling services based on the assessment made using the Depression, Anxiety and Stress Screening tool at the school level. The counselling services were also provided to help students adjust with the current situation and enable students in developing strong mental wellbeing, social adjustment abilities, citizenship education and assisting students in academic achievement.

The majority of the counselling sessions were given online according to the data submitted by Dzongkhags/Thromdes. The common issues found for counselling were related to studies, smart phones, conflict with parents and dropouts. Some of the referral cases were due to drug consumption, detoxification and clinical counselling.

Figure 18 describes that 82.50% of schools provided meals as per the standard menu developed by the MoE and some schools on students' suggestion. It was found that only opened schools were able to provide standard menu as per MoE's directives, but few could not due to inadequate supplies of goods. The data

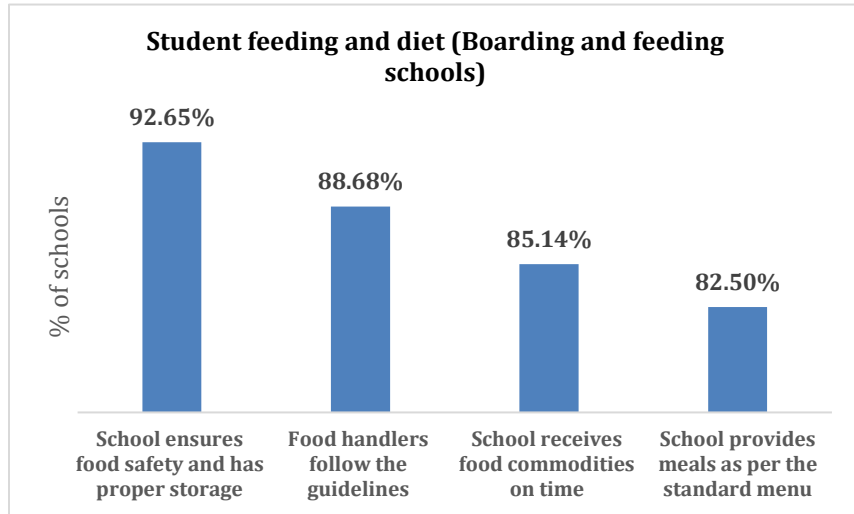


FIGURE 18.

showed 85.14% of the opened feeding schools received food commodities on time while the rest of the schools were closed due to COVID-19 pandemic.

The figure also illustrates that 88.68% of the food handlers of the opened schools followed and practiced their guidelines developed in line with COVID-19 safety protocol. Moreover, all the cooks were orientated on health, sanitation and COVID safety protocol at the school level throughout the country.

About 92.65% of feeding schools ensured food safety and had proper storage while very few schools had little difficulties in the storage of food commodities during the monsoon season. All the schools had separate storage for perishable and non-perishable food items. The schools also followed the 'first in first out' practice. All the mess items are monitored by concerned Mess in-charges or coordinators.

8 Infrastructure and Facilities

Despite the increasing number of COVID-19 cases in Bhutan, the MoE decided to reopen schools for classes IX to XII as the school closures impacted not only the continuity of education but also imposed high economic cost. Therefore, the WASH facilities, class size and hostel arrangements became crucial components in keeping the schools running and safe at the same time. This section will present the status of WASH facilities, class size and hostel arrangements of the schools.

8.1 WASH Facilities

As the coronavirus emerged as a worldwide health emergency, schools around the country started building more handwashing stations. On an average, there was a tap for every eleven students (1:11) nationwide. Samtse Dzongkhag had 1:32 tap student ratio while Gasa Dzongkhag had the ratio 1:2.

There was a total of 4,238 handwashing stations in the schools across the country. Punakha reported to have the highest number in the country with 397 handwashing stations followed by Thimphu Thromde and Zhemgang with 381 and 356 stations respectively. 99.6% of the school said that they practiced COVID-19 safety protocol by mandatory thermal screening, feet disinfecting, mask-wearing and hand washing.

About a year into the pandemic, hand-washing practices remains as one of the best defenses against the coronavirus. Schools in Bhutan not only constructed huge number of taps but also ensured running water in them. 94.1% of schools reported always having sufficient drinking water. Nationally, 97.2% of schools said that they had safe drinking water and 94.9% said that they had continuous water supply as shown in Figure 19.

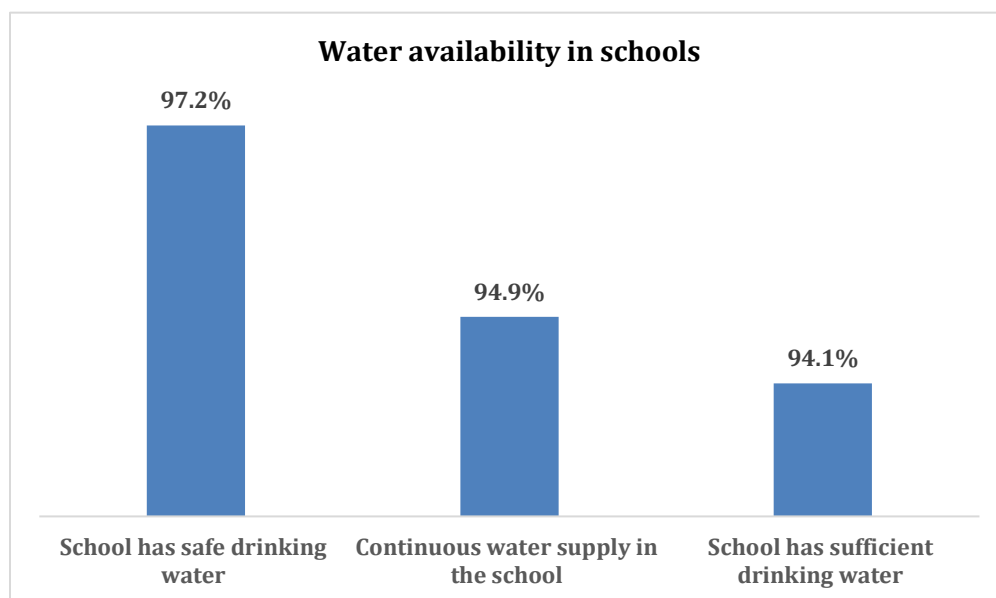


FIGURE 19.

According to the MoE, the required toilet to student ratio for male is 1:25 and for female is 1:15, but the report revealed a ratio of 1:17 for both male and female. There were 1,369 staff toilets in the country. Primary and lower secondary schools in the remote places reported to have either no

designated staff toilet or using common toilets. 9 schools in particular do not have separate staff toilets and currently using student toilets.

8.2 Class Size and Hostel Information

One of the safety protocols of COVID-19 is physical distancing, where there should be less number of students in the class. The average class size of the nation was reported to be 29 for classes IX to XII. All the Thromde schools reported having bigger class sizes ranging from 29 to 33, while the remote Dzongkhags reported smaller class sizes, ranging from 21 to 27. Lhuntse Dzongkhag had the smallest class size with an average of 21 students while Chhukha had the largest class size with an average of 38 students.

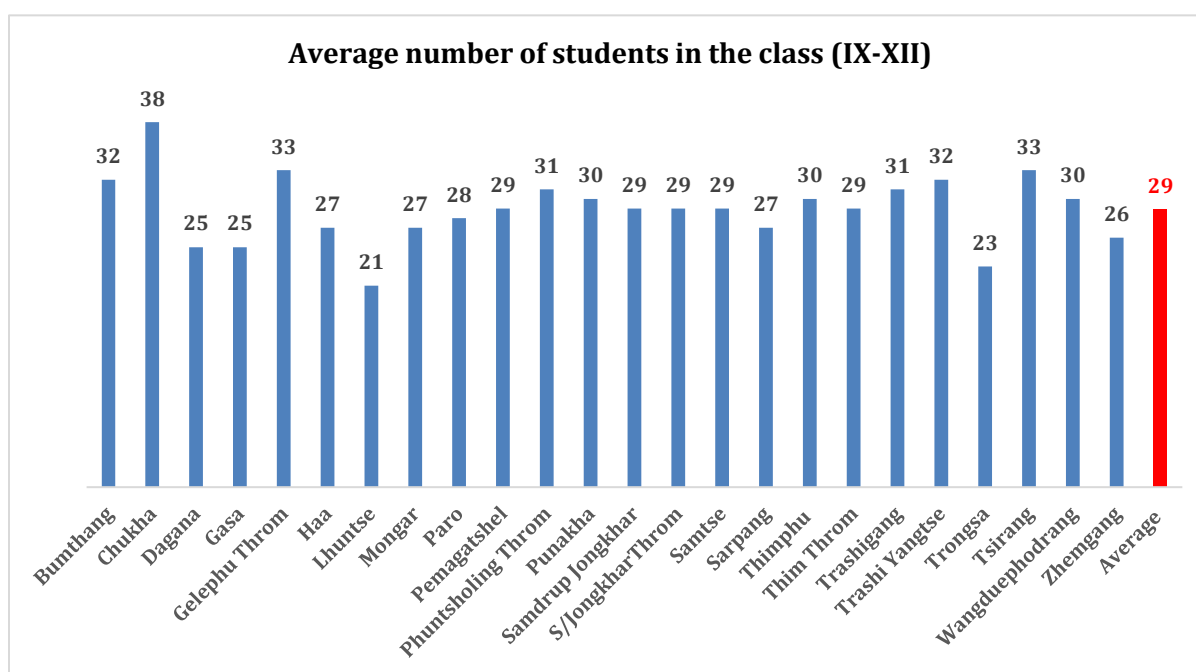


FIGURE 20.

‘Percentage of sections with more than 24 students’ applies to both open and closed schools. At the national level, percentage of sections that has more than 24 students is 50.8% on an average. The highest percentage was reported by Phuntsholing Thromde with 83.3% sections having more than 24 students while Mongar Dzongkhag reported the lowest percentage of 14.2%.

Regarding hostel condition, out of 177 boarding schools in the nation, 5 Dzongkhags/Thromdes reported that 859 students sleep on the floor due to shortage of beds. Majority of them were from relocated schools and creation of temporary hostel for day scholars during emergency. 6 Dzongkhags/Thromdes reported 687 students share beds as the hostels were too small to accommodate all the students or due to inadequate beds.

9 Findings from Students

9.1 Students' general response

The current pandemic situation had forced children to stay indoors and discouraged interactive and physical contacts with others. The study findings showed that about 74.48% of the students enjoyed learning online. 83.64% of the students agreed that they had at least learned something through online lessons. However, Zhemgang Dzongkhag reported the highest number of students having difficulty in learning

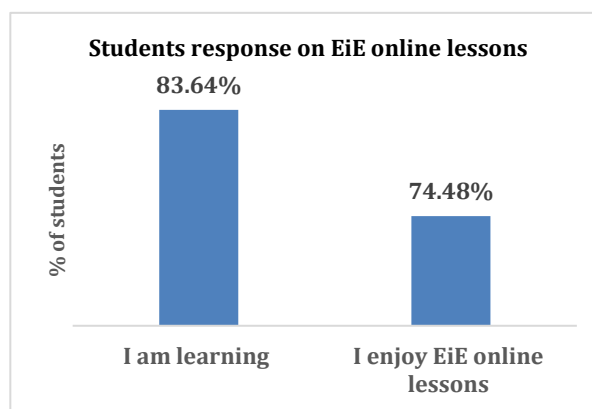


FIGURE 21.

online. The reasons given by the Dzongkhag were poor and weak mobile network coverage and issues with phone storage, which did not support Google Classroom App.

9.2 Time spent in different areas by students per day

From Figure 22, it can be noted that majority of the students spent 1-2 hours a day on activities such as, doing assignments, reading, video gaming, and helping parents. Only a few percentages of students spent more than 2 hours on these activities.

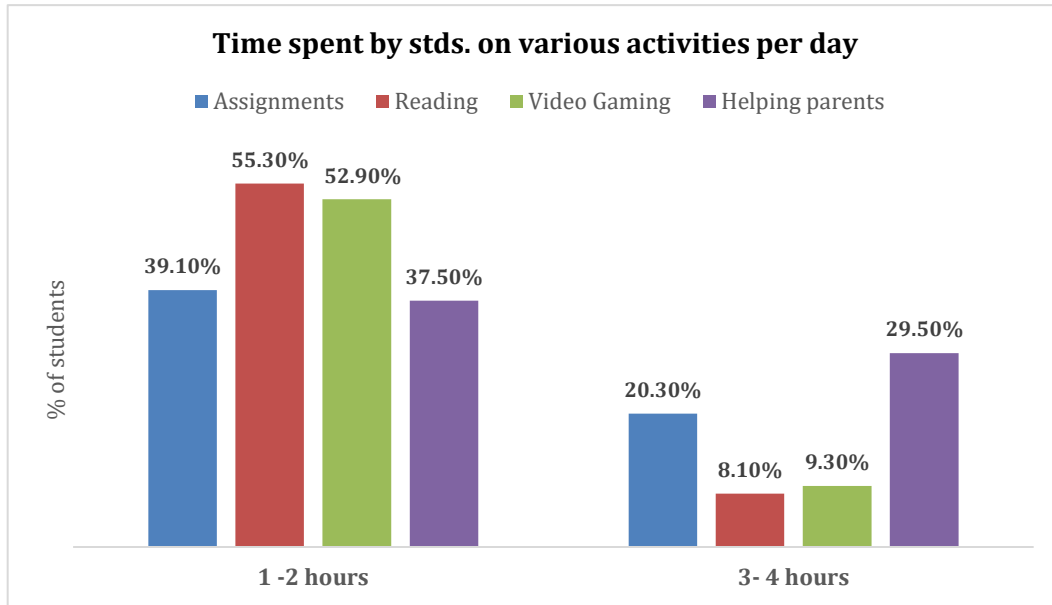


FIGURE 22.

9.3 Support received by students

The study revealed that most of the students clarified their doubts by meeting their teachers during mobile/cluster teaching/home visit while some of the students clarified their doubts online. Further, students clarified their doubts from their parents, siblings, relatives, and friends. The medium used to clarify doubts were through various social media Apps, audio or verbal feedbacks, text messages and calls. The study concludes that the students still relied more on teachers than on parents for their educational advancement.

As shown in Figure 23, 31.5% of students reported contacting teachers once a week while approximately 15% of students contacted teachers more than three times in a week. However, 6.3% of the students hadn't interacted and communicated with their teachers.

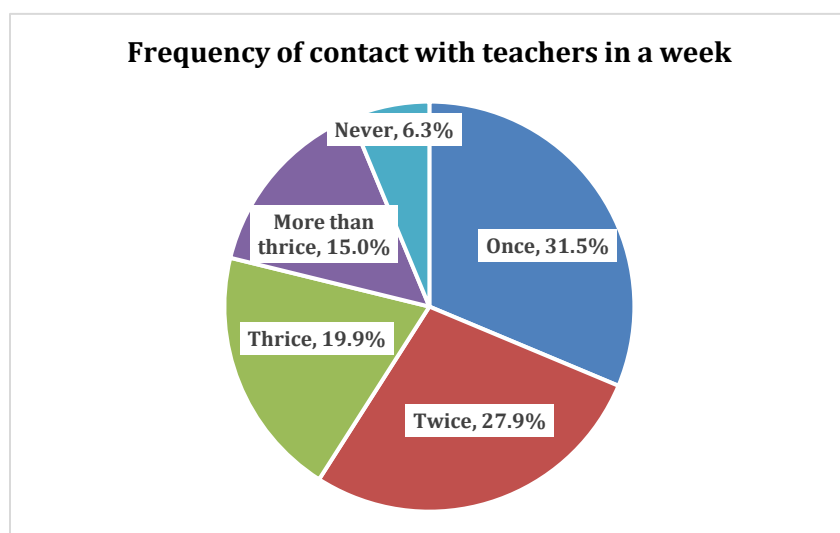


FIGURE 23.

Teachers supported students through assessment of their assignments, by giving timely feedback, and through phone calls. Teachers also supported students by extending the due date of their assignments and homework and by giving handouts or notes. In extreme cases, teachers even provided data recharges from their personal expenditure to those student who were financially disadvantaged. Further, teachers also rendered emotional support to students who were in distress. It is apparent from the study that only minimal students were not able to receive support from teachers due to geographical location, lack of amenities including smartphone, network shadow, and students away from their homes.

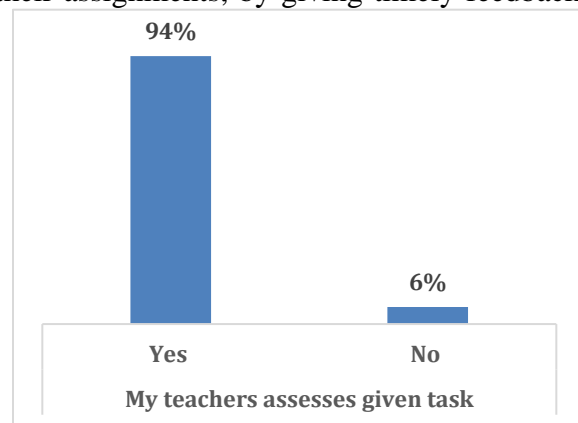


FIGURE 24.

Figure 24 illustrates that 94% of teachers assessed the learning tasks assigned to students whereas 6% haven't assessed their students' work. It was due to its geographical location, lack of facilities including smartphones, poor network connectivity, and students away from their homes.

9.4 Support from parents

The study revealed that the parents played a vital role in educating their children. Parents supported their children in online learning encouraging to attend classes on television. They also provided moral support, guidance, and motivations. In many cases, parents gave adequate time and helped them clarify their doubts on the subjects. A few students did not get support

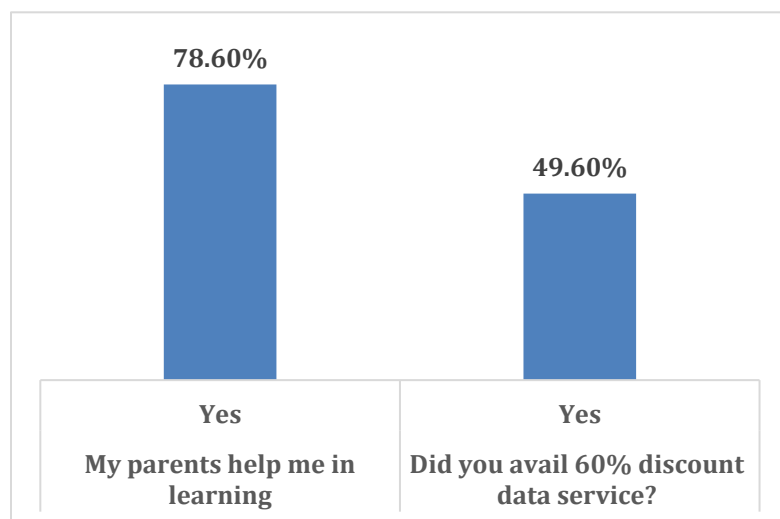


FIGURE 25.

from their parents as some parents were non-literate and also some students were involved in household chores. Parents purchased smartphones and provided data recharges. The data from the survey indicated that 50.4% of students had not availed 60% special data package provided by the

government as they were not aware of such services. Those who availed services pointed out having limitations such as, inconvenient timing and exhausting data very quickly. Hence, “60% discount data services” was of not much help to some students.

9.5 Overall students’ opinion on school closure

80% of the students reported that their interest in studies was affected as a result of school closure while 100% of student who participated in the survey said that they were excited to return to school as illustrated in Figure 26.

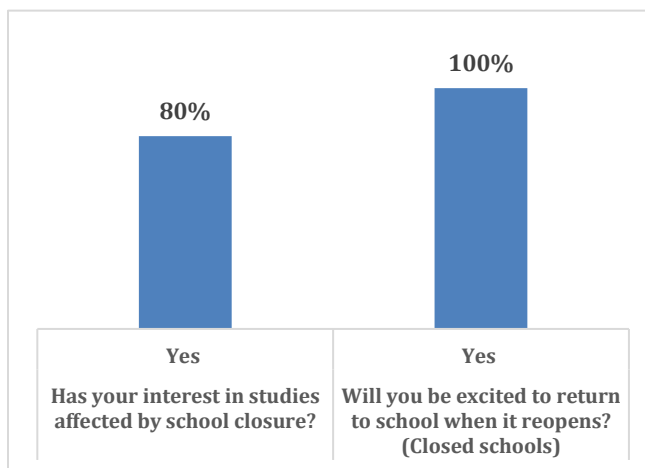


FIGURE 26.

10 Findings from parents

The data revealed that 91.95% of the parents observed their children interacting with teachers frequently. However, they did not find effective among children as the majority of the parents shared that normal contact teaching is more effective for their children. 29.2% of the parents found the EiE effective while 70.8% of the parents found it challenging. Parents also expressed that online teaching can never be able to replace contact teaching in terms of effectiveness.

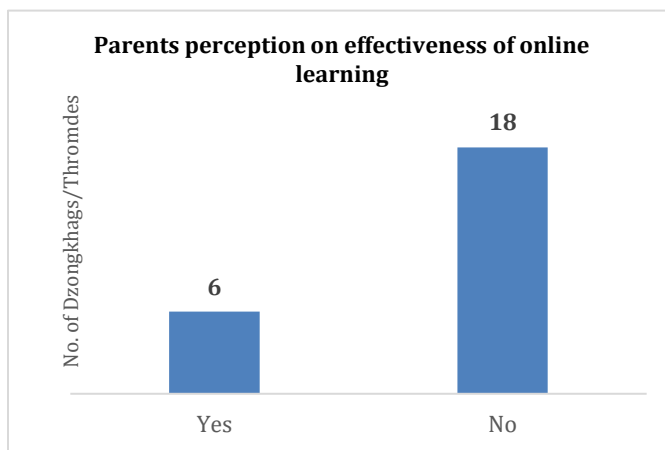


FIGURE 27.

They said online lessons promoted independent learning through the use of ICT gadgets especially for senior students. On the other hand, parents of lower classes had to put more effort in guiding their children. While it was challenging for them, EiE opened opportunities for increased interactions between parents and their children, thereby, enhancing bond and trust between them.

Some parents applauded MoE for implementing EiE using different modes of online teaching and learning, such as, Google Classroom, mobile teaching, SIM, etc. that enabled the continuity of their children's learning and were overwhelmed by the support given by their teachers and schools.

11 Challenges

This section highlights the key challenges faced by the teachers, students, and parents during the implementation of EiE programmes. The reports also revealed the type of challenges faced by ECCD centers and Schools with SEN programmes across the nation. Challenges were mostly related to online teaching and learning. There were few challenges related to physical, psycho-social and moral aspects. The challenges were:

1. Poor and expensive Internet connectivity

Since all the teaching and learning were online, Internet facility was expected to be fast and accessible everywhere at a reasonable cost. However, the reports indicated that the Internet connectivity across the nation especially in the remote places was not only expensive but also slow. This hindered the teachers to upload their lessons and students to download and learn.

2. Lack of students' cooperation

Schools across the nation found it challenging in having 100 percent students' participation online. Some students never participated in online lessons despite teachers' repeated reminders. The reasons given were:

- poor financial status,
- lack of devices,
- distractions such as online games and household chores,
- announcements deliberated by the concerned authority stating that online lessons were only for mere engagement rather than formal learning,
- Internet connection issues, and
- laziness.

3. Lack of parents' support

The reports mentioned two types of parental support: academic and moral supports. Non-literate parents were not able to help their children in performing academic tasks provided by the teachers online. On the other hand, there were some parents who could not support their children's online learning due to their other commitments and domestic issues. In the latter case, parents were either too busy to support children's schooling or found to be in favor of having their children repeat when the schools reopened.

4. Online lessons not suitable for Pre-primary students

Few reports indicated that pre-primary students faced difficulties in coping with the online lessons since they were learning for the first time. They need to learn the initial processes of letter formation and pronunciations accurately through contact teaching.

5. Lack of authenticity in students' assignments

Teachers across the nation raised concern over students' assignment. The standard of assignments submitted by the students were too high for their level which was evident that they did not write their assignments. Teachers also found that many students had plagiarized their assignments from their friends.

6. Distraction while studying online

Parents across the nation have reported that their children were mostly distracted by the online games, videos and social media. Children were found spending most of their time in these online activities rather than studying online. Therefore, parents were concerned about their children getting indulged in unhealthy social media activities.

7. Inadequate ICT skills and knowledge

Teaching and learning through online platforms was a novice practice adopted by the schools across the nation during the pandemic. Although teachers followed the guidelines provided by the MoE to teach students online, inadequate ICT skills and knowledge of both teachers and students hindered effective teaching and learning.

8. Vulnerability to cyber threats

The reports from the Dzongkhags/Thromdes stated that students were with their gadgets most of the time and this was considered a risk for them. They were found vulnerable to cyber threats as they have limited knowledge on media literacy and cyber security.

9. Time management issues for the parents

Both working parents and homemakers found it challenging to support their children with online education. They complained about facing difficulties in managing time between their works and in guiding their children.

10. Teaching-learning materials for Dzongkha

Dzongkha teachers across the nation reported to have faced difficulties in teaching online. They hardly found any teaching-learning materials online. Besides, students were not able to view files when they did not have Dzongkha software installed in their devices.

11. Unavailability of instant contact

Most students and parents found the online learning ineffective since students were not able to clarify their doubts. They were not able to contact their teachers immediately to clarify the doubts as they would have done in the regular contact teaching. Similarly, teachers were not able to provide timely feedback on the assignments submitted by the students.

12. Mobile teaching

Schools reported that mobile teaching was found difficult due to terrains, scattered settlement and weather condition. The report stated that teachers could not reach out to all the students through mobile teaching since they lived scattered from one another without road connection. Furthermore, unfavourable weather condition risked teachers' lives.

13. ECCD centers

The parents and facilitators of ECCD centers faced challenges in engaging their children meaningfully during the pandemic. Non-literate parents were not able to guide their children and

working parents had either no time or inadequate knowledge to guide them despite the facilitators' guidance online.

The proprietors and facilitators (both government and private) working in the ECCD centers found that they did not have adequate knowledge to cater to the needs of their children during pandemic. Further, they believed concerned authorities were not able to focus much on ECCD.

The facilitators have stated that most parents had limited idea about the significance of ECCD programmes for their children. This led parents to discontinue their children's engagement at the centers during the pandemic.

Private ECCDs had issues in regard to dropouts and fee collections. Most children in the centers dropped from the programs as parents were not satisfied with online service. In addition, parents of those children enrolled in the centers were reluctant to pay the fees as the children were at home.

14. Schools with SEN programme

Reports did not present any specific challenges faced by schools with SEN programme except for some schools, which mentioned that their teachers were not trained to deal with students with disabilities online.

12 Recommendations

This section highlights the key recommendations reported by the Dzongkhags and Thromdes to improve future EiE programs.

1. Improve Internet connectivity to ensure access, efficient and effective online learning.
2. Review data package provision for teachers and students.
3. Explore means to provide devices at subsidized rates.
4. Relevant authorities to provide clear and consistent instructions to the schools and general public.
5. Develop BBS TV lessons according to class level rather than key stage.
6. Adapted curriculum to include all subjects.

7. Provide PD programme for online teaching, Google Classroom, digital pedagogy and media literacy for teachers and ECCD facilitators.
8. Provide training on online learning to students.
9. Create awareness on media literacy and cyber security to parents and students.
10. Schools to remain open with adequate infrastructure and safety protocols during partial lockdown.
11. MoE to use EMIS as a single source of information.
12. MoE to ensure supply of SIM to all the students.
13. MoE to train and encourage teachers in creating their own video lessons.
14. Organize programs for parents to support their children including ECCD during EiE.
15. Develop a mechanism to prevent student dropout during emergencies.
16. MoE to have plans and programs to support to students with disabilities during EiE.

13 Limitation of the report

The following were some of the limitations of the report:

- Pilot testing of the survey questionnaire could not be carried out due to time constraint and restriction of movement by Covid-19 pandemic.
- The orientation of the survey questionnaire to DEOs/TEOs and Principals was conducted virtually. However, they shared that the training could have been more effective if it was done in person.
- Initially, the survey questionnaire was developed to monitor schools during the pandemic. Therefore, the questionnaire was quite lengthy and challenging to administer. Also, analyzing the data was difficult as it was not meant for research purpose.

14 Working Committee Members

A. Teachers from Dzongkhags/Thromde

1. Tashi Choden, Dechenchholing HSS, Thimphu Thromde
2. Tshering Lhamo, Changangkha MSS, Thimphu Thromde
3. Sonam Dekar, Lamgong MSS, Paro
4. Tshering Tshomo, Gaupel LSS, Paro
5. Norbu Wangdi, Kuzhuchen HSS, Thimphu
6. Ugyen Dhendup, Khasadrapchu MSS, Thimphu
7. Karma Sonam Rigdrel, Genekha LSS, Thimphu

B. Education Monitoring Division, Ministry of Education

1. Sangay Chopel D, Chief EMO
2. Rinzin Wangmo, Principal EMO
3. Yeshe Dorji, Principal EMO
4. Karma Kuenphen, Principal EMO
5. Ugyen Thinley, Principal EMO
6. Karma Yangchen, Principal EMO
7. Rajan Kumar Kafley, EMO
8. Singye Sherab, EMO
9. Thinley Dorji, EMO

C. School Planning and Coordination Division, Ministry of Education

1. Namgay Wangmo, Program Officer

D. Policy and Planning Division, Ministry of Education

1. Sherab Tenzin, Dy. Chief Planning Officer

15 Conclusion

With the first case of COVID-19 in Bhutan on 6th March 2020, Ministry of Education activated the Education Disaster Response plan in accordance with Ministry of Education's Disaster Management and Contingency Plan. However, the nature of the pandemic was new to Ministry of Education. This pandemic has necessitated the Ministry to go beyond formal classroom settings for both teaching and learning and to provide support to learners with different strategies to address their needs.

Ministry of Education in collaboration with different relevant stakeholders-initiated education in emergency to ensure education continuity. As a part of education in emergency, video lessons were developed for online learning and SIM was developed for students who did not have access to online learning. SIM was also delivered through radio lessons. Google classroom and other modes of teaching were adopted by the Ministry and teachers for education continuity.

Reports showed that the Ministry of Education could engage students with video lessons broadcast through BBS TV, distribution of SIM, airing of radio lessons, teaching through google classroom and other medium of delivery. However, lessons were not as effective as the contact teaching in terms of learning and there was less interaction between teachers and students. Among different medium of lesson delivery, SIM was reported to be most effective and user friendly by students.

Though schools remained closed, teachers were engaged in teaching and assessing students' work and parents also equally contributed to students' learning by providing moral and financial support.

Although a lot of effort has been put in for online teaching and learning, online teaching and learning was reported as expensive in terms of affordability of gadgets and data packages by students, teachers and parents. Access to good internet connectivity remained the greatest challenge during online learning. Lack of ICT knowledge and skills of teachers and students was also a challenge. Reports showed that limited knowledge on cyber bullying among parents and students was a threat to students spending most of their time online. Some parents did not support their children's learning. Reports also revealed cases of students discontinuing their studies due to domestic problems, affordability of gadgets and data packages to access online learning and other personal reasons. Lessons delivered did not cover all the subjects and were not comprehensive. Lessons developed

for general students did not help students with disabilities and schools with SEN programme had to improvise their own teaching learning materials.

Reports also revealed that health and hygiene of the schools improved with a number of interventions such as support provided in installation of hand washing stations, distribution of sanitary pads and hand sanitizers. Counselling services were provided to students during the pandemic.

Improving mode of delivery and content can contribute to effective teaching learning. Support from parents was found to be vital in children's learning. Not only is there a need to improve reliable internet connectivity but also make it affordable. Need to explore mechanisms to provide gadgets to students for online learning.

In nutshell, remote learning was not able to replace face to face interactive teaching and learning for the learners with the limited resources. Therefore, prolong closure of schools and centers affect the quality of education in general and particularly for those children in remote and rural places, including children with disabilities.

16 References

- Adarkwah, M. A. (2020). "I'm not against online teaching, but what about us?": ICT in Ghana post COVID-19. *Education and Information Technologies*, 1-21. <https://doi.org/10.1007/s10639-020-10331-z>
- Bergdahl, N., & Nouri, J. (2020). COVID-19 and Crisis-Prompted Distance Education in Sweden. *Technology, Knowledge and Learning*, 1-17. <https://doi.org/10.1007/s10758-020-09470-6>
- Dorji, T. (2020). Integration of ICT in Bhutanese Schools – Common Obstacles and the Way Forward. *The Druk Journal*, 6(1). <https://drukjournal.bt/journal-issues/>
- Kerres, M. (2020). Against All Odds: Education in Germany Coping with COVID-19. *Postdigital Science and Education*. <https://doi.org/10.1007/s42438-020-00130-7>
- Ministry of Education. (2020, a). *COVID-19 response plan: Guidelines for Curriculum Implementation Plan for Education in Emergency (EiE)*. Ministry of Education.
- UNICEF Regional Office for South Asia. (2020). *UNICEF ROSA Monitoring Learning Continuity during COVID-19 Guidance and Survey Question Bank*.

17 Appendix

1. Survey Questionnaire

Sl. No.	Particulars	Response	Remarks/Justification
School Detail			
1	Dzongkhag/Thromde		
2	School		
3	Level of school (ECR/PS/LSS, MSS, HSS)		
4	Category of school (Boarding/Day School)		
5	Type of school (Private/Government)		
6	Class Range		
7	Location		
Staff Detail			
8	School Leadership (Principal, Officiating, In-Charge)		
9	Vice principal		
10	No. of teachers (Male)		
11	No. of teachers (Female)		
12	Support staff (Male)		
13	Support staff (Female)		
14	No. of ESP & GSP staff		
15	No. of teachers on leave (EOL, Maternity, Study Leave, etc.)		
Student Details			
16	Enrolment in March (Girls)		
17	Enrolment in March (Boys)		
18	No. of students at present (Girls)		
19	No. of students at present (Boys)		
20	Boarder enrolment in March (Girls)		
21	Boarder enrolment in March (Boys)		
22	No. of boarders including students adjusted after reopening of schools (Girls)		
23	No. of boarders including students adjusted after reopening of schools (Boys)		
24	Day scholar Enrolment in March (Girls)		
25	Day scholar Enrolment in March (Boys)		
26	No. of dayscholars at present (Girls)		
27	No. of dayscholars at present (Boys)		
28	No. of SEN students (Boys)		
29	No. of SEN students (Girls)		
30	Total students dropped out (include those who joined army/nun/monk)		
31	No. of drop out (Girls)		
32	No. of drop out (Boys)		
33	No. of students transferred to other schools (Provide details of student and school)		
34	No. of girl students who could not be contacted (Provide details)		

35	No. of boy students who could not be contacted (Provide details)		
Students access to lessons			
36	No. of students accessing lessons on TV		
37	No. of students using social media Apps (WeChat/WhatsApp/Messenger/telegram/etc.)		
38	No. of students using Google Classroom		
39	No. of students using Radio		
40	No. of students using SIM - key stages I		
41	No. of students using SIM - key stages II		
42	No. of students using SIM - key stages III		
43	No. of students using SIM - key stages IV		
44	No. of students using SIM - key stages V		
45	No. of students using video conferencing for learning		
46	No. of students accessing lessons from Sherig YouTube		
47	No. of students accessing lessons from e-library		
48	No. of students using other media (specify)		
Early Childhood Care and Development (ECCD)			
49	No. of Facilitators		
50	No. of facilitator actively engaged in teaching		
51	No. of facilitators on COVID-19 duty		
52	No. of facilitators on Leave (any form of leave)		
53	Total no. of ECCD children (Boys/girls)		
54	No. of ECCD children engaged in online learning (Mention no. of boys and girls)		
55	No. of children not attending online learning (Mention no. of boys and girls)		
56	Applications used by facilitators (WeChat/Telegram/WhatsApp/Messenger/etc.)		
Non-Formal Education (NFE)			
57	No. of Instructors		
58	No. of Instructors actively engaged in teaching		
59	No. of Instructors on COVID-19 duty		
60	No. of instructors on Leave (any form of leave)		
61	Total no. of learners (Male/Female)		
62	No. of learners engaged in online learning (mention no. of men and women)		
63	No. of learners not attending online learning (mention no. of men and women)		
64	Applications used by facilitators (WeChat/Telegram/WhatsApp/Messenger/etc.)		

Sl. No.	Statement	Response	Give justification OR status
1	School received the prioritised curriculum		
2	Prioritised curriculum has clear guidelines		
3	Prioritised curriculum is convenient to implement		
4	School received the Adapted curriculum		
5	Adapted curriculum has clear guidelines		
6	Adapted curriculum is convenient to implement		
7	Adapted curriculum covers all the subjects		
8	Teachers plan their lessons		
9	No. of teachers maintaining lesson log		
10	No. of Students maintaining activity log		
11	Types of additional tasks provided to students to supplement online lessons		
12	Teaching strategies are adapted to suit the needs of diverse learning abilities		
13	All students have access to textbooks		
14	School received clear assessment guidelines from REC		
15	Every teacher is clear with assessment modalities		
16	Students are aware of how they would be assessed		
17	Parents are informed of assessment and promotion modalities		
18	Every teacher has records of student assessment		
19	Teachers keep track of student learning		
20	Frequency of student assessment conducted per week		
21	Teachers provide supplementary task for academically challenged students		
22	There are clear guidelines for continuity of learning for SEN students		
23	There are clear guidelines for continuity of ECCD sessions		
24	Frequency of ECCD class in a week (in days)		
25	There are clear guidelines for continuity of NFE sessions		
26	Frequency of NFE class in a week (in days)		

Area	Sl. No.	Statement	Responses	Give justification OR status
Teacher Engagement	1	No. of teachers actively engaged in continuity of teaching		
	2	Average hours a teacher is engaged in teaching per week		
	3	No. of teachers on Desuung Duty (Male)		
	4	No. of teachers on Desuung Duty (Female)		
	5	No. of support, ESP & GSP staff engaged in school activity		
	6	No. of teachers engaged in mobile teaching		
	7	Teacher desuups are engaged in teaching		
Student Engagement	8	Average hours a student is engaged in academic activities in a day		
	9	Average hours a student is engaged in non-academic activities in a day		
	10	Average hours a student spends on leisure reading		
	11	Average no. of students attending daily lessons		
Parent Engagement	12	Do parents support their children's learning		
	13	How do parents support their children		

Area	Sl. No.	Statement	Response	Give justification OR status
Student's physical Health, Hygiene & Welbeing	1	No. of students reported to have availed health service during school closure		
	2	Every school staff is trained in COVID-19 safety protocols & management		
	3	School has provisioned sanitary pads and other sanitary items for students		
Student's mental health & Counseling	4	No. of students who availed counseling service at school level		
	5	No. of students referred to Dzongkhag/Regional/National counselling centers		
Student Feeding & Diet (Boarding & Feeding Schools)	6	School provides meals as per the standard menu		
	7	School receives food commodities on time		
	8	Food handlers follow their guidelines		
	9	School ensures food safety and has proper storage		

Area	Sl. No.	Statement	Response	Give justification OR status
WASH facilities	1	No. of water taps available (taps : student)		
	2	No. of hand washing stations in the school		
	3	Continuous water supply in school		
	4	Students practice COVID-19 protocols		
	5	No. of functional toilets - boys (ratio)		
	6	No. of functional toilets - girls (ratio)		
	7	No. of functional toilets - staff (gender wise)		
	8	School has safe drinking water		
	9	School has sufficient drinking water		
Class size	10	Average no. of students in the class in classes (IX-XII)		
	11	% of sections with more than 24 students		
Hostel	12	No. of boarding students sleeping on the floor (boys/girls)		
	13	No. of boarding students sharing bed (boys/girls)		

Sl. No.	Open ended questions	Your Views on each question
1	What are good things about EiE programmes?	
2	What are the challenges of current EiE programmes?	
3	What support do schools require to make EiE programme effective henceforth?	
4	Is there personal financial implication on online teaching? Mention approximate amount per teacher/month.	
5	Your views on how we (MoE, Dzongkhag & Schools) can make EiE implementation seamless & effective in 2021 and beyond?	
6	What support does the school provide to SEN students?	

Sl. No.	Questions	Response	Remarks
1	I enjoy EiE online lessons		
2	I am learning		
3	Average hours I spend on online lessons & assignments per day		
4	My parents can help me in learning		
5	I access lessons on (TV, Phone, SIM, Radio, Video, etc.). You can mention more than one medium		
6	If you are using phone, which App do you use the most?		
7	Do you face challenges in using different Apps?		
8	How frequently do you contact your teachers in a week?		
9	I have all the textbooks with me		
10	Do teachers assess tasks given in TV, Radio, SIM lessons?		
11	How do you clarify your learning doubts?		
12	What type of support do you receive from teachers?		
13	What support do you receive from your parents?		
14	How many hours do you spend reading books/newspapers/magazines/etc. in a week.		
15	How many hours do you spend on video games and other online games?		
16	Has your interest in studies affected by school closure?		
17	Will you be excited to return to school when it reopens? (Closed schools)		
18	Did you avail 60% discount data service?		
19	No. of hours you spend supporting your parents in a day		
20	Your overall views on online learning and suggestions		

Sl. No.	Questions	Response	Remarks
1	Do you see your child interacting with teachers frequently?		
2	How long does your child spend time on learning subjects in a day on average?		
3	How many hours does he/she spend on reading books/newspapers/ magazines, etc. in a day?		
4	On average, how long does he/she engage on video games & other online games in a day?		
5	How long does he/she engage in helping the family?		
6	How long does he/she engage in physical games and activities?		
7	How do you support your child's learning?		
8	How does your child interact with teachers?		
9	Do you find online learning effective for your child? Justify.		
10	How much money do you spend on child's learning in a month?		
11	Your overall views on online teaching and learning & recommendations		