Centre of Excellence
in Teacher Education

Impact of school lockdown in Karnataka - *Survey of teachers*

Survey conducted by

Karnataka DIET faculty &
CETE, TISS faculty

Report compiled by

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Centre of Excellence in Teacher Education

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The Centre of Excellence in Teacher Education (CETE) at the Tata Institute of Social Sciences, Mumbai (bit.ly/cetewebsite), aims to enable Right to Quality Education for all children in India by helping teachers respond to diverse and changing needs. Built around the central premise that professional qualified teachers can create lasting impact, the centre focuses on empowering teachers, improving professional development standards, supporting the teacher education ecosystem, and advocating the strengthening of policy on teaching and teacher education. Research at the centre is on the themes of quality in teaching, policy and scaling innovations, inclusion, curriculum and pedagogy, and EdTech. Academic teaching programmes include B.Ed.-M.Ed., M.A. Education, doctoral research, short term programmes through blended learning, and online offerings to enhance capabilities of teachers and teacher education faculty (www.tissx.tiss.edu). Key field action projects are focused on improving inclusive teaching-learning at schools and employing technology thoughtfully in professional development of teachers. The Connected Learning Initiative (www.tiss.clix.edu), was awarded the UNESCO King Hamad Prize for the Use of ICTs in Education in 2018. CETE received seed support from the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, Government of India, and TATA TRUSTS.

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Report is available for download at
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Introduction

Faculty of Centre of Excellence in Teacher Education [CETE] (formerly CEIAR), TISS are supporting the setting up of District Educational Resource Centres (DERCs) in all District Institute of Education and Training (DIETs) in Karnataka. Faculty are working closely with the DIETs in enabling their DERCs to emerge as active centres providing a common platform for practising and prospective teachers as well as teacher educators. The aim is to create synergy among teacher education institutions and neighbouring schools and broaden DIET faculties' conceptual understanding related to education through action and design-based research and professional development.

This survey has been created collaboratively by DIET faculty and TISS to hear Teachers' voices from Karnataka on the impact of COVID-19 pandemic on school education.

Emphasis of Karnataka state on children's education can be inferred from the presence of a total of 78,234 schools for a population of 6.8 crores as recorded in 2019 UDISE data. Number of teachers facilitating the learning of young students in these schools at both primary and secondary levels is 4,65,773. Among these, 54% are female, 61% are in rural locations and 51% are working in government schools. In the present situation of the pandemic, hearing the voices of various cohorts of our teachers from different districts of the state would be certainly valuable to both understanding how it has affected them as well as what aspects of support given to school education must be prioritised in the near future.

Creating the survey tool - learning and collaboration

The survey took shape as an idea in an online preparatory workshop on design-based research, for DIET faculty from various districts in Karnataka. This was conducted in conjunction with DSERT, Karnataka and attended by DIET faculty all over Karnataka (Refer to Table 1). Over the weeks, we discussed the issues being faced by teachers in the pandemic situation, ways to find out their problems and opinions, the best format to conduct such a study, the tools and techniques required to gather and analyse the prospective data, and the outline of a possible tool. From these discussions, online survey of teachers in Karnataka through a written questionnaire emerged as a suitable approach. This was then brainstormed further and chosen as the workshop outcome.

Table 1: Workshop Schedule for developing the survey		
Workshop Dates	**Topic**	**No. of participants**
23-04-2021	Design-Based Research (DBR)- Preparatory Workshop	41
30-04-2021	KTET Question paper analysis using teacher knowledge frameworks	23
03-05-2021	DBR Tutorial on creating pivot tables	12
07-05-2021	Understand UDISE Data and using spreadsheets for data analysis	23
13-05-2021	Design of a Teacher Survey Topic of the survey: Teachers' Voices on the Impact of COVID-19 on School Education *Session Plan:* 1. Understanding Sampling using UDISE data 2. Designing the survey questions 3. Creating the online Survey using Google forms **Readings referenced** Jain, Lall & Singh (2021) - A survey-based study and research of Delhi school teachers during the pandemic. O'Leary, Z. (2004) - To understand populations, sampling and methods of data collection and analysis	21
15-06-2021	Survey Finalysing	26
31-07-2021	Analysis of survey responses	24
04-09-2021	Report writing	24

Questions were contributed and/or examined by DIET faculty and collaboratively arranged into appropriate sections. A few DIET faculty piloted the questions with some of the teachers in their districts. This enabled the team to select relevant and contextual options for answering many of the questions related to the teacher's digital skills and competencies, approaches to teaching and so on. Once finalised, Google forms were created with this questionnaire tool in both Kannada and English.

Administering the survey - participating districts and DIETs

The URL of the google form for the survey questionnaires were shared with DIET faculty. They actively forwarded these to the teachers in their respective districts along with necessary instructions regarding the need for the survey. They also guided the teachers when the latter had doubts or queries, and in many districts ensured that a large number of teachers responded to the survey within a reasonable timeframe. A total of 27,526 responses were collected across several districts in a 3-week period (Refer to Table 2). As the DIET faculty circulated the questionnaire within their known groups of teachers, the survey team decided not to take teacher's email IDs or any form of identification and allow anonymous responses.

District	No of Teachers	No Of Survey Responses	% of teachers who responded
Dakshina Kannada	15037	6121	40.70%
Hassan	14800	2706	18.28%
Uttara Kannada (Karwar)	6321	2244	35.50%
Tumakuru (Tumkur)	14598	2212	15.15%
Bagalkot	15389	1955	12.70%
Chitradurga	13670	1819	13.30%
Davangere	15973	1802	11.28%
Vijayapura (Bijapur)	18508	1315	7.10%
Chikkamagaluru (Chikmagalur)	10901	1142	10.47%
Shivamogga (Shimoga)	13558	1090	8.03%
Mysuru (Mysore)	20702	1040	5.02%
Mandya	12664	1000	7.89%
Udupi	8335	967	11.60%
Dharwad	13859	718	5.18%
Bengaluru (Bangalore) Rural	8431	699	8.29%
Chikballapur	10336	491	4.75%
Other Districts*- Responses Less than 100		205	
Total Responses		**27526**	

*Other Districts include Yadgir (81 Responses) ; Bengaluru (Bangalore) Urban (72 Responses)

Haveri ;Kalaburagi (Gulbarga) ;Belagavi (Belgaum);Koppal;Ballari Bellary); Kodagu; Chamarajanagar; Bidar; Ramanagara; Gadag; Kolar; Raichur (Below 10 responses)

Data Analysis Process

The teachers could access the questionnaire in both languages. Among the responses **19433 were in Kannada** and **8096 were in English**. Three entries were invalid and hence the total number of responses that have been analysed is **27526**. Responses from 12 districts were poor, logging only in single digits. The sample comes to 5.9% of the total number of teachers in the state.

The responses from the Kannada and English forms were checked for incomplete entries, cleaned and then merged into a single worksheet. The ordinal data were assigned numerical values and the responses were converted to corresponding numbers that can be used to quantify the answers. Representative tables and graphs were generated as required, from either responses to individual questions or from suitable combinations of categories.

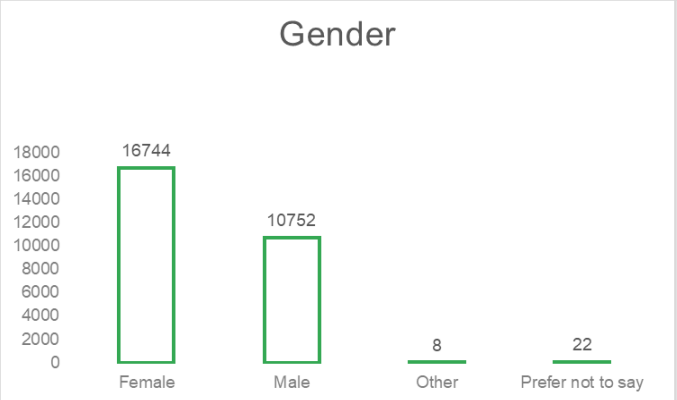
The last two questions sought descriptive answers regarding approaches/ methods that they found effective and changes/modifications they would like to make if they continue to teach online. Teachers have briefly answered these queries, several teachers responding to Kannada survey tools switched to English to answer this part. By carefully reading the answers and systematically analysing the words used, a detailed catalogue of teachers' impressions and aspirations was obtained from these responses.

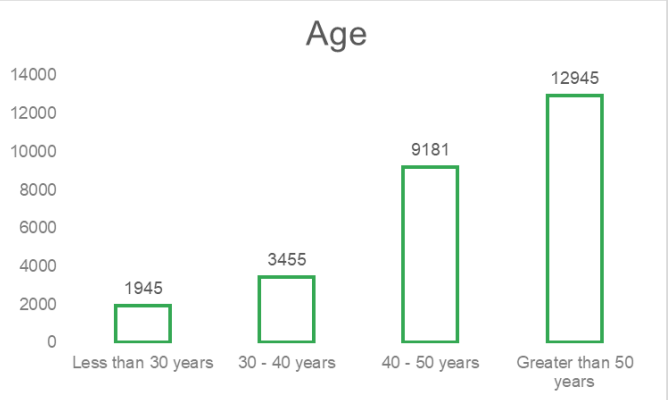
Several DIET faculty have analysed data from their own districts and provided district-wise reports, Nine district reports are attached as annexures.

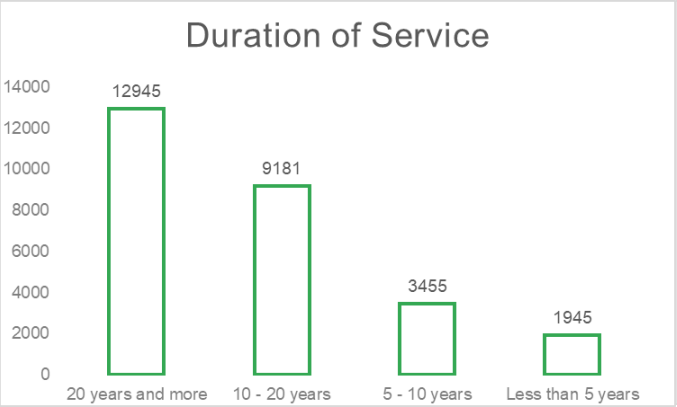
Survey Findings

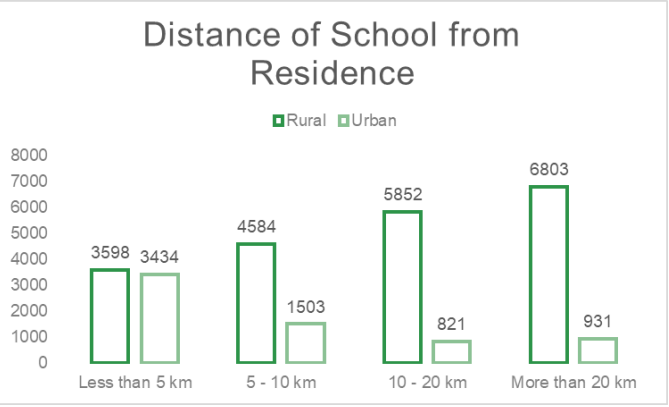
Respondents' Profile Information

Information about the respondents **(Total Responses 27,526)**





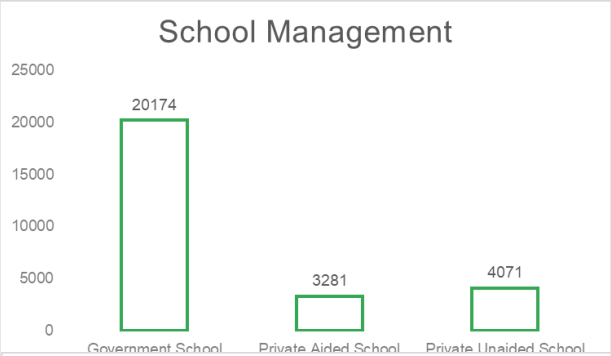


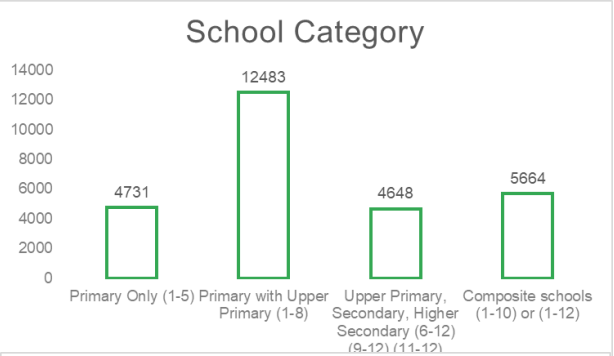


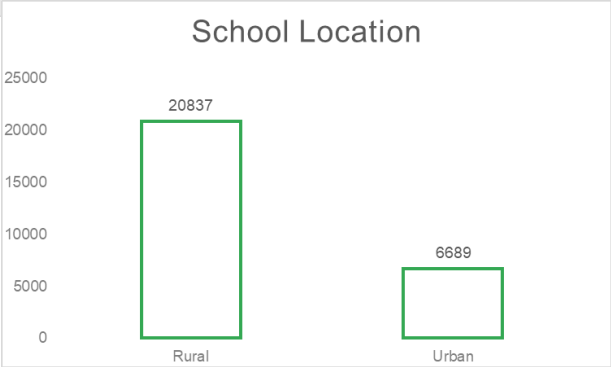
Summary

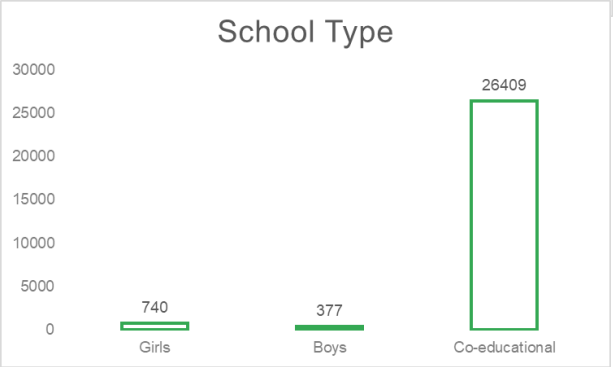
- It is notable that 30 of the respondents have identified themselves as neither male nor female.
- About two thirds of teachers who participated in the survey are rural females older than 40, nearly half of them with more than 20 years of service.
- About 23% of the respondents who live in rural areas commute more than 20 km to reach school.
- Responses to questions regarding educational qualification elicited the most diverse responses, giving a wide range of subcategories entered in the ‘other’ option among the answer choices. For example, in answering the query regarding their educational qualification, a variety of qualifications were selected including B.Ed., D.Ed., T E T, M.Ed., TCH, MA . 883 entries are unique in either the type of degree or the way it is written, resulting in a total of 1099 subcategories listed for this response.
- 61 percent of the respondents identified themselves as *Other Backward Class OBC* social category, 20 % *General category* , 11 % *Scheduled Caste* , 4 % *Scheduled Tribe*, 4 % selected *Other* and/or the respondents identified themselves with a specific sub caste or religion.

Information about the respondents schools (Total Responses 27, 526)





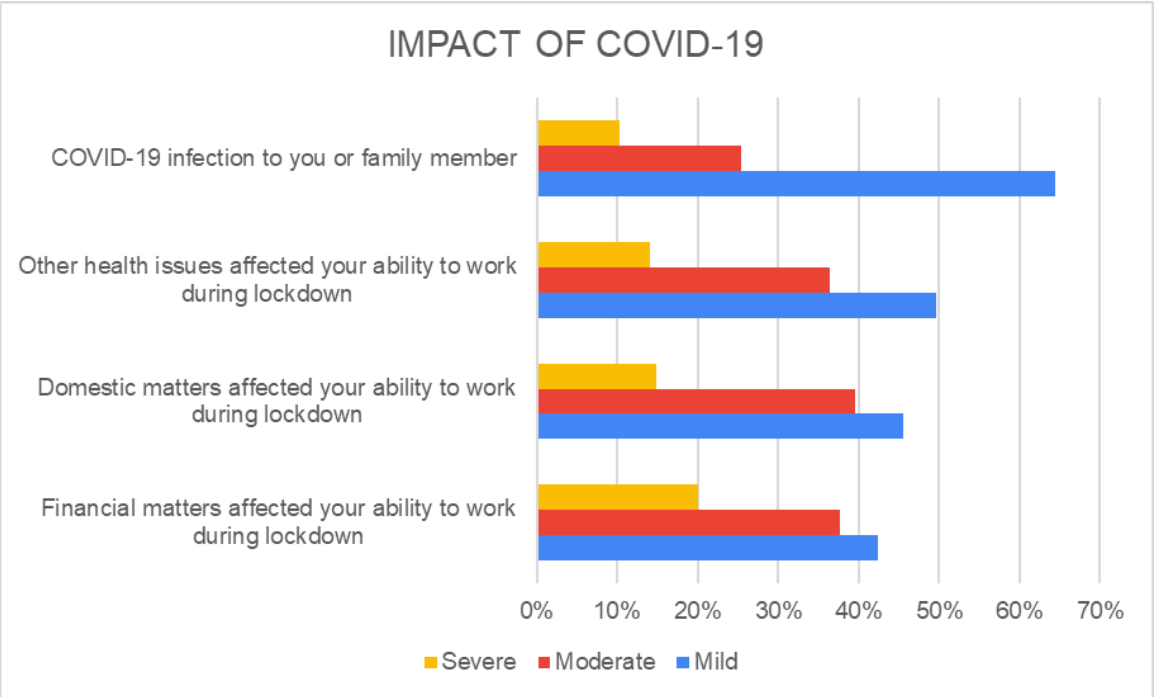




Summary

- 73% of the schools that teachers worked in were government run schools
- 45% of the teachers worked with primary and upper primary classes
- 75% of the schools that teachers worked in were located in rural areas
- Almost 95% of the schools that teachers worked in were coeducational schools.

Personal and professional impact of the COVID-19 pandemic



Summary

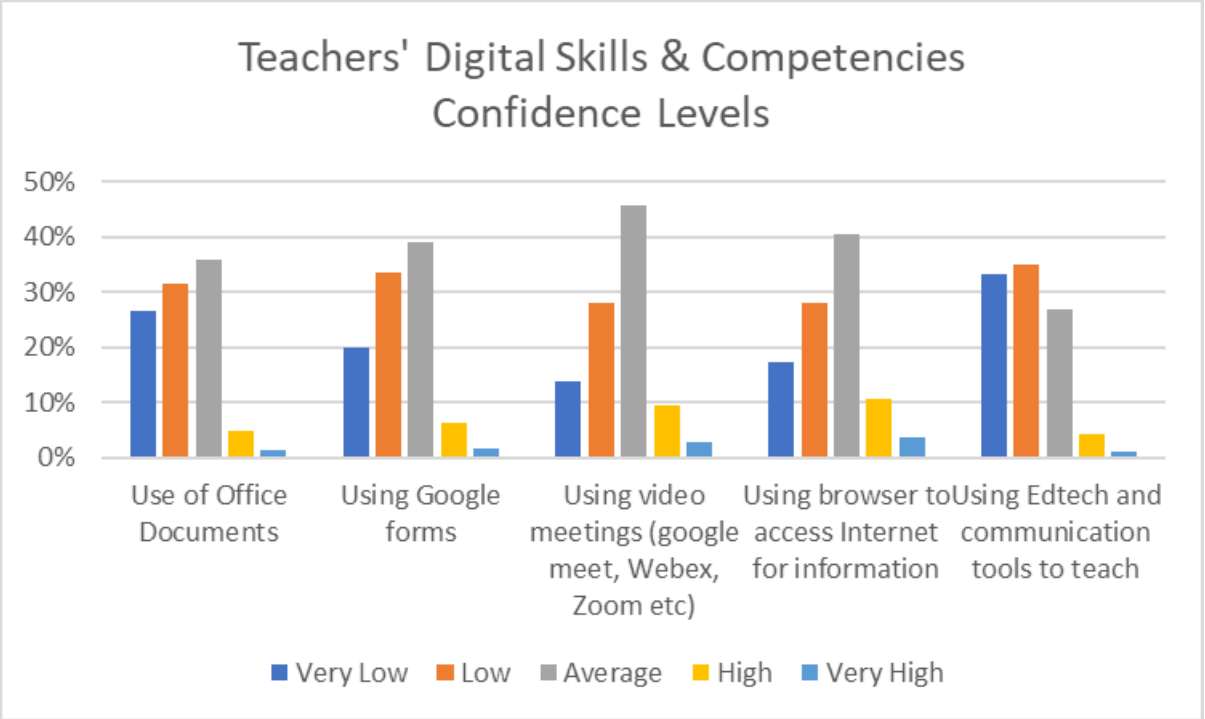
Analysis of all responses together shows that

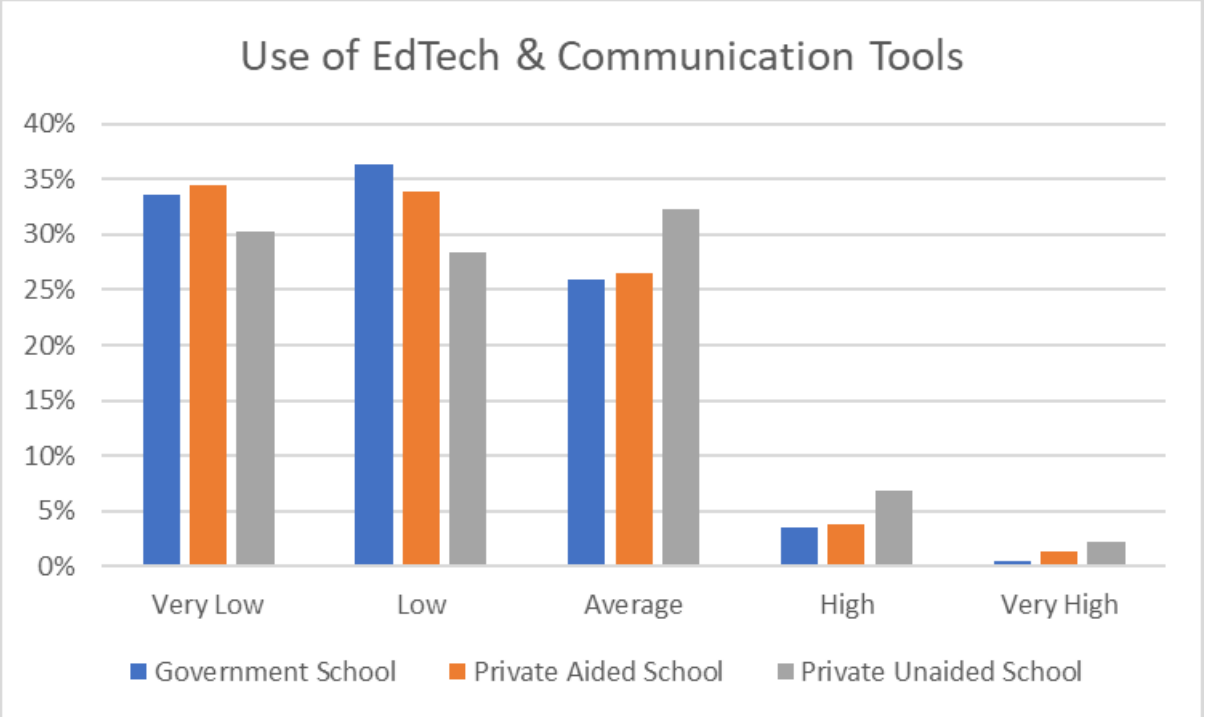
- the majority of teachers (64%) were unaffected or mildly affected by COVID-19 infection to themselves or a family member.
- 36% of teachers were moderately affected and 14% of teachers were severely affected by other health issues during the pandemic.
- domestic matters affected nearly 40% of teachers moderately and about 15% of teachers severely in carrying out their teaching duties.
- Financial matters affected 38% of teachers moderately and 20% of teachers severely.

Analysing the responses category-wise shows that

- By age, domestic and financial matters affected teachers less than 30 years more severely than older teachers.
- By gender, domestic and financial matters affected teachers of other gender or undisclosed gender more (moderately affected more than 50% of them) than female or male teachers (less than 40%).
- By duration of service, financial matters affected teachers of less than 10 years of service more severely (about 40%) than teachers of longer service (less than 20% severely affected).
- By school management, domestic matters affected teachers working in unaided private schools more (29%) than teachers in government schools or aided private schools (less than 15%).
- Likewise financial matters affected teachers from private unaided schools more (59%) as compared to less than 20% of government and aided school teachers
- By location, there was no difference between teachers in rural and urban areas in terms of the impact of the COVID 19 pandemic.

Teachers' Digital Skills and Competencies

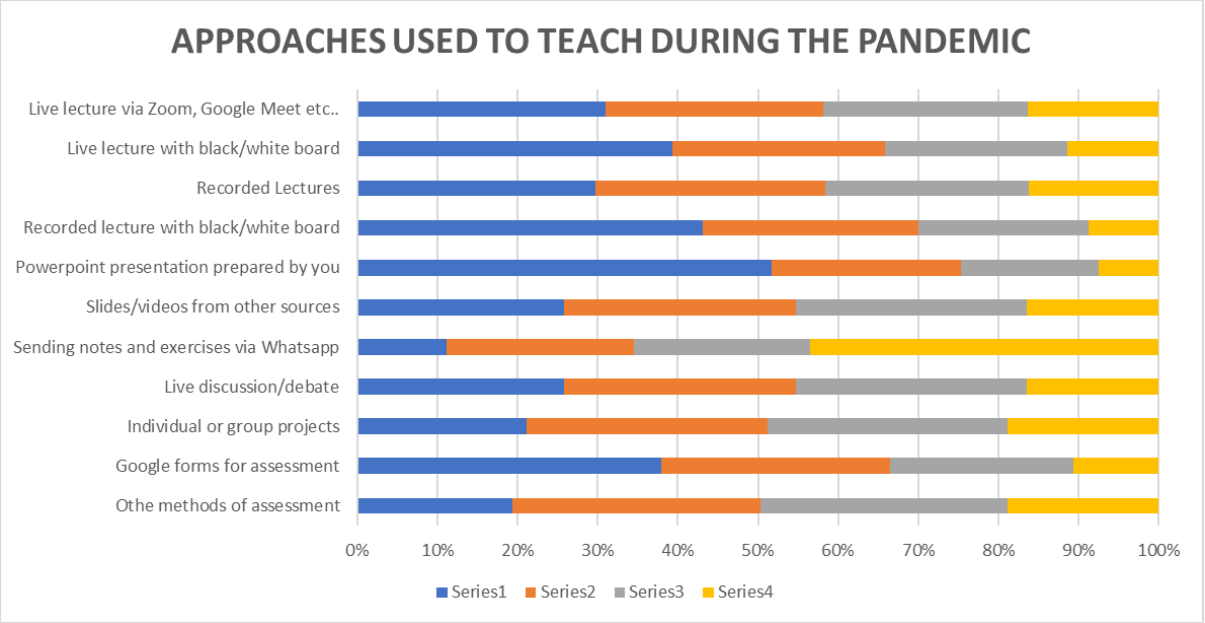




Summary

- About 84 % of the teachers had access to only mobile smartphones .
- Only 11% of the teachers have access to a computer desktop/laptop
- 81% of the teachers accessed the Internet from their mobile, of which 56% had access to more than 1 GB of data per day.
- 6% and 11 % of teachers have either poor/no connectivity or poor connectivity during the rainy season.
- Most teachers report very low to average levels of confidence in the use of digital tools. High confidence in using digital tools was reported in less than 10 % of the respondents.
- Confidence in the use of EdTech tools was the lowest among the respondents.
- There was no significant difference between female and male teachers in terms of their confidence in the use of digital applications and tools.
- There was no significant difference seen between teachers working in rural and urban schools in terms of their confidence in the use of digital applications and tools.
- There was no 10 percentage point difference between teachers working in government and aided schools when compared to teachers working in private unaided schools in terms of their confidence in the use of digital applications and tools. Private school teachers reported higher confidence in the use of digital applications and tools. However, even private school teachers reported low confidence in the use of EdTech tools.
- Less than 5% of teachers working in primary or elementary schools reported high confidence in the use of applications and tools, whereas 12% to 15 % of teacher's working in composite schools or highschools reported high confidence levels in the use of digital applications and tools.
- Less than 3% of teachers with more than 20 years of service reported high confidence in the use of applications and tools.

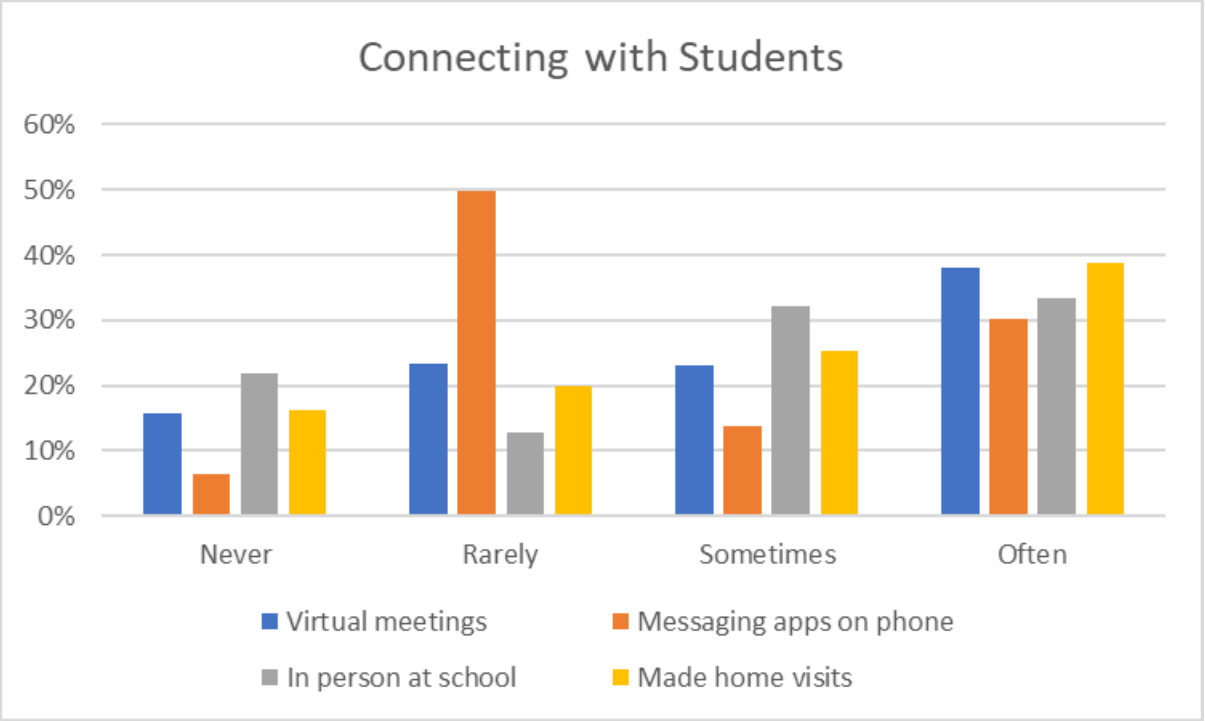
Approaches used to teach during the pandemic



Summary

- The most popular method of teaching was sending notes and exercises via whatsapp. 45% of teachers said they used this method often.
- Teachers do not appear to have prepared their own materials for teaching. More than 50% of teachers said they never prepared their own Powerpoint presentations.
- Slides/videos from other sources, recorded lectures, live lectures and individual/group projects are some methods that have been used often by approximately 16% to 18% of the teachers.
- There is no significant difference between female and male teachers in the use of teaching approaches.
- On an average there was a 10 percentage point difference between teachers working in rural areas versus urban areas. Teachers working in urban areas have used various teaching approaches more frequently than teachers teaching in rural schools.
- The teacher's working in composite and upper primary schools used different teaching approaches more frequently than teachers working in primary and upper primary schools.
- On an average, 14% of the teachers with more than 20 years of experience used different teaching approaches often, whereas 26% of the teachers with less than 10 years of experience used different teaching approaches more frequently.

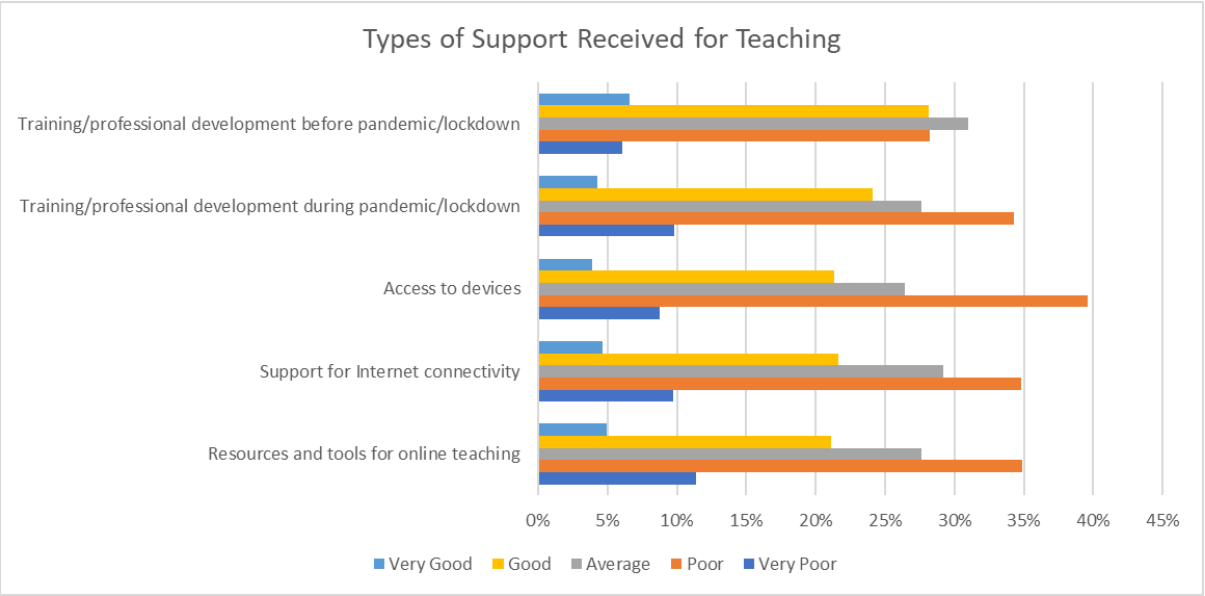
Connecting with Students

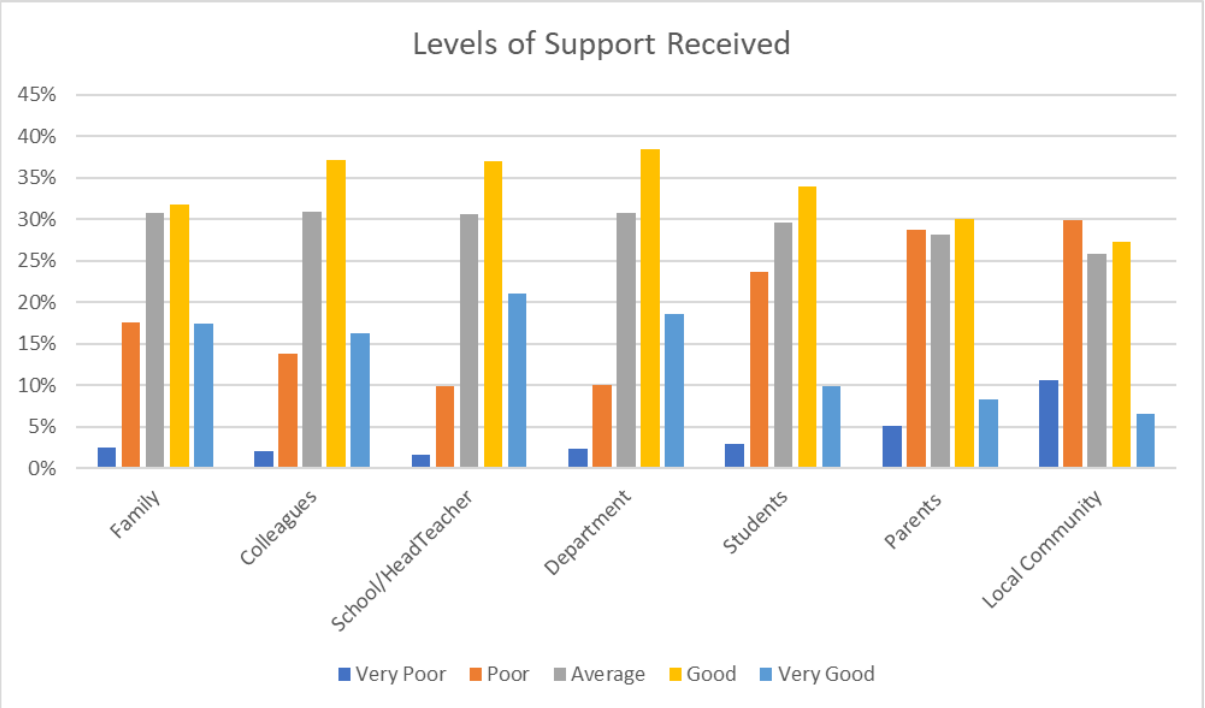


Summary

- Virtual meetings and home visits are the most popular ways in which teachers connect with their students.
- 52% female teachers in comparison to 42% male teachers used messaging apps on phone to connect with students.
- 31% of teachers working in urban schools made home visits to connect with students in comparison to 41% of teachers working in rural areas.
- Primary and upper primary school teachers made more frequent home visits when compared to teachers of upper primary classes. Whereas teachers working in upper primary classes used virtual modes more frequently as compared to upper primary teachers to connect with students.
- 24% and 18% of teachers working in government and aided schools respectively visited student's homes often to connect, whereas only 6% of teachers working in private unaided schools reported making home visits.

Support received for Teaching





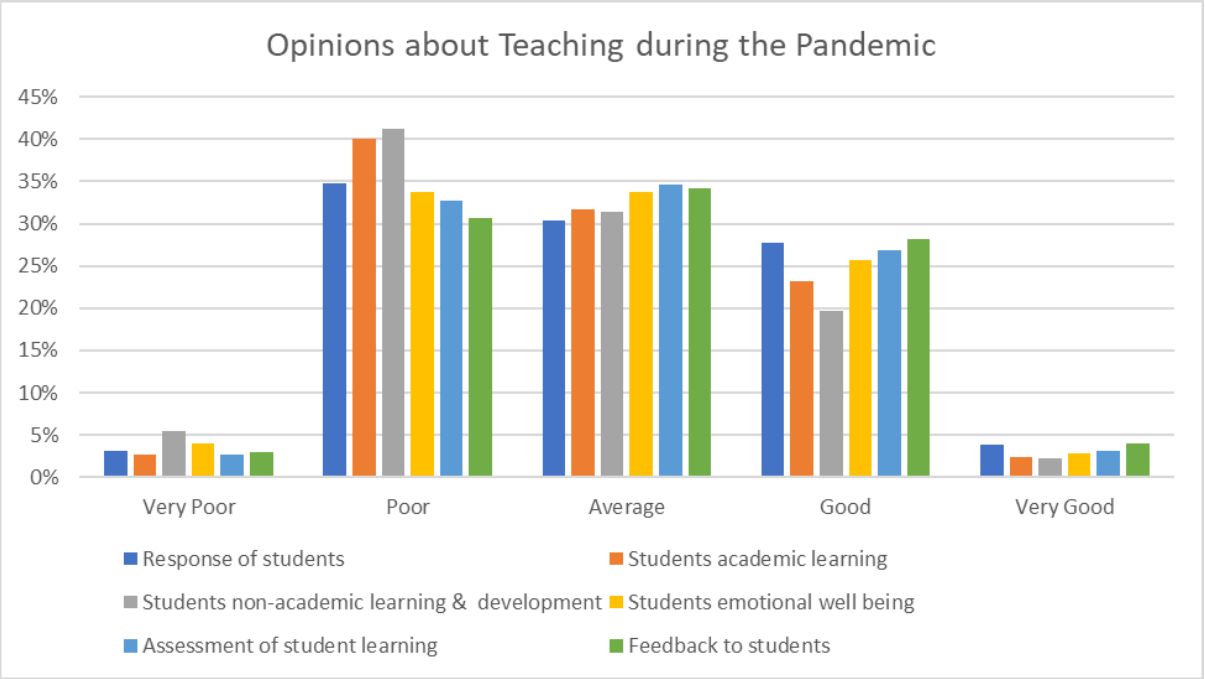
Summary

- Overall, 45% to 49% of teachers reported poor or very poor support for resources and tools for online teaching, Internet connectivity and access to devices
- 43% of teachers in private aided schools reported poor or very poor professional development support before the lockdown/s.
- 23% of teachers in government and private aided schools reported good or very good support for professional development during the lockdown periods, whereas, 37% of teachers in private aided schools reported good or very good professional development support during the lockdown.
- 23% of teachers in government and 28% in private aided schools reported good or very good support to access resources and tools for online learning, whereas, 40% of

teachers in private aided schools reported good or very good support to access resources and tools for online learning.

- It is heartening to see that overall nearly 52% of teachers report that support from colleagues and school leaders and department is good or very good. Over 64 % of teachers in private unaided schools reported good or very good support from colleagues and school leaders. And nearly 57% of teachers in government schools reported good or very good support from the department.
- There was no significant difference between teachers working in rural and urban locations with respect to support from colleagues and school leaders and departments.

Opinions about Teaching during the Pandemic



Summary

- Overall, more than 30% of teachers responded that their opinion of various aspects of teaching was poor during the pandemic.
- There was a 6 percentage point difference reported between rural and urban schools. More teachers working in rural areas responded that (1) response of students, (2) academic learning and non-academic learning & development were poor as compared to teachers working in urban areas.
- On an average, 37.5%, 34% and 24% of teachers working in government, private aided and private unaided schools respectively reported a poor opinion of all listed aspects of teaching.
- On an average, 28% to 33% of teachers working in composite or upper primary , secondary or higher secondary schools reported that teaching with respect to all aspects asked in the survey appeared to have been accomplished poorly. Whereas, on the average 38% of teachers working in primary and upper primary schools reported the same.

Qualitative Analysis

The survey posed two open-ended questions, namely

1. Please share the approaches/ methods that worked well for you to teach your students during the pandemic
2. If you continue teaching online, what changes/ modifications would you like to make?

Summary of responses to open-ended questions

Overall, the responses show that most of the teachers prefer teaching in person to teaching remotely. While endeavouring to continue offline classes, many teachers have employed programs like *Vidyagama* and *Samveda*; they have also tried to conduct lessons at school by staggering the timings for subgroups of students who could then attend classes by turn. Teachers also express their wish to make better use of what they have learnt about online education during the pandemic, in how they facilitate students' learning in the future.

Summary of approaches/ methods that worked well for the teachers

Many teachers found teaching offline – either in school premises or outside - more effective than any other method. A large number of them liked the Vidyagama programme to facilitate learning during the pandemic. Some of them found online classes ineffective in spite of being able to use ICT and related devices/platforms well. Teachers have also conducted separate online and offline classes for students with and without devices/facilities respectively. Several teachers have visited homes of students and/or distributed worksheets, assigned group work and activities which they monitored and provided feedback on. Some have used online modes of teaching via Google Meet, Zoom, Teachmint etc. Others have utilised recorded classes, relevant videos, phone calls, whatsapp groups, or classes on radio and television to teach in this period. Some teachers elicited help from parents of students to facilitate their learning.

Summary of changes/ modifications that teachers would like to make/see

Teachers that have figured out a way to facilitate student learning during the pandemic, whether by conducting classes online or offline, do not wish to make any changes to it. Many teachers have stated the need for relevant communication devices, ICT facilities and stable internet connectivity not only for themselves but also at schools and with students/parents. They have often expressed their wish to be in touch with their students. Many teachers find online methods either difficult due to lack of devices and facilities or ineffective for various reasons and would prefer to teach offline by any possible means – be it asking students to attend school by turns, conducting classes in open grounds, through the Vidyagama or Vataara Shale programmes, so that COVID-19 norms can be adopted. Some teachers would like to try newer methods to teach online, some others would like more training to conduct online classes effectively and to use ICT modes available to them.

By carefully going through the replies of teachers to the above two questions, we also tried to glean information pertinent to the following issues that are relevant to the present scenario of school education in Karnataka.

1. Deciphering the pressure points from where primary difficulties of teachers arose in conducting their teaching duties during the pandemic:
    a. No or low internet signal in school
    b. Lack of ICT facilities at school
    c. Inability to effectively conduct classes online
    d. No smartphone or internet with students
    e. Inability of students to use online learning platforms well
    f. Concern for health of students
    g. Concern for student learning
2. Identifying the key frustrations of teachers in reaching their students when offline classes are not possible:
    a. Relevant communication devices not available to all students
    b. In spite of adapting to and conducting online classes, teachers felt that their teaching was not effective
    c. Difficulty in gathering online responses, even when students participate in online classes
    d. Difficulty in monitoring student learning and providing feedback
3. Teachers' perception of student learning without attending schools (the responses triangulate with the findings of the quantitative data)
    a. Online classes are either difficult of ineffective
    b. Younger classes (1 to 5) and highschool are particularly tough to teach online
    c. Art and physical education teachers have taught online too, but are understandably unable to monitor the work of students in real time

Selected quotes from response to the open-ended questions
Male teacher with more than 20 years of experience in rural composite govt school with only primary classes, from Uttara Kannada district wrote *"Since ours is a remote rural area, we don't have internet connectivity (network). Therefore notes, charts etc are necessary"* (ನಮ್ಮದು ತೀರಾ ಗ್ರಾಮೀಣ ಪ್ರದೇಶವಾದ್ದರಿಂದ ನೆಟ್ವರ್ಕ್ ಇಲ್ಲ. ಹೀಗಾಗಿ ***notes, charts*** ಇತ್ಯಾದಿಗಳು ಅನಿವಾರ್ಯ).
Female teacher with more than 20 years of experience from rural composite govt school with primary and higher primary classes in Vijayapura district wrote *"Teaching lessons in the school premises with social distancing, following COVID-19 rules"* (***Kovid*** ನಿಯಮಗಳನ್ನು ***paalisutta*** ಸಾಮಾಜಿಕ ಅಂತರದೊಂದಿಗೆ ಶಾಲಾ ಆವರಣದಲ್ಲಿ ಪಾಠ ಬೋಧನೆ)

Female teacher with more than 20 years of experience from rural composite govt school with primary and higher primary classes in Uttara Kannada district wrote

"As ours is a rural area, there are network issues for online teaching or watching youtube videos; most parents have keypad mobiles hence students can be taught by appointing volunteers and distributing worksheets."

(ನಮ್ಮದು ಗ್ರಾಮೀಣ ಪ್ರದೇಶ ಆಗಿರುವುದರಿಂದ ಆನ್ಲೈನ್ ಬೋಧನೆಗೆ ಆಥವಾ ಯೂಟ್ಯೂಬ್ ಪಾಠ ವೀಕ್ಷಣೆಗೆ ನೆಟ್ವರ್ಕ್ ಸಮಸ್ಯೆ, ಹಾಗೂ ಹೆಚ್ಚಿನ ಪಾಲಕರದ್ದು ಕೀಪ್ಯಾಡ್ ಮೊಬೈಲ್ಇರುವುದರಿಂದ ಸ್ವಯಂ ಸೇವಕರನ್ನು ನೇಮಿಸಿ, ಅಭ್ಯಾಸ ಹಾಳೆಗಳನ್ನು ನೀಡುವುದರ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಬೋಧಿಸಬಹುದು.)

Female teacher with more than 20 years of experience, from rural composite govt school with primary and higher primary classes in Mandya district wrote

"As I teach nali-kali, activity based online learning is difficult for children of this level, but in order to stay in touch with the children and involve them in learning it is necessary and unavoidable to organise online classes. It is very important to explain to children and their guardians in person how to use smartphones"

(ನಾನು ನಲಿಕಲಿ ಬೋಧಿಸುವುದರಿಂದ,ಈ ಹಂತದ ಮಕ್ಕಳಿಗೆ **Online** ಚಟುವಟಿಕೆ ಆಧಾರಿತ ಕಲಿಕೆ ಕಷ್ಟದಾಯಕ,,,ಆದರೂ ಸ್ವಲ್ಪ ಮಟ್ಟಿಗಾದರೂ ಮಕ್ಕಳನ್ನು ನಮ್ಮ ಸಂಪರ್ಕದಲ್ಲಿ ಇಟ್ಟುಕೊಂಡು ಕಲಿಕೆಯಲ್ಲಿ ತೊಡಗಿಸಲು ***online classes*** ಆಯೋಜಿಸುವುದು ಅನಿವಾರ್ಯ ಮತ್ತು ಅವಶ್ಯಕ. ಮಕ್ಕಳಿಗೆ ಹಾಗೂ ಅವರ ಪೋಷಕರಿಗೆ ***smart phone*** ಬಳಕೆ ವಿಧಾನಗಳನ್ನು ಮುಖಾಮುಖಿ ಭೇಟಿಯಲ್ಲಿ ವಿವರಿಸುವುದು ಅತೀ ಮುಖ್ಯ)

Female teacher with less than 5 years of experience from rural composite govt school with primary and higher primary classes in Bagalkote district wrote

"Examining progress of children's learning by phone through the parents"

(ದೂರವಾಣಿಯ ಮೂಲಕ ಮಕ್ಕಳ ಅಭ್ಯಾಸದ ಅಬಿವೃದ್ಧಿ ಯನ್ನು ಪೋಷಕರ ಮೂಲಕ ಪರಿಶೀಲಿಸುವಿಕೆ)

Male teacher with 10 - 20 years of experience from urban composite unaided private school with primary and higher primary classes, from Mandya district

"Better if timings are from 6pm, parents will be at home after completing their jobs"

(ಸಮಯ ಸಂಜೆ 6 ರಿಂದ ಮಾಡಿದರೆ ಉತ್ತಮ ಪೋಷಕರು ಈ ಸಮಯದಲಿ ಕೆಲಸ ಮುಗಿಸಿ ಮನೆಯಲ್ಲಿರುತಾರೆ)

Summary of Analysis

Overall, teachers have attempted to teach during the COVID-19 in the best way that they thought possible. It is however clear that teachers lack digital skills to confidently use digital and EdTech tools in their teaching learning process. More than 50% of the teachers have reported very poor or poor support such as training, access to resources, devices and Internet connectivity to support their teaching during the pandemic. More than 80 % of the teachers had access to smartphones and only 11% of the teachers had access to laptops. Therefore teachers have not been able to create resources of their own, and have consumed resources and tools that they had access to. Teachers with more years of experience are least confident when it comes to using digital tools. The use of EdTech tools in particular was very low among all teachers.

Teachers in their open responses have felt that they have not been able to teach to their satisfaction in the online mode and clearly indicated that in-person learning in schools cannot be substituted. Teachers working in rural and remote locations have said that Internet connectivity and device access for students has been an issue. Teachers have expressed that interacting with students, monitoring and assessing student's learning in the online mode has been very difficult. More teachers (10 percentage points) working in rural areas made home visits to be in touch with their students during the pandemic.

Recommendations and Way Forward

The survey results echoed the issues faced by teachers from several other studies (Jain, Lall & Singh, 2021 ; UNESCO, 2021) done during the pandemic. There is a large gap in access to laptop/computers and digital skills and competencies among teachers to effectively and meaningfully use digital tools and EdTech for teaching and learning.

With continuing issues of school closure, it has now become important that teachers are able to adopt **hybrid methods** going forward in their teaching-learning process. The pandemic has exposed teachers and students to adapt to different methods of teaching and communication and this must be leveraged going forward. It is very clear that teachers feel that in-person lessons are best for their students, however, hybrid methods of in-person and

online methods will only enhance teaching-learning for both teachers and students. Headteachers and teachers would need to develop different hybrid methods that are suitable for their context going forward.

Teachers should not be just consumers of digital resources, but be producers of contextual resources made in the local language by curating high quality open educational resources to fit their classroom and school contexts (Kasinathan & Ranganathan, 2017). To be able to confidently become producers of educational resources and use EdTech meaningfully in their teaching-learning, teachers must be **provided with (or given incentives to purchase) tablets/laptops**.

There is a clear gap in the digital skills and use of digital and EdTech tools among teachers. This despite the state implementing ICT integration programs since the 1990s. This is more prominent among teachers teaching primary and elementary level classes. Systemic efforts have to be made to develop teacher's digital skills and use of EdTech resources and tools through a **variety of professional development opportunities**. Several studies (Miglani & Burch, 2019; CLIx, 2020; Jain, Lall & Singh, 2021; UNESCO,2021) have indicated that access to EdTech resources is insufficient for improving learning outcomes, it is very vital that teachers learn to use these EdTech tools meaningfully to facilitate learning.

Finally, teachers need continuous pedagogic support (Thirumalai et. al., 2019; UNESCO 2021) to adopt technology meaningfully in their daily classroom practises in schools and in online modes for teaching and learning. It is important to support teacher's adoption of EdTech meaningfully into classroom practice by facilitating learning through **local and online communities of practice,** giving opportunities for teachers to share their issues, successes and experiments of teaching-learning with peers, experts and teacher educators and learn from each other.

Reference

Connected Learning Initiative (CLIx). (2020). Making EdTech Work for Secondary School Students and their Teachers. A Report of Research Findings from CLIx Phase I. Mumbai, Tata Institute of Social Sciences.

https://clix.tiss.edu/wp-content/uploads/2021/01/Making-Edtech-Work_Research-Findings_CLIx-Phase-I.pdf

Jain S, Lall M, Singh A. (2021). Teachers' Voices on the Impact of COVID-19 on School Education: Are Ed-Tech Companies Really the Panacea? *Contemporary Education Dialogue*.18(1):58-89.

Kasinathan, G. & Ranganathan, R. (2017) Teacher Professional Learning Communities: a collaborative OER adoption approach in Karnataka, India Research Report from IT for Change
https://itforchange.net/sites/default/files/Teacher_Professional_Learning_Communities_%20a_collaborative_OER_adoption_approach_in_Karnataka%2C_India_Research_Report_from_IT_for_Change%2C_January_2017.pdf

Miglani, N., & Burch, P. (2019). Educational Technology in India: The Field and Teacher's Sensemaking. Contemporary Education Dialogue, 16(1), 26–53.

O'Leary, Z. (2004) Chapter 8 Exploring Populations in The Essential Guide to Doing Research. Sage Publications

Thirumalai, B, Ramanathan, A, Charania, A, Stump, G (2019). Designing for Technology Enabled Reflective Practice: Teachers' Voices on Participating in a Connected Learning Practice. In Teaching and Teacher Education. South Asian Perspective. Setty, R., Iyengar, R., Witenstein, M., Byker, E.J., Kidwai, H. (Eds.), Palgrave Macmillan.

UNESCO (2021). No Teacher No Class. State of the Education Report for India 2021. UNESCO, New Delhi, India.

Unified District Information System for Education (UDISE) (2019). Data for Karnataka. Accessed from https://udiseplus.gov.in/#/home

Appendices

List of Teacher Educators participated from DIETs

Sl. No.	Name	Workplace(DIET)	Designation
1	Ananda. A	DIET Chickballapura.	Lecturer.

2	ASHOK M LIMAKAR	DIET, VIJAYAPURA	Senior Lecturer
3	ASHWIN C R	Shimoga DIET	Lecturer
4	Asuntha sequeira	Shimoga	Lecturer
5	Basangouda	DIET Yadgir	Lecturer
6	Bhanukumara R	DIET, MANDYA	Lecturer
7	Chandrika .B	Ramanagara	Lecturer
8	Channappa kalmani	Yadgir	Lecture
9	Deepak k s	Davanagere	Lecturer
10	Fouzia Banu	Hassan karnataka	Senior Lecturer
11	Govindappa k	Davanagere	Senior lecturer
12	Hadagali S S	ILAKAL, Bagalakote	Lecturer
13	HEMALATHA. P	DIET, BLORE URBAN	Lecturer
14	Lalitha S	DIET Kolar	Lecturer
15	Lathamani T M	HAVERI	Lecturer
16	Laxmana Naik S	DAVANGERE	Lecturer
17	LEELAVATHI .C.S	CHITRADURGA	LECTURER
18	Lolakshi.N	Davanagere	Lecturer
19	MAHADEVI NAIK	Bangalore Rural DIET	Lecturer
20	Mamatha. K. M	DIET Chikmagalur	Lecturer
21	Manjula L. Ambiger	Dharwad	Lecturer
22	Manjula R Chandragiri	DIET Haveri	Lecturer
23	Minkshi F.Patil	DIET Belgaum	Lecturer
24	Naik M.R	DIET Davanagere	Lecturer
25	Pithambara K	Mangaluru (D K)	Lecturer
26	POORNIMA S R	Davanagere	Lecturer
27	Praveena Kumari	Udupi	Lecturer

28	RadhaKumari.M.K	DIET,Mysuru	Lecturer
29	Raghavendra N	Chitradurga	Lecturer
30	Roopa Baburao Puramkar	DIET MUNIRABAD, Koppal	Senior Lecturer
31	RUKHSANA NAZNEEN	DIET Hassan	Senior Lecturer
32	Savithramma H	DIET Davanagere	Lecturer
33	Shubha Nagendra Nayak	DIET. KUMTA	LECTURER
34	Srinivasareddy T	Tumkur	Lecturer
35	Suresh K V	DIET KUDIGE	Senior Lecturer
36	Tharamani L	DIET Mysore	lecturer
37	Thippeswamy J M	Ballari	Senior Lecturer
38	TRIVENI.N. Y.	Davanagere.	Lecturer.
39	Ushakumari.s	Davangere	Senior lecturer

List of district wise draft reports

Sl. No.	DIETs	Authors
1	DIET Chikkaballapur	Mr. Ananda A, Lecturer
2	DIET Chikmagalur	Ms. Mamatha K.M, Lecturer
3	DIET Chitradurga	Ms. Leelavathi.C.S, Lecturer
4	DIET Dharwad	Ms. Manjula. L. Ambiger, Lecturer
5	DIET Hassan	Ms. Rukhsana Nazeen, Senior Lecturer
6	DIET Kumta(U.K)	Ms. Shubha Nagendra Nayak, Lecturer
7	DIET Mangalore(D.K)	Mr. Pithambara K, Lecturer & Dr.Sumangala S Nayak, Lecturer
8	DIET Shivamogga	Ms. Asuntha Sequeira, Lecturer & Ashwin C.R, Lecturer
9	DIET Udupi	Ms.Praveena Kumari Rai, Lecturer

Survey

Attached
Kannada Survey
English Survey

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