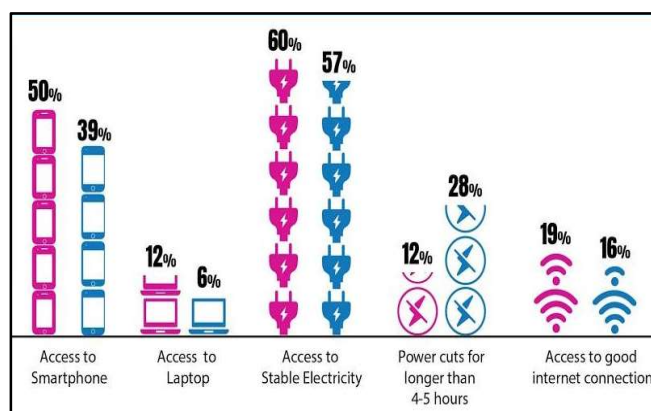
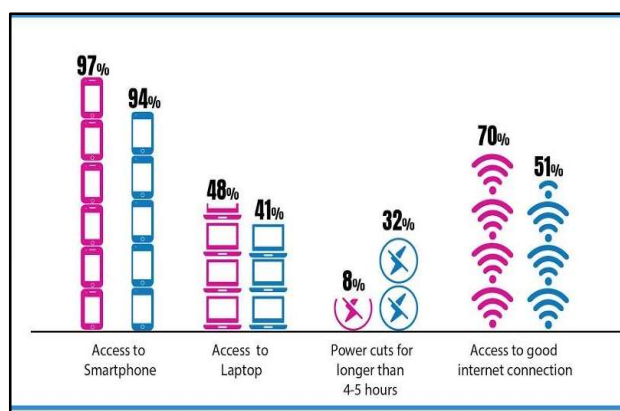


Assessment of ground preparedness for use of EdTech during COVID-19 disruption in School and Teacher Education (Round 3)

24 June 2020



Teachers Access to devices, electricity and internet

Teacher perception of student access

(pink) Urban. (blue) Rural

The Central and State governments are adopting different mechanisms for learning processes by incorporating various technological tools to enable schools to continue as learning sites in the current situation caused by COVID-19. The thrust to shift to online modes is evident in practice to maintain the protocols and norms established to deal with the situation. In round 3 of the survey, we report findings from a larger pool of 365 respondents that includes 178 urban school teachers and heads and 91 rural school teachers and heads and 96 Teacher Educators (see methodology and process details at end of report).

METHODOLOGY: The survey tool was designed for school teachers, school heads, and teachers educators, and included 40 Questions, (35 close ended and 05 open ended, 10 questions to profile the person) self-administered through an online survey form in Hindi and English, question types: (i) current key concerns (personal and professional), (ii) access to devices and internet, (iii) the nature of online activities, (iv) professional development in the near future (v) support needed towards teaching and (vi) opinion regarding ease and difficulty of teaching topics online and suggested strategy for continuing education in the covid times. The sampling was by snowballing through known contacts with the survey link shared via whatsapp, Telegram and mail. Responses obtained between 22 April -31 May 2020 have been taken for this analysis.

School Teachers

Table 1: Respondent profile

	N	Type of School(%)			Gender(%)		Age (in years)(%)			Highest education qualification(%)					
		Teachers	HM	Govt	Pvt	Aided	M	F	51-65	36-50	18-35	>PG	PG	UG	+2
Urban	178	145	33	51	22	27	41	59	24	52	24	9	68	19	4
Rural	91	67	14	61	9	30	52	48	19	55	25	6	61	27	6

1. Context

Access to smart phones is high (above 90%) among both rural and urban teachers (men and women), but only about 40-50% have access to laptops, with more women than men having them. Power cuts for 4 to 5 hours are reported by 30% of rural teachers, in comparison to 8% of urban ones. On the whole, urban teachers are able to spend more time on online activities.

Table 2: Access to devices and internet

	Urban Teacher (%)	Rural Teacher (%)
Access to Smartphone	97 (Men-92, Women-100)	94 (Men-94, Women -93)
Access to Laptop	48 (Men-38, Women-55)	41 (Men-34, Women-56)
Access to stable electricity	95	90
Power cuts for longer than 4-5 hours	8	32
Access to good internet connection	70	51
Availability of data for more than 1GB per day	58	54
Online Presence for more than 2 hours	74 (Men-67, Women-79)	63 (Men-69, Women-56)
Online Activities : Reading News	58	66
Watching Educational Videos	75	66
Social Media	50	34
Online Courses	41	21
Conducting online classes	49	39
Creating resources and content	34	21

2. Teachers' assessment of their students' contexts

As reported by their teachers, students' access to stable electricity by most of one's students is 60% or less, smartphone is 50% or less and internet is less than 20%. Access to laptops is very limited and less than 30% of teachers have students most of who have use a device for 2 hours for learning. Access of rural students is less than their urban counterparts

Table 3: student access to devices, internet (according to teachers)

		Urban Teacher (%)	Rural Teacher(%)
Access to Smartphone	Most Students have	50	39
	Some Students have	45	55
	None or Hardly any have	6	6
Access to Laptop	Most Students have	12	6
	Some Students have	32	30
	None or Hardly any have	56	64
Access to Stable Electricity	Most Students have	60	57
Power cuts for longer than 4-5 hours have	Most Students have	12	28
Access to internet connection	Most Students have	19	16
	Some Students have	71	58
	None or Hardly any have	20	25
Addiction to Digital Devices	Most Students have	55	55
	Some Students have	35	33
	None or Hardly any have	10	12
Use of device for learning for 2 hr have	Most Students have	26	29
	Some Students have	66	62
	None or Hardly any have	18	20

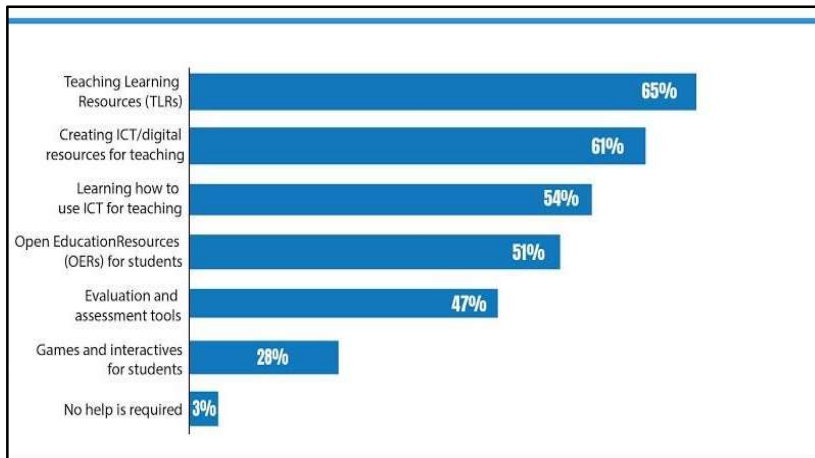
3. Concerns

Concern for well being is more evident among urban teachers. There is a high level of concern among both urban and rural teachers regarding their students and whether they will be able to stay in touch with education in this period. 50% of urban teachers and 40% of rural teachers are in touch with their students, primarily via whatsapp. More than 20% of teachers are concerned about job stability and it is higher among urban teachers.

Table 4: Concerns of Teachers

	Urban Teacher(%)	Rural Teacher(%)
Overall: Family's safety and well-being	89	79
One own's health	57	49
Availability of medicines and essential items	48	42
Economic Crisis in the country	52	52
Work Related: Students will lose touch with the subject	73	70
Need for professional development	48	34
Backlog of syllabus to be covered	41	33
Additional burden for the students struggling with the subject	44	37
Inability to concentrate or work according to the plan	21	16
Job Stability	28	22
Able to stay in contact with most students:	50	40
Means to contact the students: Whatsapp/Telegram	64	73
Phone calls	39	40
Zoom/Skype/Webex	22	13
Google Meet	12	3

4. Professional development:



Close to 90% of teachers (urban and rural) said they would be able to spend an average of 10 hours per week on professional development. They are concerned that lack of student access to smartphones and internet connectivity will create hurdles in an ICT based learning solution. The preferred topics of interest include using digital tools to teach concepts in subject pedagogy. Topics of general interest: personality development, communication skills and ICT based teaching with focus on assessments.

Table 5: Professional development

	Urban Teacher(%)	Rural Teacher(%)
Training for online teaching	59	31
Preferred means of learning: Online Video Lectures	66	55
Online Courses/MOOCs	49	-
Textbooks	-	49

5. Suggestions:

Urban and rural teachers suggest starting online Classes/ICT enabled learning, reducing syllabus where possible and focusing on projects. Urban teachers suggest using blended learning: and have classes with reduced numbers/Odd-even, staggered shift with online learning. Rural teachers favour more use of radio and DTH. They suggest using phone and social media to support student-teacher interaction.

“ Economical backwardness of the parents is leading to lack of android phones, while for some, phone is always with their parents. So, students do not get time to be in touch with their teachers.
- Rural Government School Teacher, Gondia

In starting the online teaching learning classes, we faced some difficulties, like teaching without book, syllabus or any resources. It is just like fighting in a battle without any weapons.
- Rural Government School Teacher, Gondia

पहली बार छात्रों को ऑनलाइन पढ़ाने का अनुभव मिला। ICT संबंधित शिक्षण में कठिनाइयां आती हैं , लेकिन काफी अच्छा अनुभव रहा।
- DIET Teacher Educator, Dewas, MP

School should be open for students for two weeks for actual student - teacher interaction. Students can utilize other two weeks in completing the assignments / evaluation/ project work.
- Urban Private School Teacher, Pune

ज्यादातर मजदूर हैं, उनको खान पान की चिंता अधिक है। उनके यहाँ संगणक का भी अभाव है... पढ़ाई के लिये बच्चों को नजदीकी स्कूल में स्तर और क्लास निहाय बुलायें।
- Rural Government Aided School, Usmanabad (Maharashtra)

I would suggest these: (1) Allocating direct classroom learning short times for different subjects as per their priority of difficulty. (2) Other subjects may be dealt with the use of technologies. (3) Reducing less important topics from the syllabus of subjects (4) Emphasis to be given for project works
- Rural Government School Teacher, Gondia ”

TEACHER EDUCATORS

Highlights: Teacher educators (TE) have adequate access to smartphones, electricity, internet connection but only half of them have access to the laptops. Students have relatively good access to smartphones but not to Laptops. Most are concerned about their family's safety and students losing touch with the subject. They preferred online lectures and courses for learning and sought support for preparing teaching learning resources.

Respondent profile: 96 Teacher Educators: 15 English, 12 Mathematics, 25 Science, 1 All subjects, 6 Other languages, 6 Social Science, 31: Other **Type of institution:** Government: 63%; Private: 26%; Aided: 12% * **Gender :** 49% men and 51% women * **Age :** 51-65 years: 40%; 36-50 years: 45%; 18-35 years: 16% * **Education Qualifications:** Highest Education Qualifications: MPhil PhD: 42%; Post Graduation: 55%; Graduation: 2%; Senior Secondary:1%* **States:** Madhya Pradesh: 30%; Maharashtra: 15%; Mizoram: 11%;Telangana:8%; Goa: 6%; Others:30% (Andhra Pradesh, Delhi, Karnataka, Gujarat, Bihar, Haryana, Rajasthan, Puducherry, West Bengal, Tamil Nadu, Uttarakhand)

1. Context

Device: Smartphone: 96% (96% of men and 96% of women); Laptop: 56% (47% of men and 65 % of women). **Electricity:** 97% have stable electricity used to charge devices. 8% TEs have power cuts for longer than 4-5 hours. **Internet:** 79% have a good internet connection on which they can view a YouTube video (without much interruption). 68% have more than 1GB data limit per day (60% of male, 75% of females). **Online presence:** 91% report spending 2 hours or more online including 38% spending more

than 4 hours (94% of men, 88% of women). **Online activities:** Reading news: 39%; watching educational videos: 66%; social media: 48%; online courses: 66%; Conducting online classes: 59%; Creating resources and content: 44%.

2. Teachers' assessment of their students' contexts

Access to smartphone: 'Most students have': 55% (48% of govt., 72% of private); 'some students have': 42% (50% of govt., 28% of private); 'none or hardly any have': 2% (2% of govt., none of private). **Access to Laptop:** 'Most students have': 7%; 'some students have': 39%; 'none or hardly any have': 54%. **Stable electricity connection to charge devices:** 'Most have': 62% (60% of govt., 76% of private); 'most have power cuts longer than 4-5 hours per day': 14% (13% of govt., 20% of private); **Good internet connection:** 'Most students will have': 28% (15% of govt. and 56% of private); 'some students will have': 65% (75% of govt. and 40% of private). **Student addiction to digital devices:** 'Most students have': 48%; 'some students have': 35%; 'none or hardly any have': 17%. **Use device for learning for about 2 hours:** 'Most students': 53% (41% of govt. and 71% of private); 'some students': 45% (60% of govt. and 21% of private).

3. Concerns

Overall: Family's safety and well-being: 78%; one's own health: 55%; availability of medicines and essential items: 36% and economic crisis that the country will face: 51%.

Work related: Students will lose touch with the subject: 62%; Need for professional development: 57%; there will be a backlog of syllabus to be covered: 40%; Additional burden for students struggling with the subject: 38%; Inability to concentrate or work according to plan: 20%; Job stability: 23%.

76% of TEs had contacted their students for teaching or assignments, 39% to check on their wellbeing while 43% to motivate them. Only 6 TEs had not contacted their students. 42% of TEs were able to contact most of the students. To contact their students, TEs used WhatsApp/Telegram (54%), Zoom/Skype/Webex (48%) followed by phone calls (38%) and Google Meet (9%)

4. Suggested strategies: Providing access of TLRs from different universities to students enabling online learning with support of online platforms such as ZOOM, Google Meet and Google Classroom. There are only 46% TEs with the training for online teaching.

5. Professional development

98% of TEs mentioned that they would be able to spend 10 hours per week on an average with the range from 1-35 hours. The online video lectures (67%) and online courses/MOOCs (48%) were the preferred means of learning. Preferred topics of study were action Research integrated with pedagogy of different domains using ICT, creating teaching learning resources by mapping curriculum, digital assessment.