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Version 1

Key Contributors



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Disclaimer

We have made every effort to ensure that the information provided in this case study is correct and complete as of March 2021. All the numbers stated in this playbook are state reported. Due to limitations of our data collection, we do not claim exhaustive coverage of states' COVID-19 response programmes related to education. No part of this study should be considered an official position of the Government of India, respective state governments or their allied agencies and departments. TicTacLearn is an initiative supported by Central Square Foundation (CSF).

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Introduction

Schooling is a universal experience and is the most common means by which societies prepare their children for the future. In March 2020, the COVID-19 pandemic forced nearly 1.5 million schools in India to shut down for an indefinite period. With in-school learning no longer an option, nearly 250 million students faced the loss of learning leading to widened grade-level inequalities. Due to indefinite school closures, home learning via digital tools became the only way forward. But the government machinery was unprepared for such a sudden shift, making implementing and scaling e-learning solutions a major challenge.

To avoid any learning loss and promote digital/ e-learning, the Ministry of Education (MoE) <u>shared</u> various free of cost, e-learning platforms, such as the National Programme on Technology Enhanced Learning, Study Web for Active Young Aspiring Minds (SWAYAM), e-Pathshala, Digital Infrastructure for Knowledge Sharing Application (DIKSHA), SWAYAM Prabha, etc.

Over the last year, traditional classroom-based teaching models had to quickly adapt to educational technology (EdTech) enabled models, exposing teachers and students to new innovative educational methodologies. Several programs were launched to help continue student learning at home with enough resources to avoid any further learning loss. These programs were designed and implemented by senior education department officials with the help of partners like Samagra, Boston Consulting Group and Leadership for Equity.

In this playbook, we study the home learning initiatives of seven states, identifying key learnings and implementation challenges from these case studies and highlighting the solutions developed for the same. The best practices identified in this guidebook can be replicated for further developing and implementing home learning programs in India.

As part of our analysis, we have generated evidence on the extent to which home learning resources are reaching children, and their impact on student engagement and learning. These findings can also be used while planning digital education for states in the future. The programs covered under this report are:



Solution Framework 5-step Framework for Implementing a Home Learning Program



1. Content Curation

Finding and organizing the best available open-source content for a particular concept/ topic across grades and subjects



2. Content Dissemination

Utilizing high-tech, low-tech and no-tech interventions to share content with teachers, parents and students



3. Content Engagement

Taking measures to ensure sustained content usage and student engagement



4. Assessment & Testing

Undertaking periodic assessment to gauge conceptual understanding and optimize student learning



5. Tracking & Monitoring

Keeping regular track of data being collected to measure impact, and looping in the feedback in all on-ground initiatives

Content Curation





Resources Identification

"Curating" already available content and "Creating" new concepts



Calendar Creation

Creating a year-long calendar depicting when and what will be taught and tested



Content Review

Reviewing content for state curriculum alignment, conceptual clarity, pedagogical correctness, etc.

The first phase of any home learning program is to curate content which

is mapped to concepts or competencies, as per state specified syllabus and learning outcomes. This exercise can be based on various free digital e-learning platforms provided by the MoE or through content partners like TicTacLearn, Avanti, Pratham, etc. (see list of content partners in Appendix), providing open-source content that covers most of the state/ national syllabus and is easy to use for both teachers and students. These videos are also pedagogically sound and created with the Indian context in mind. Content providers like TicTacLearn have developed content in 6 languages! <u>The 2019 World Bank report</u> suggests that content developed in local languages aid better understanding for students, therefore, providing greater uptake by teachers and students.





Curation vs Creation

At times, open-source content may fail to cater to all student and teacher needs. Moreover, it was observed that there was a general lack of availability of content for subjects other than Maths and Science. Non-availability of content in local languages and lack of technically sound content with optimal picture and sound quality became some of the major roadblocks faced by the states.

To solve some of these availability and contextualization challenges, state officials and teachers began creating their own content. While this gave rise to more relevant content, the accompanying resource and time commitment had to be further planned.



For example, in Jharkhand, more importance was given to locally created/ curated videos to bring better alignment to textbooks and higher relatability. Content for self learning became more prominent as it could be used independently by students and teachers. The content creation process became more decentralized and teachers created

contextual content for their students. Additional videos were also created by the department to guide teachers on how to teach particular competencies.



In Himachal Pradesh, videos were created by the State Resources Groups (SRGs, a group of teachers selected for curating and creating content) for each class. Daily worksheets were also created on the basis of the videos shared for each class.



In Rajasthan, <u>'e-Kaksha' content</u>, which was developed specifically for the state, began gaining momentum with teachers. Madhya Pradesh also realized the need for more effective content around Teacher Professional Development, which led to the development of the CM-RISE teacher training program. This initiative was jointly created by the education department and Peepul.



Content Curation: Best Practices



Content should be mapped to concepts or competencies, as per state specified syllabus or learning outcomes



Videos should be student facing (addressing the student), free of conceptual errors and technically sound with optimum picture and sound quality



Videos should convey the ideas and concepts to students without external intervention, and should be pedagogically sound as well as engaging



Videos should not be more than 5-7 minutes for grades 1-8; and 15-20 minutes for higher grades



Content should be relatable for students—the vocabulary, accent and examples should be familiar to them. Content in local languages often prove to be useful



For grades 1-8, animated and vibrant videos are preferred, while it is important to convey more information with enough emphasis on problem-solving for higher grade students



Content should be approved by state teachers



In Uttar Pradesh, the state mapped digital content provided by Rocket Learning to learning outcomes given in Aadharshila Kriyanvayan Sandarshika. This not only ensured that students achieved the basic learning objectives but also gave a sense of syllabus completion. The state, with the help of Rocket Learning, utilized its existing resources and digitized them. Adharshila Kriyanvayan Sandarshika has lesson plans for literacy and numeracy for grades 1-3, calendarized for the year to achieve the desired learning outcomes. Rocket Learning leveraged activities/ teaching learning materials listed in these lesson plans and created digital content around it. For example, they used a poster given in lesson plans to create a small video.



In Haryana, the need for students' mental well-being and overall development was raised, and hence, the focus shifted to curating extra-curricular content along with academic content.

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In Madhya Pradesh, as the academic session approached an end, more exam-oriented content was curated, like worksheets with previous years' questions for class 10, important questions, short and long answer type questions, etc.

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In Maharashtra, an academic learning calendar was curated with the help of subject department officials at SCERT and selected teachers. The calendar had week-wise learning content to be accessed by teachers and students along with activities based on the topic of content.

Key Challenges



- General lack of availability of content for subjects other than Maths and Science
- Non-availability of content in local languages and lack of technically sound content with optimal picture and sound quality

Key Learnings

- **1** Give equal importance to:
 - Student-facing & teacher-facing content
 - Remedial content
- 2 Include content promoting mental well-being to help students
- struggling with prolonged isolation after lockdown
- **3** Account for holidays, exams, remediation and limited teacher-student interaction time while **preparing calendar**
- 4 Ensure videos are dissemination medium-friendly shorter videos are more suited for WhatsApp, while longer ones better for TV broadcast
- **5** Content should be relatable to students with the vocabulary, accent and examples being familiar to them. Content in local languages is preferable (e.g., TicTacLearn)

Way Forward

Curating or creating content which is **mapped to concepts or competencies** is an indispensable component of any successful learning program.



Sharing structured and state curriculum-aligned content for pre-class preparation, post-class revision, pre-exam recap, etc., will empower students to take charge of their learning process and enable teachers to devote their limited classroom time to identifying gaps in student understanding and devising classroom strategies. States investing in this process will find this useful even when the schools are back to functioning physically.

Content Dissemination

2



Identifying Media

Identifying available media and their reach like WhatsApp, phone, TV, radio, etc.



Communication

Setting up communication channels to ensure resources reach all users



Accountability

Setting accountability at every stage for ensuring timely communication

Few households in India have access to internet enabled devices that can access e-learning resources. Coupled with a general gap in technology access, this often leads to a gap in user uptake and engagement. The technological divide is even more prominent if we consider the number of devices, children per household, and the affordability, quality and reliability of internet service in households with multiple learners in <u>different grades</u>. Lack of digital literacy among parents and students is a further challenge, especially for younger children who completely depend on their parents for accessing digital resources.



Before we evaluate how our Indian states responded to solving these challenges, it might be beneficial to look at how other countries have responded to the problem at hand.



In Italy and Lithuania, the technological access issues were resolved by providing devices, while in Kenya the state worked on providing free WiFi. In countries like Jamaica, Jordan, Rwanda and South Africa the state worked to provide zero-rating access¹ to e-learning sites where traffic from specific applications would not be counted against the 'cap' in an internet user's monthly access plan.

In India, states deployed a combination of high-tech, low-tech and no-tech interventions to continue home learning initiatives across all sections of society. The content dissemination efforts of various states followed a three-fold strategy:



¹ Alternatively, it can mean providing Internet access without financial cost under certain conditions, such as by permitting access to only certain websites.

Fig. 2: Range of Technologies Adopted by States in Their Educational Responses

	High tech		L	.ow tech		No tech
PRO: Allow engagemen other data tracking	t and CON: Not accessible by many; Some digital literacy required	PRO: connect Low of	Can be utiliz cted to inter r no digital l	zed at places not net; literacy required	CON: No eng	agement tracking
WhatsApp	Web content and apps	Mobile telep	ohone	т	Radio	Printed material
	e			R		
Smartphone	Internet enabled computer	Internet enabled feature phone	Feature phone			

Technologies Adopted by States in Their Educational Responses



WhatsApp played an important role in many states' **COVID response strategy**. Content shared on WhatsApp was found to have better uptake than website portals or mobile applications since many parents/ students were already on the platform and familiar with its usage.

In Maharashtra, daily learning content library was hosted on DIKSHA and shared with students and teachers via WhatsApp continuously.





The education departments of states like Uttar Pradesh, Maharashtra and Himachal Pradesh had operational WhatsApp groups that were expanded to create a multi-layered WhatsApp cascade, where the content would flow from state department > district level > block level > School Headmaster/ Principal > Teachers > Parents (students).





The messages consist of video and/ or worksheet links as per the day/ week's schedule. Note: The exact structure for flow of messages may vary from state to state



Fig. 4: WhatsApp as Teaching Tool



a feeling of a time table, like 'हर दिन सुबह दस से बारह, घर पर चले स्कूल हमारा' in Haryana and 'समय दस से बारह वाला, हर घर बने पाठशाला' in Himachal Pradesh. During the lockdown period parents were able to give phones to students for accessing content through WhatsApp, but student access to mobile phones became challenging when parents resumed work. To solve this, teachers set a fixed time for sharing content and conducting online classes. This helped parents to schedule their work and set aside some time for students to use their phones.



Fig. 5: Percentage of Students Reached via Whatsapp

All percentages are taken wrt the state's enrollment numbers; all numbers are state-reported.



In addition to building a WhatsApp based digital communication infrastructure, state-specific websites and mobile applications were also launched to house e-learning content, e.g. <u>hargharpathshala.in</u> in Himachal Pradesh. Through these websites and mobile apps, students, parents and teachers were able to access e-learning content, based on their daily, weekly and monthly schedules.





Mobile (without Internet Access)

In areas where internet enabled devices were not available for students, state governments turned to basic mobile phone pathways.



In Jharkhand, teachers were asked to call 10 students daily and converse with them about the content of that day and their mental well-being. Teachers and headmasters regularly called parents to create awareness and assist in resolving technological challenges faced by parents.

In Rajasthan too, similar teacher calls were conducted, leading to their sensitization towards campaign initiatives.



In Maharashtra, a number was given to teachers and students on which they could give a missed call, post which they received a call through the Interactive Voice Response (IVR) and a story by <u>Pratham</u> was narrated for free.



Since a large number of Indian households have access to television, it soon became a major means for delivering audiovisual content. Videos from TicTacLearn and *Gali Gali Sim Sim* were stitched together to create episodes, which aired on Doordarshan at a fixed time every day.

> In Uttar Pradesh, a 4-hour slot per day was purchased by the Basic Shiksha department from Prasar Bharti. The available time slot (9 am to 1 pm) was divided into 8 slots of 30 minutes each to ensure that all grades were given equal importance.



In Maharashtra, TV sets from schools were placed in the homes of School Management Committee members, where students from nearby houses could come and watch videos of their teachers with lessons, in a pendrive.



Parents who had TV sets at home also invited students from nearby houses. State level initiatives for TV-based programming were launched in partnership with

Maharashtra Knowledge Corporation Limited for the *Tili Mili* program and with UNICEF for *Gali Gali Sim Sim*.

Fig. 6: Percentage of Students Reached via TV in Rajasthan and Madhya Pradesh



All percentages are taken wrt the state's enrollment numbers; and are state-reported.

Notes: TV & radio viewership numbers are difficult to measure, hence we depict here the 'percentage of students reached'; in RAJ & MP, the number of students with TVs at home was collected/ extrapolated during admissions or via IVR calls; in MP, TV programs catered to grades 9-12, hence the percentage is taken wrt the state's 9-12 enrollment numbers



Radio is believed to have extensive coverage across India, with government-owned All India Radio (AIR) claiming near-universal reach. To reach media and/ or internet dark areas, states decided to use radio to reach students and continue home learning.

Madhya Pradesh launched a daily 1.5-hour radio program for grades 1-8 — one hour in the morning for academic inputs and half hour in the evening for co-curricular and social-emotional learning content.

In Uttar Pradesh, a 30-minute slot per day was purchased on Akashvani, for playing 'English <u>Seekho</u>' audios from UNICEF on the radio. In Maharashtra, few districts placed loudspeakers in the community temple and other public spaces, for narrating stories and rhymes or students.



However, radio and TV programs do not offer many opportunities for student practice and feedback. Hence, in places where radio and TV are the main remote learning channels, they would need to be supplemented with other media (like printed workbooks, regular interaction with teachers via SMS, phone, WhatsApp, etc.).



Printed Learning Material



For students without access to any of the above, engagement on a regular basis became difficult. For this, distribution of printed learning materials like textbooks, worksheets, calendars, etc., became a necessity.

घर-घर किताबें बांटने वाला हिमाचल पहला राज्य

मानव संसाधन मंत्रालय ने सराहा पयास. शिक्षा मंत्री ने भी शिक्षा बोर्ड की कल छात्रों से लाइव बात करेंगे शिक्षा मंत्री

In Himachal Pradesh, districts undertook campaigns to distribute printed notes and worksheets to students. Wherever possible, It is important to supplement printed material with regular interaction with teachers.

It was also imperative to train parents on how to assist students to engage with the content from the printed material.

Key Learnings

- 1 Survey students' accessibility and preference for different media
-
- **2** Target multiple media for maximum reach
- Create cascaded channels for smooth flow of information, e.g., from central team (state department) > district > block > teachers > parents (students)
- 4 Appoint mentors at each level to overlook the process and assist teachers, parents and students with digital and other challenges

Way Forward

As states continue to think about and implement at-home learning solutions, filling this digital divide in the country continues to remain a priority.



Create a Range of High-tech, Low-tech and No Tech Solutions

While devising any home-based learning programs, it is important to account for the level of technology penetration, and identify and address infrastructural incapacities at the student level. One can then create a composite of high-tech, low-tech and no tech solutions based on the interventions outlined above.



Focus on Content Engagement

It is important to note that while content dissemination is important, it is indeed a small part of any home learning program. Further, we have to work on ensuring student engagement with the content being shared. This can happen either through low-tech interventions like IVR or direct calls to students or through online assessment or quizzes. In either case, for any home learning program to succeed, it is important to measure content engagement and use this information to create a feedback loop and improve content curation and creation.

Content Engagement





Generating a 'Buzz'

Generate a 'buzz' to draw people's attention and interest to the program



Stakeholder Engagement & Motivation

Keep the momentum high by engaging all levels of stakeholders, i.e., teachers & central team members, students, community members & parents



Tracking Engagement

Track engagement regularly and incorporate feedback into on-field initiatives

Sustained usage by students is important if we want to move towards improved learning outcomes. Hence, in addition to curation and dissemination, it is also

critical to focus on engagement. It is observed that many remote learning programs do not always pay enough attention to instructional pace; pathways for student practice; checks for understanding and feedback loops to support home learning. However, such learnings are now leading to effective programs that couple practice with timely and meaningful feedback.



Generating a 'Buzz': Political and Administrative Nudges

For successful implementation of any program, it is important to build administrative momentum starting from the topmost officials of the state. In all successfully implemented home learning programs, administrative nudges and the involvement of higher officials have played a significant role in spreading awareness and increasing the uptake.

In Madhya Pradesh, Principal Secretary, Commissioner, RSK and Commissioner of Public Instruction (CPI) jointly undertook awareness programs, which specifically addressed parents, to ensure parental support. The launch of the DigiLEP program in the state was led by the Chief Minister in April 2020.







In Himachal Pradesh, <u>the Chief Minister and the</u> <u>Education Minister led the launch</u> and execution of the 'Har Ghar Pathshala' program, resulting in active stakeholder involvement at all levels.

The campaign was also promoted through newspapers, radio jingles and SMS blasts to parents. As part of the campaign, the Education Minister interacted directly with parents, students and teachers through Zoom.

The program was livecast on YouTube, with over 4,000 viewers joining in. The video has since been viewed over 56,000 times. A similar intervention was executed in the state of Haryana with a <u>launch video</u> created specifically for spreading the word about the '*Ghar se Padao*' program.



In Rajasthan, tweets and video messages were shared regularly by the Education Minister on campaign initiatives. In Uttar Pradesh, the Director General of School Education (DGSE) conducted multiple video calls with mentors and teachers to motivate them to engage students. He also personally conducted training to push for the awareness and understanding of learning outcomes.



In Jharkhand, all program related portals and apps were launched by the Chief Minister himself and the Education Minister led webinars with officials.



Role of Community

In areas where access to technology is sparse and not all homes have equal access to internet enabled devices, it becomes critical to leverage community resources to enable continued learning.



In Haryana, the state invited community members (parents, siblings, neighbours, extended family, etc.) as 'Shiksha Mitr' and requested them to give their phones to students for learning for a dedicated time daily. Thirteen lakh Shiksha Mitr have registered so far, 76% of whom are parents.

In Maharashtra, some districts started a 'Donate a Device' campaign, in which the district officials urged people to donate their used smart devices (phones, tablets, laptops, etc.) to students. In Nashik, more than 4,500 devices were donated to students of government schools.





Support and engagement from family and community are crucial for best home learning outcomes

In Maharashtra, all programs were launched virtually by the Education Minister. The idea of '*Galli Mitra*' in particular became popular, where graduates or 11th-12th graders spared their time to teach primary school students in a community space or at a student's home, keeping all COVID precautions in mind.



Role of Parental Engagement

In scenarios where teachers have very limited interaction with students, home learning imposes additional demands on parents. However, most parents are not equipped to manage home-based learning. Key barriers are resource constraints, education, language, household, work obligations, etc.





To enhance parental engagement, **Himachal Pradesh** introduced ePTMs for which detailed <u>guidelines</u> were shared with all teachers. As part of this initiative, teachers engaged parents through calls, WhatsApp and other means to guide them to help their children continue at-home learning, addressing their concerns around e-learning programs, daily assignments and coping with student anxiety. In the <u>two ePTMs</u> conducted, more than 700,000 and 600,000 parents participated, respectively.

In Madhya Pradesh, school level PTMs were conducted in online and offline modes in December 2020 and February 2021, post final examinations.



Providing due recognition to teachers, mentors and officials has shown to help sustain momentum in program implementation. In Haryana, state and district level <u>appreciation posts</u> were shared for individuals from high performing blocks.

In Himachal Pradesh, State Resource Groups were recognized and given certificates for their contribution by the Education Minister.





In Madhya Pradesh, 'DigiChampion' certificates were provided to teachers and principals showing exceptional efforts to ensure student learning.

In Haryana, an incentive system was also developed using data from *Avsar* app. Launched in October 2020, the *Avsar* app is used to streamline data monitoring for home learning. Within one month of its launch, 12% students and 65% teachers had registered on the app. Top performers in the weekly quiz, Higher Order Thinking Skills (HOTS), questions and daily surveys were recognized with personalized e-certificates at a block level each month. Similarly, high performers were recognized at the district and state levels each month and awarded prizes by the District Education Officer and the Director of Secondary Education, respectively.







In Maharashtra, daily extra curricular activities in the form of videos and activities for social and emotional well-being of students were shared under the *Abhyasmala* program. <u>Virtual summer camps</u> were hosted on DIKSHA, covering topics such as theatre, music, origami, drawing, science experiments, importance of waste management, etc. Videos celebrating eco-friendly *Ganeshotsav* were shared with students, which educated them on making eco-friendly <u>Lord Ganesha idols</u>.

In Himachal Pradesh, some extracurricular activities were shared with students every week to perform at home, under a program called '<u>Masti ki Pathshala</u>'. Students were encouraged to share photos with teachers while working on them, and a flurry of such photos on WhatsApp encouraged other students to follow the same and break the monotony in their daily routines. Some of these activities were made competitive and high performers were recognized.



Quiz data can be used to signify student engagement and learning. In Haryana and Jharkhand, custom links (for example, <u>bitly links</u>) were sent to track the number of clicks and website traffic was regularly monitored.



Haryana conducted quizzes for grades 5-12 via Google Forms and Open Data Kit (ODK)² platform. Fifty-three percent of elementary students and 48% of secondary students regularly participated in these quizzes.

In Himachal Pradesh, Madhya Pradesh and Rajasthan, weekly quizzes were created in a game-like format on WhatsApp with visuals to encourage engagement and allow students to become familiar with an easy to use interface. For instance, in Rajasthan, every Saturday students participated in WhatsApp quizzes based on the content sent throughout the week. Students were asked 6-10 Multiple Choice Questions and they were provided with the answer key and revision videos for practice after class. States used 'quiz attempts' as a proxy for measuring engagement. Weekly quizzes were shared to encourage engagement.



Fig 7: Percentage of Students Attempting Quizzes per Week across States

All percentages are taken wrt the state's enrollment numbers. All numbers are state-reported.

Note: Quizzes/ assessments were not conducted in UP, and therefore the above graph consists of data from 6 states

2 ODK is an open source tool used to collect and manage data, replacing the normal survey techniques. ODK provides an alternative to be employed in resource-constrained environments, allowing offline data collection with mobile devices even in remote areas, without an internet connection. The submission of the data to a server can be performed when internet connectivity is available. It allows communities to aggregate data with full control over the collected data and the servers where this data is stored.

Key Learnings

- 1 Involve senior authorities to develop interest & faith in the program
- 2 Incentivize stakeholders with certificates, awards and recognition on
 - social media platforms, etc.
- **3** Regular administrative nudges to all stakeholders, such as phone calls to track usage



Way Forward

Build Necessary Salience

As states continue to focus on developing home learning programs, it is critical to improve engagement at the program, community, parental and student levels. Before launching any state critical program it is important to build necessary salience at all levels of administration. Coupled with a strong political push, this can significantly help increase program uptake and improve engagement.



Focus on Parental Engagement in Student Learning

In areas where students are unable to access guided learning content, the role of community and parents becomes all the more critical. All home learning programs should have dedicated interventions that are focused on improving parental engagement in student learning. In areas where there is low levels of adult literacy, community-based interventions can be explored. Given that home learning programs are significant to the new normal, it is important to find ways to sustain engagement. This can be done by creating a system that recognizes high performing administrators, teachers, and students. As students continue to learn in a home-based environment, the role of assessments in tracking student learning becomes all the more critical. We will explore this in the following section.

Assessment & Testing





Question Bank

Creation of assessments bank/ outsourcing the creation to third-party vendors aligned to the broad points of 'what to assess' and 'how to assess'



Timeline

Setting up timelines for conducting assessments at formative or summative levels using applications/ Google forms



Tracking/ Setting up Dashboards

Tracking data regularly to report the progress over time and drive specific interventions

The primary purpose of any assessment is to optimize student learning in a way that helps recognize and foster the unique capabilities of each

student. The role of assessment becomes even more critical in a home learning environment where the teacher is unable to gauge student understanding through the soft cues provided by the student. Appropriately designed learning assessments can have a far-reaching impact on informing future interventions. Assessment can help identify gaps in student learning and inform provision of appropriate technical assistance and training through learning enhancement programs.





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DIGI SCHOOL

WHATSAPP QUIZ REPORT FOR SCHOOL HEADS

tegister yourself on the WhatsApp quiz chatbot

to know

articipation of students in your school in the last 4 weeks

rformance of students

Send WhatsApp message "**Hello**" on **859**5¹¹¹ register

DOWNLOAD THE REPORT EVERY WEEK

of every class and subject

States onboarded some content partners like Avanti and ConveGenius, who had a repository of structured, curriculum mapped quizzes. With the combined effort of content partners and teachers, states started sending out weekly quizzes.



Maharashtra, Himachal Pradesh and Madhya Pradesh partnered with ConveGenius to launch a WhatsApp-based assessment chatbot.

In Rajasthan and Jharkhand, the education department used WhatsApp to share quizzes created on Google forms every week, but soon moved to the ConveGenius approach. The platform tracks district and block level results, and the planning for collecting student-level data is underway. This WhatsApp-based approach has helped in scaling up.

In Haryana alone, more than 320,000 elementary students and over 500,000 secondary students participated in the weekly quiz on an average. Similarly in Himachal Pradesh, over 200,000 elementary students and more than 100,000 secondary students participated in the weekly quiz on an average.

Feedback and Remedial Support

While conducting assessments to understand student progression is important, using assessment data to provide informed feedback and remediation support is critical. Using assessments not merely for promoting students but using them to inform and improve student learning will help improve the robustness of any home learning program.





Supported by ConveGenius, Himachal Pradesh and Madhya Pradesh incorporated a remedial mechanism in their assessments. After completing their quiz on the <u>WhatsApp chatbot</u>, students were given their score, followed by an answer key. In case a student scored less than 70%, the bot shared the links to remedial content. While in Maharashtra, after completing a quiz students were provided competency aligned learning content hosted on DIKSHA.

Summative and Formative Assessments

Himachal Pradesh also conducted Summative Assessments and Formative Assessments for grades 1-8, with teachers preparing question



papers and evaluating the answer sheets according to the guidelines provided by the state, in a decentralized manner. For both elementary and secondary grades, data was submitted through the 'e*Samwad*' application, and data was analyzed and visualized on dashboards.



Key Learnings

- Leverage a widely-used platform and format, such as WhatsApp/ SMS chatbot, Google forms
- 2 Set aside some classroom time for pre-test revision and post-test follow up
- **3** Regularly provide students with their performance reports & improvement plan



Way Forward

As states continue to develop assessments suited for a home learning environment, it is important to pre-define the learning outcomes and to use it to inform what to assess and how to assess it. Conducting fair and unbiased assessments is a challenging area for all home learning programs.



The easiest way to reduce false reporting is to make assessments a low stake for students. If assessments are not used solely for promoting students, the incentive to cheat and misreport will go down.



As validity of data being collected improves, it can be used to track student performance and to inform further policy action.

5

Tracking & Monitoring



Identification of Metrics

Identify a list of metrics on the basis of desired program outcomes



Measurement of Outcomes

Identify tools to collect & measure metrics, like website dashboard and mobile app



Analysis and Feedback

Analyze data to make informed decisions at all stakeholders levels

Major roadblock that all surveyed states faced lay in collecting reliable

data - for instance, not much data is available for TV viewership and radio shows. Due to this, we often have to rely on data reported by teachers or parents through surveys, Google forms, etc. Moreover, the website analytics don't differentiate between different users like teachers or students and using third-party or open source videos don't allow for the tracking of viewership data. WhatsApp responses could also result in validation issues due to incorrect NIC code entry by the user (NIC = National Informatics Centre; NIC code is a unique identifier code). Due to the lack of centralized content and quiz hosting platforms paired with data dashboards, post quiz analysis is completely manual and requires high time investment.





Tracking Student Data



To track student data better, Haryana launched Avsar, a mobile app created by Esperanza. It hosted all academic content, surveys, quizzes and assessments. The app also tracked viewership of home learning content being telecast on television.



In order to streamline collection and analysis of data by mentors and teachers, the Samiksha app was developed. It was used to record academic observations during school/ monitoring visits, daily recording of temperature, student attendance and reporting of COVID cases. It was also used to observe class Whatsapp groups, call teachers and Shiksha Mitr. Since October 2020, over 23,500 calls have been made by teachers and the observations recorded on the Saksham Samiksha app.

In Himachal Pradesh, all teachers, principals and block officers were mandated to fill forms to report their work daily. Since participation in quizzes can be used as a proxy for student engagement data, the same was stored and regularly monitored. District, block and grade-wise student participation in quizzes were noted daily, enabling the state to take appropriate actions and push for better uptake.

Ale and Ale an Alter and a second In Maharashtra, custom links (bitly links) were created to track the number of clicks on daily content circulated through WhatsApp. Reports were created using data collected from DIKSHA, and shared with district leadership for increasing content reach. Dashboards were also created for the Swadhyay initiative (undertaken on the ConveGenius platform), to understand block, district and state level student learning outcomes for Maths, Science, Marathi and Urdu. All data regarding student viewership was collected and stored on the state-specific dashboard.

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Key Learnings

- 1 Organizing teacher training sessions and enabling them to interpret data and make informed choices
- 2 Incorporating feedback from data analysis to on-ground initiatives

Way Forward



Tracking and monitoring of student learning outcomes can provide useful insights for remedial teaching, thereby influencing the quality of what is learnt. However, for this to happen, adequate training and professional support should be given to teachers and officials on how to use and interpret the information.

Conclusion

Quality education is education that works for every child and enables all children to achieve their full potential. Learners of different ages and academic levels learn differently with remote learning. Further, different mediums could be better suited for learners of different ages. Two such examples are provided below:



Research supports the benefits of educational programs on television for younger children, but the evidence is less clear for older learners³.



On the other hand, many younger learners do not have the necessary level of digital literacy and skills that older learners have, and need parental help.

The surveyed programs have been successful in mobilizing all stakeholders as well as building and sustaining momentum towards home learning. There has been a huge shift in using online media to teach, learn and even hold meetings. The states' response to COVID highlights the importance of digital learning.

Persistent Challenges



3 The relationship between television exposure and children's cognition and behaviour: A systematic review, Kostyrka-Allchorne, K and Cooper, NR and Simpson, A, 2017





Possible Solutions

Digital Infrastructure

To solve these challenges we need to first invest in **digital infrastructure** to improve access. Some factors form a critical barrier to learner participation, like inequities in access to technology (in terms of connectivity, affordability, reliability, quality). The aim should be to ensure equal and adequate access to digital infrastructure. To successfully leverage all the benefits of creating an effective home learning environment, we must focus on policies that bridge the digital divide.

Engagement

E-learning platforms cannot replicate the various dialects, varied contexts and different experiences that are brought together by physical classrooms. In addition to instructional and animated videos, we should look for more engaging and interactive formats such as game-based learning and personalized adaptive learning. Such e-learning practices identify and cater to different learning levels within the classroom. There is also a pressing need to improve parental involvement in home-based learning programs. Parents need to be trained on techniques to increase student engagement with home-based learning resources.



Train the Trainers

Training of educators with more emphasis on ICT-related training in addition to pedagogical training and support. Technology is effective for learning when it complements and enables educators. <u>A study by the World</u> <u>Bank Group in January 2019</u> shows that educators are effective when they are prepared, supported and motivated⁴. Teaching remotely is not the same as teaching in a classroom and requires substantial adjustments for teachers to direct, engage and support children with home learning. In a 2020 survey of 98 countries conducted by the Organisation for Economic Co-operation and Development (OECD), providing professional support and advice to educators was perceived as the second most critical educational priority, after ensuring necessary infrastructure availability⁵.

4 Successful Teachers, Successful Students: Recruiting and Supporting Society's Most Crucial Profession, Tara Béteille and David K. Evans 5 A framework to guide an education response to the COVID-19, Fernando M. Reimers, Andreas Schleicher





When schools reopen, it will be important to understand student learning levels and identify the level

of learning loss. Programs will need to be designed to realign students and ensure learning recovery. Investment made to build home learning content will help reduce the learning loss. Resources can also be used to mitigate the learning gap by teachers using this content to create personalized learning modules for lagging students. While home learning solutions will never be able to substitute classroom learning experiences, they can be used as complementary learning resources to strengthen student learning. Moving forward, learnings from this report will help all states design and implement such home learning programs as we enter a new era of adaptive education.

Appendix List of Content Partners

Content Creators

1. TicTacLearn (CS	F)	23.	TFI (Firki)
2. Avanti Sankalp		24.	Peepul
3. Khan Academy I	ndia	25.	Vedantu
4. Pratham Founda	tion	26.	Bright Tutee
5. Galli galli sim sim	ı (Sesame Street)	27.	MSDF
6. Toon masti (EY F	oundation)	28.	Toppr
7. English Seekho (U	JNICEF, Audio-based content)	29.	SARD
8. Akanksha		30.	CENTA
9. eKaksha (Missior	n Gyan)	31.	Planet Read - Bookbox Hindi
10. Akshara Foundat	ion	32.	Ratta ya Samajh (FSG)
11. BodhaGuru		33.	Splendid Moms
12. Doubtnut		34.	Meghshala
13. Eckovation		35.	Kids colouring fun
14. Piramal Foundati	on	36.	Goyal Brother Prakashan
15. The Education A	lliance	37• .	Joyful Learning
16. The Teacher App	•	38.	Global Shiksha
17. Top Parent		39.	4Pillars
18. Chalklit		40.	Unacademy
19. Pebbles		4I .	iPathshala
20. LLF		42.	Tata Class Edge - Youtube
21. NCERT official		43.	DigiLEP Haryana
22. Peepul (TPD)		44.	Only for you

4	5. Learn Fatafat	63. Ramakrishna Mission
4	.6. Intuitive Ways	64. SRF Foundation
4	.7. Bharat Learn Student Video	65. Azim Premji Foundation
4	8. Educational Initiatives	66. Eklavya Foundation
4	9. Rajasthan SCERT	67. Agastya Foundation
59	o. Akanksha	68. Rotary India
51	1. Akshara	69. Educate Girls
52	2. Odia - Odisha Knowledge Corporation Limited	70. NEG-FIRE
53	3. Odia - Odia Medium Text Book Videos -	71. Jigyasa
	YouTube	72. Bharat Learn
5.	4. Examrace Hindi	73. Digital Sakshar,
5	5. Cattrack Kids	74. Jnana Prabodhini
50	6. DSH Online	75. Leap for Word
52	7. Kumari Jaya	76. BCPT
5	8. Room to Read	77. Funtoot
5	9. Study91	78. Sundaram E Class
6	60. Simple Educational Foundation (SEF)	79. Kompkin
6	1. Blue Print Digital	
6	2. Marico - Lead for word - English Literacy	
	Program	

Extra-curricular Content Partners

I.	Waste no More (Xynteo)	3.	Arvind Gupta Toys
2.	Sankram Music	4.	Pratham Digi

Content Dissemination

Ι.	ConveGenius	5.	Aakashvani
2.	Esperanza	6.	CSM
3.	Rocket Learning	7.	Learnytics
4.	Doordarshan		

Assessments

ConveGenius

Tracking & Monitoring

ConveGenius

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