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Bridging the Technological Gap in Education in Rural Uttar Pradesh- Best Practices & Challenges

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Introduction

"Sir, you have been a guiding light for me throughout these months... Wherever I will reach in my life, I will always remember the opportunities that you have given me..."

- Student's word at the End-of-Year Achievement celebration.

These were the words of one of the students of Project Enable, who was attending the End-of-Year Achievement celebration being conducted virtually. She was standing in a dark room holding a candle in one hand and a smartphone given to her by the Give Back to Community (GBTC) Trust. Garima's speech brought tears to the eyes of many of the mentors attending that virtual meeting.

On 23 March 2020, India went into lockdown because of the spreading coronavirus. Every single human was impacted by the pandemic, including children. 250 million children in India were suddenly deprived of schooling overnight (Education in India during COVID-

Image 1: *Virtual End-of-Year Celebration of Achievements*

Source: *Give Back to Community*

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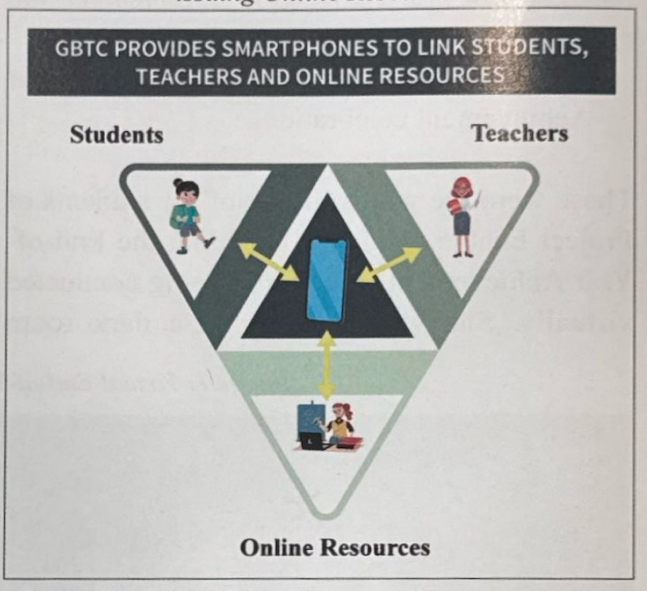
19: Challenges Faced and Solutions for a Post-Pandemic Era By Mr Shekhar Mehta, n.d.). In July 2020, the Ministry of Education announced the Alternative Academic Calendar (AAC) to continue formal education for the academic year 2020-2021 ("India Case Study: Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Asia," 2021).

The purpose of the AAC was to minimise the disruption of teaching and learning caused by the pandemic by moving schools online. As a response to the shift in the education paradigm, learning repositories such as DIKSHA, E-Pathshala, and Swayam were created by the Ministry. The structure of the AAC assumed that every state had established digital ecosystems and every citizen, whether parent, student, or teacher, had access to digital technology, that is the internet, educational apps, along with digital infrastructure, such as smartphones, desktops, laptops, TV, and radio. However, this assumption was flawed because the "India Case Study: Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Asia," (2021) reported that only 32 per cent of the rural population over the age of 12 had access to the internet and only 11 per cent of Indian households had a digital device such as a laptop or tablet, excluding smartphones.

Another survey conducted by Oxfam (India, n.d.) in five states, including Uttar Pradesh, found that nearly 75 per cent of parents faced challenges in supporting their children's online education because of the lack of access to digital technology and infrastructure. They lacked smartphones, had no or poor internet connection, or relied on expensive data. Many students, including meritorious ones from underprivileged families, dropped out of school because of the lack of support and access to resources along with the external pressure to reduce the economic burden of the family, caused due to the pandemic.

On the other side of the desk were the teachers who were required to deliver education as a part of AAC through digital mediums. Lack of training and preparation of teachers had a direct impact on the implementation of the AAC. According to Oxfam (India, n.d.), 84 per cent of teachers reported facing challenges in delivering education online. Two in five teachers reported internet issues, such as poor connection and expensive data. Nearly 80 per cent of teachers in Uttar Pradesh lacked appropriate devices to deliver online education and only 20 per cent reported receiving training in teaching digitally.

Figure 1: *Pictorial Representation of GBTC issuing Online Resources*

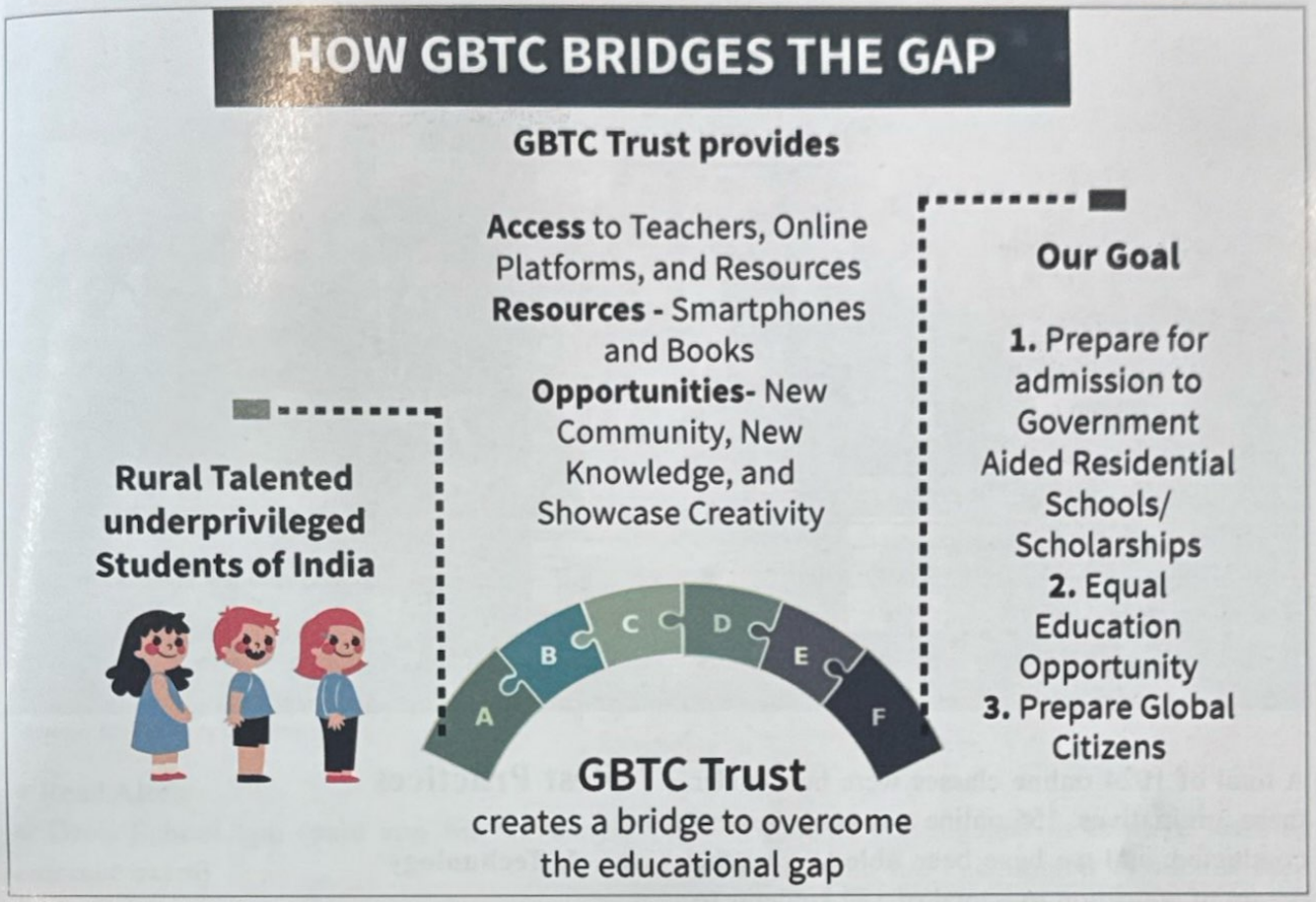


Source: *Give Back to Community*

Project Enable Intervention

The Give Back to Community (GBTC) Trust is a not-for-profit charitable organisation focused on educational empowerment in rural India. The trust started informally in December 2020, mid-pandemic, to support education in rural India. In June 2021, the GBTC Trust initiated a grassroots initiative, named Project Enable, in rural Ayodhya, Uttar Pradesh, India. Its vision was to bridge the educational gap in rural India by supporting meritorious students from low-income families, irrespective of gender, caste, or creed, with technological empowerment.

Figure 2: About the Bridge Gap Policy About the Bridge Gap Policy



Source: Give Back to Community

Goals of GBTC Trust

1. Prepare students to join mainstream government schools and become global citizens.
2. Prepare teachers to deliver education through digital mediums and bring global experiences to their classrooms.

The Trust also has a three-pronged strategy to bridge the education gap in rural India which was to:

1. Provide equal educational opportunities to students by providing access to teachers and online resources through smartphones.
2. Provide professional development opportunities to volunteer mentors through training and research opportunities.
3. Involve parents and raise awareness of the importance of education.

The GBTC Trust's strategy is founded on the belief that a child's education cannot be carried out in isolation. To provide equal educational opportunities to children, educators and parents have to be part of the equation, along with technology.

Since June 2021, the GBTC Trust has launched the following three initiatives in rural India.

1. Project Enlighten
2. Project Super 60
3. Project Super 60+

The aim of these initiatives is to support the government in its efforts to fulfil every Indian child's right to education.

The summary of these three initiatives is given in

Image 2: Project Super 60 Students and Mentors

Source: *Give Back to Community*

Table 1 below. (This data is as of 30 September 2022)

A total of 1024 online classes were held under these 3 initiatives. 155 online assessments were conducted, and we have been able to give the dream of education to a total of 182 students to date. Currently, 31 volunteer mentors (including district resource officers, teachers, and teacher trainees from Basic Shiksha Parishad, Ayodhya, UP) are part of Project Enable.

In the next section, the best practices of Project Enable are discussed from the perspectives of the students, teachers, and parents.

Best Practices

1. Technology

Every student of Project Enable is given a sturdy smartphone (with a minimum of 18 hours of battery life) where the following Applications are downloaded:

- Google Workplace for Education

Table 1: *Summary of GBTC Programmes*

Project name	Launch Date	No. of Lives Touched	No. of online classes	No. of online assessments
Project Enlighten	22 June 2021	13	24	N/a
Project Super 60	1 October 2021	62	700	75
Project Super 60+ (ongoing)	18 June 2022	107	300	80

Source: *Give Back to Community*

Table 2: *A Detailed summary of classes and assessments conducted through GBTC Programmes*

Project name	Launch Date	No. of Lives Touched	No. of online classes	No. of online assessments
Project Enlighten	22 June 2021	13	24	N/a
Project Super 60	1 October 2021	62	700	75
Project Super 60+ (ongoing)	18 June 2022	107	300	80
		Total online classes	**1024**	**155**

Source: *Give Back to Community*

Image 3: Project Super 60+ Students and Mentors virtually connected

Source: Give Back to Community

- Read Along
- Dron School app (paid app for Navodaya entrance exam)
- YouTube
- WhatsApp
- DIKSHA

2. Students

The mission to provide equal educational opportunities to students and make them global citizens are fulfilled in the following ways:

- Student orientation is held for two weeks at the beginning of each project where they are taught how to use the online platforms, e-learning tools, and online etiquettes. They are also trained on how to assist the mentor and their peers in class.

- Online classes are held from Monday to Friday on Google Meet and assessments are conducted on Saturday. Baseline test results are used for the grouping of the students. Each virtual classroom consists of 35 students and two volunteer mentors so that the teacher-student ratio is optimal for their learning and engagement.

- Students are engaged in creative learning activities and are encouraged to submit their short videos, voice notes, or photographs of their crafts on their specific WhatsApp groups. These additional activities help the students to showcase their talents and thereby boost their self-esteem and confidence.

- Festivals and competitions are regularly conducted by mentors to provide opportunities to socialise virtually and develop emotional connections within the community.

3. Teachers

Teachers are the backbone of any community, and their professional development is one of the core objectives of the GBTC Trust. Some of the best practices implemented to support teachers are as follows:

1. Monthly professional development webinars are conducted by volunteers and International and National trainers to expose the mentors of GBTC to new methodologies of teaching. Some

Image 4: *Virtual Celebration by students of Super 60+ for Independence Day of India*

Source: *Give Back to Community*

of the professional development workshops conducted in 2022 were:

- How to use Google Meet
- How to setup and optimise Google Classroom
- Mind Mapping for teachers
- How to use Dron School App

2. Research webinars are conducted by experts every two months to encourage a culture of research among the teachers. A few examples of webinars conducted in 2022 are:

- Action Research for Educators
- Goal-Setting for Research
- Success Mindset
- Challenges in Smart Classes

3. Research scholarships are available for volunteer mentors of Basic Shiksha to conduct research, action research, participate in conferences, and submit research findings to journal articles. Some of these scholarships are:

- Sardar Pritam Singh Research Scholarship (INR 21,000/- per annum)
- Dr. K.B. Varshney Research Scholarship (INR 21,000/- per annum)

4. Teaching internships are held. Five teacher trainees of DIET were able to complete their

internships by teaching for approximately 70 hours of online classes.

5. Volunteer mentors are motivated to continue associating with the project by acknowledging their efforts with Certificates of Participation and Certificates of Excellence given during physical and virtual events.

6. Volunteer mentors are given opportunities to take up leadership positions in the project, such as team leaders, coordinators, event hosts etc.

4. Parents

Parents are an important part of the teaching-learning ecosystem and therefore awareness programs are regularly organized for parents as mentioned here:

- Monthly webinars to motivate the parents and to make them more focused towards the goal of educating their child.
- Monthly progress meetings with team leaders (where nearly 90% of the parents- either mother or father are present every month).

Challenges Faced

The Pandemic combined with the fast advent of technology and downturn in income had deprived many children of their right to education and widened the technological gap in education.

Project Enable with the help of its enthusiastic and committed team has made significant progress in narrowing this gap in rural Uttar Pradesh and continues to educate the rural students, but the path was never easy and the challenges were too many. Mentioning all those challenges here is critical, but will help us to find ways to overcome other challenges in future. Some of the major challenges are as mentioned in the section below:

Challenges Faced in Teaching and Learning Process

1. Motivation

One of the biggest challenges was keeping the teachers motivated. While all of them were committed and proficient in their teaching process, they also faced challenges on other fronts of their lives. Most of the women teachers had children and elderly people at home who needed care and attention. Male teachers also faced similar challenges on a personal front in terms of shouldering family responsibilities. Hence it was a constant challenge to keep mentors motivated to prepare for the sessions and deliver their best. We have ensured to a great extent to keep teachers motivated by conducting professional development sessions. Scholarships are awarded to eligible teachers for upskilling themselves and hands-on training is given to teachers for operating the various educational apps and tools.

2. Curriculum Design

An important aspect of teaching-learning is how well the teachers match the pace and needs of the student with the curriculum. Hence we felt the need for customized lesson planning and curriculum design, keeping in mind the diverse background of the students. Therefore we started approaching the experts in the field and were able to mitigate this challenge to a certain extent by getting a sponsored subscription to the Dron School app (a paid app for the Navodaya entrance exam).

3. Ensuring Correct Utilization

Another challenge that we faced especially in phase one of the program was ensuring that the facilities provided to the students were used for the intended purpose, i.e. education.

This was especially difficult because we were operating remotely and had no direct control over what the students/parents did with the smartphones and if they were using it for the purpose of education or not. Hence, the teachers along with the mentors had to take a few steps to monitor the students' progress, ensuring that they utilised the resources effectively. Also, parents had to be educated from time to time through monthly sessions. This was done with the objective that in the absence of teachers at home, the parents needed to guide and motivate the children and guide them towards achieving a better life through education.

4. Technological Challenges

Technology can create fear especially when you are using it for the first time. The majority of our learners are first-generation learners. Besides they belong to rural parts of the country where smartphones, online classes, using mobile applications, etc are still like rocket science. Hence it was (and still is) the biggest challenge to bridge that gap through continuous training sessions and other methods like peer-share techniques, giving them simple-to-follow video-audio guides, etc. Our objective here is to not only give the students a smooth classroom experience and make them use smartphones for education but also make them well-versed with the technologies that are available today and help them use the internet and resources in a safe way.

The Way Forward

The technological gap in rural India is not new. We as a society are aware of this lack and lag and the pandemic has worsened this inequality. Bridging this gap is not one day or a year's work. It is a long-term process and will need a lot of work and commitment. It will need continuous intervention and policy changes. For the students to contribute in nation building, in the future, we need to make education accessible to the underprivileged, and for this, we need to educate, empower and provide opportunities to the three major stakeholders of the education system, i.e. The teachers, Students and Parents. Every child deserves to be educated and get a fair chance of becoming successful in life and improving the socio-economic status of their family and the community. The way to achieve this is by laying a strong foundation and making education accessible to all. Project Enable is a humble initiative to support the government as it accomplishes its goal of fulfilling every child's right to education in India with the support of teachers, parents, and technology. Today, as many students of Project Enable have returned to physical schools, the difference in their personalities is visible because of their improved PERMA (Positive emotion, Engagement, Relationship, Meaning, and Accomplishment). The next initiative of the GBTC Trust is to empower rural schools through technology and we have made a humble start by setting up 5 smart classes in rural schools in Uttar Pradesh in November 2022.

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