

# Is rural India ready for digital classrooms in schools?

Solid small steps, if not giant strides, are being taken towards achieving a rural India that uses digital tools to become self-reliant



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**T**his is a mouse," the digital centre teacher was greeted by rolls of laughter as soon as she said this.

"Does it run as well? Does it eat rice? Do cats chase it around?" Teachers have to deal with millions of such questions. They are, however, more than happy to entertain such irreverent queries, as they are paving the way to realise the vision of a digitised rural India, one village at a time.

The stagnant state of rural education has been a major point of concern for educational policymakers in India. A study by the government in 2014 revealed that 67% of India's population belongs to rural areas. The ratio of rural-urban enrolment of students is a massive 7:5. Despite such a high rate of enrolment, nearly 60% of students in rural areas up to the age of 10 do not

have access to digital education. This situation prevents meritorious rural students from availing themselves of such facilities that will broaden their horizons.

**Unavailability of teachers:** The availability of trained resources and their willingness to teach in far-flung villages has taken a severe hit in recent years. Considering the fact that many of these areas are either prone to natural disasters or are hubs of violent political activities, it is difficult to transfer skilled educationists to these areas.

**Empowering education through technology**

provided to students in central universities, are to be distributed among rural students as well.

**Digital literacy:** In keeping with the Skill India initiative, soft-skill courses regarding computer literacy, functioning and hardware-software solutions are being planned at rural centres. The aim is to gradually develop students learning in these centres as future instructors, in a bid to enrich rural digital education

is provided to rural students to bring some parity in standards of education. Teacher training programmes, holding science workshops and fairs, and providing scholarships for meritorious students have provided encouragement to students of remote areas. At a number of places, student

organisation Dasra focuses on community-based efforts of villages dealing with primary education. Leafbird Foundation is also doing commendable work in providing holistic learning mechanisms, including liberal arts studies such as theatre and film making to students of rural



Illustration: SHYAM

ucation has been a major point of concern for educational policy-makers in India. A study by the government in 2014 revealed that 67% of India's population belongs to rural areas. The ratio of rural-urban enrolment of students is a massive 7:5. Despite such a high rate of enrolment, nearly 60% of students in rural areas up to the age of 10 do not possess basic reading skills nor can they solve simple mathematical problems. The high rate of dropouts, nearly 50% by the age of 14, further compounds this problem. Amongst female students, the dropout rate increases even further due to the prevailing socio-economic conditions.

### Falling standards of rural education

The Annual Status of Education report 2014 was a grim read as it stated that barely 47% of grade-5 school children could read a grade-2 textbook. One of the major reasons behind this is the lack of quality education available in rural schools.

**Infrastructural inequities:** A lot of villages deal with infrastructural lacunae related to electricity and potable water, apart from unavailable fundamental health and hygiene requirements. The teacher-student ratio in rural schools is appalling, where classrooms are crammed with more than 100 students of different age groups.

**Lack of connectivity:** With no or negligible access to the internet, the education provided in schools lacks any sort of relevance. While urban classrooms are upgraded with modern technology such as digital classes, the lack of fundamental infrastruc-

ture in far-flung villages has taken a severe hit in recent years. Considering the fact that many of these areas are either prone to natural disasters or are hubs of violent political activities, it is difficult to transfer skilled educationists to these areas.

### Empowering education through technology

Considering such limitations, it is essential to implement the new digitised education tools in rural India. Introduction of such ed-tech tools can solve the problems of mass reach, quality and relevant education. Teachers will be available via virtual classrooms, thereby plugging the problem of unwillingness in educationists to be physically present in many such areas.

One of the major pillars of Digital India is e-Kranti (revolution), under which immense emphasis has been given to digitising rural India through e-technology, especially in the domain of education. The key aspects attended to are:

**All schools connected with broadband:** The central government has collaborated with various telecom service providers as well as players such as Google and Facebook to empower geographically-remote areas of India with basic infrastructural set-ups for internet services. Still, much needs to be done since only 9% of rural India is connected to the internet, according to the latest report by the Telecom Regulatory Authority of India.

**Free Wi-Fi in all schools:** The central government plans to provide free Wi-Fi to 2.5 lakh schools within the next five years. Devices such as tablets, as

**Digital literacy:** In keeping with the Skill India initiative, soft-skill courses regarding computer literacy, functioning and hardware-software solutions are being planned at rural centres. The aim is to gradually develop students learning in these centres as future instructors, in a bid to enrich rural digital education through own human resources.

**The problems of migration, lack of connectivity and unavailability of resources can be tackled head-on by employing adequate resources to equip villages with the infrastructure needed for rapid digitisation**

**MOOCs:** There is a focus on developing Massive Online Open Courses to help rural students pursue any course of their choice from institutions all over the country and abroad as well. These courses comprise the latest syllabus taught by eminent academicians as well as industry leaders via virtual classrooms.

### Partners in development

The CSR wings of a number of organisations have played a major part in the initial investment of digital tools in rural areas. Various companies have adopted villages and have collaborated to ensure that basic infrastructure

is provided to rural students to bring some parity in standards of education. Teacher training programmes, holding science workshops and fairs, and providing scholarships for meritorious students have provided encouragement to students of remote areas.

At a number of places, student volunteers are offering to provide technological insights to rural students. With their fresh perspective on things and a focus on entrepreneurship and innovation, they are giving a different outlook to these rural students who are otherwise afraid of adopting new methods and practices. It has been seen that teachers feel hesitant towards using new technologies as they are themselves not confident, and so the support these volunteers provide help reduce the fear of technology in village teachers also.

The role of NGOs in spreading digital education tools across Indian villages is also noteworthy. For instance, Pratham, in partnership with Vodafone Foundation India, has started the digital classroom initiative called "Learn, Out of the Box" to enhance teaching and learning in low-income schools using technology as the primary teaching tool. Their Annual Status of Education Reports have been a definitive source of information on rural educational development.

Similarly, eVidyaloka, started by Satish Viswanathan and Venkat Sriraman, is a not-for-profit organisation that aims to improve the quality of education in remote regions of India through digital classrooms. In the same vein, the philanthropic

organisation Dasra focuses on community-based efforts of villages dealing with primary education. Leafbird Foundation is also doing commendable work in providing holistic learning mechanisms, including liberal arts studies such as theatre and film-making to students of villages in Uttarakhand.

In terms of NGOs sponsored by international or central agencies, Teach for India (a part of the Teach for All global network) and State Bank of India's Youth for India fellowship have given great impetus to the progress of rural education and infrastructure.

The fact that such initiatives and programmes are well-received proves that rural schools are ready for new-age teaching methods through digital classrooms. All they need is implementation on a large-scale to ensure quality education.

Solid steps, if not giant strides, have been taken towards achieving a rural India that uses digital tools to become self-reliant. Problems of migration, lack of connectivity and unavailability of resources can be tackled head-on by employing adequate resources to equip villages with the infrastructure needed for rapid digitisation. As wide-eyed village children ogle at the plethora of information opening up in front of them, the seeds of a Digital India dream can be seen germinating, and it can be safely said that rural India is indeed ready for digital classrooms.

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