

# Mobile & Internet Education for Rural India

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## Abstract

This research paper is about the use of technology to help not decrease the literacy percentage of Rural India. More than half of India's population live in rural areas and off-the-map villages. According to the Socio Economic and Caste Census (SECC) 2011, over one-third of Indian population living in rural areas of India is still illiterate. The research paper will cite the reasons for the same and will propose technology and internet as a solution.

## Keywords

M-learning, Education, Rural India, Online education, E-learning, students

## I. Introduction

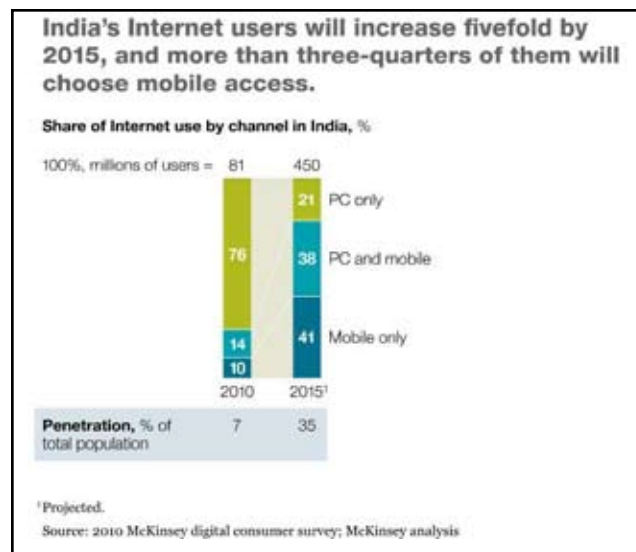
On an average, the rural population having below primary education is 13.97 per cent and till middle level is 13.53 per cent. Illiteracy, one of the country's biggest problem, is the result of lack of easy access from schools. Also, the teacher-student ration in most villages is also very high. To combat these issues, internet and different applications of it can come to rescue.

## II. Present Rural Education

1. Lack of easy access to schools –  
Most villages have very poor connectivity to travel to government schools and hence, it demotivates them to continue with studies.
2. Indirect costs are very high –  
Costs for provisions provided by the school are very high – from school uniforms to textbooks.
3. Lack of teachers
4. Poor infrastructure of the school –  
The school doesn't have proper classroom, clean toilets, reliable electricity etc.
5. Mostly well experienced professionals migrate to urban areas since they are getting paid very less in rural areas.
6. In most of the rural schools the teaching equipment that is used is only blackboard and chalk.
7. For students who want to really learn, they have only one source i.e. teacher. So they are fully dependent on teachers. If the teacher is not very well trained in that subject then they don't have any other source. This leads to lack of interest of the students in that subject.

## III. Mobile Education In India

According to regulatory body TRAI, India has around 791 million mobile subscribers with a significant share in villages. Hence, educational institutes can look at this target group. E-learning refers to the use of technology to deliver learning. Mobile education or mobile learning is E-Learning in which the end devices are mobile devices.



Smartphone penetration into India's mobile market is expanding. For now, most low income groups use feature phones. Hence, the new ed-tech interventions are creating applications for both smart phones and feature phones.

## IV. Examples of m-Learning

1. Flipped classrooms :
  - This is a form of education which uses a combination of face-to-face delivery of content as well as offline learning i.e., through videos of lectures. The offline videos can be downloaded and viewed on smart phones.
2. MOOC :
  - Another concept of learning in India is MOOC or Massive Open Online Course. It is an open source model for delivering high quality educational content/courses online to anyone free of cost. Indians form the second largest pool of students taking up MOOC courses. Some leading MOOC providers are Courseera, edX and Khan Academy.

## V. Present Initiatives In Rural India

- **Gurukul School** in rural Bihar is run through power generators and Skype. The attendance of students is taken through computers and teachers by the use of fingerprint machines.
- **8 day academy**, which conduct 8 days seminar on important topics like computers, development of skills, speaking in public etc.
- A few NPOs have been working on bringing internet in Rural India's education and have seen success in the same. This

has given positive results as well.

- **EDUSAT:**  
EDUSAT is the first dedicated “Educational Satellite” that provide India with satellite based two-way communication to classroom for delivering educational materials.
- **Samudaya:**  
In Raichur district of Karnataka, Cisco used technology to deliver content out of video interfacing to provide remote education by experts and qualified teachers out of Bangalore.

## VI. Proposed Initiative

### a. Video Learning:

- i. The first proposed solution is the use of videos to impart education among the students of rural India.
- ii. Offline videos can be downloaded and viewed. In this way, lectures given by qualified experts from urban cities can be easily viewed by the students.

### b. Examination:

- i. The second proposed solution is with regard to exams conducted which are an equally important part of the education system.
- ii. M-Learning can be used to conduct Multiple Choice Questions in two forms :
  1. Vivas conducted on telephonically for the students – on call or through a recorder.
  2. Written exams can also be conducted online or via SMS’s without having to travel long distances.
- iii. By giving online tests the students can also get the results immediately within few seconds.

### c. Feedback

- i. The third proposed solution is the feedback of the tests given by students.
- ii. After giving online tests, the students can fill the online survey form and can give their opinion regarding the test. This helps us to know the students better.

### d. Interactives

- i. The fourth proposed solution is to use interactives as an alternative for textbooks.
- ii. Instead of using static textbooks which contains only text, we can use interactives which will explain the chapter by using graphics, images, 3D animated videos etc.
- iii. These interactives can be viewed in tablets or smart phones.
- iv. The students can learn all the subjects by using single tablet rather than carrying different textbooks for all subjects. This will also be cost effective.

## VII. HURDLES

- a. Inaccessible to technology :  
Rural India has a very weak infrastructure with regards to technology. A major problem in villages is discontinuation of electricity. A solution to this can be the use of Solar Energy.
- b. Unwillingness of people to learn technology  
Most people in the rural parts of the country are unwilling to make use of technology as they are not used to it. Since they are not familiar with it, they have a wrong mindset about it and also take a while to learn.

## VIII. ADVANTAGES

A very important advantage is that technology attracts the rural children. That is the reason why their wish to join schools and learn increases.

Mobile Education/Computer Education also increases the required confidence and reduces the gap between urban education and the rural.

M-learning can hugely save the long distances that students have to travel to attend far-away schools. Most of the learning can be done at home.

## IX. Conclusions

In developing country like India where more than 50% of the population lives in rural parts, rural education is an important part that leads to the betterment of the society and country. Mobile education without doubt, will bring a positive change towards the enhancement of the rural education in India.

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