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<u>Online Education in Urban Slums of India</u>

Dewangi Sharma[1] and Ipsita Pati[2]

1. ILS Law College, Pune, India

2. Ravenshaw University, Odisha, India

Abstract

The Coronavirus pandemic has brought to surface a new phenomenon which was otherwise underexplored for young children-- 'Online Education'. The enabling and equalising effects of technology are well known but it also produces numerable challenges in areas underprivileged and underdeveloped like the Urban Slums in India. Technology can be used to bridge the gap between children from low-income backgrounds and children from well-off families. The Indian public -sector education system has failed in making quality and holistic education accessible to children living in slums. This article explores the opportunities and challenges posed by the implementation of Online education for primary and secondary education in Urban Slums. Few models of already existing examples are analysed to gain practical insights which could be helpful in overcoming the challenges and making the Internet-learning model a success. The fruition of this model of education is not possible without the collaboration and support of government and educational institutions, therefore their important role is also identified.

1.0 Online Education in Urban Slums in India

*"In education, technology can be a life-changer, game-changer for kids who are both in schools and out of it." -*Queen of Jordan

The United Nations agency UN-HABITAT defines 'Slums' as 'A group of individuals living under the same roof in an urban area who lack one or more of the following:

1. Durable housing of a permanent nature that protects against extreme climate conditions.
2. Sufficient living space which means no more than three people sharing the same room.
3. Easy access to safe water in sufficient amounts at an affordable price.
4. Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people.
5. Security of tenure that prevents forced evictions.' (UN Habitat, n.d.)

In such poor conditions, many times education doesn't even make it to the list of priorities. In maximum cases, the inhabitants are uneducated except in the case of Tamil Nadu, where 70% of people are educated. People living in slums work in various informal sectors to sustain life. The lack of education may breed criminal tendencies among them from a very young age which lead to major problems like drug abuse, child marriages, domestic violence, negligence of health and hygiene, unemployment, etc."Education is the most important single factor in achieving rapid development and technological progress and increasing a social order found on the values of freedom, social justice and equal opportunity" (Planning Commission, 1961-62). But due to lack of facilities, basic amenities and proper guidance, the slum children can't exercise their Right to Education fully. Poverty, or low incomes, adversely affect the quality and quantity of education at the macro, country level. (tsujita, 2009)

According to the Sustainable Development Goals put forward by the United Nations, Goal no. 4 aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." Similarly, the Millennium Development Goal no. 2 aims at achieving universal primary education. online education with the use of accessible technology can help in achieving this goal and increase the reach of quality and holistic education to poor neighbourhoods like the Urban slums in India.

The scope of online education is broad. It encompasses technological and electronic tools to provide children access to quality education. In this paper, we analyse the role that the Internet

and technology can play to bridge the gap between students who cannot afford to gain a quality education in a conventional school setting. The coronavirus crisis has opened a door for increased use of technology and has forced schools and government to make distant education possible in a world where attending schools is impossible. However, children from slums in cities have been disproportionately affected as they do not have access to gadgets and devices to access online classes or present online assignments. (Bedi, 2020) Access to technology and infrastructure is one of the major challenges of Online education. Other challenges include social barriers, low digital literacy, etc.

This paper will not present online education as a model challenging traditional school education but as a way to enhance overall education for children engaged in primary education from Urban Slums, who lack access to quality school education. The various models adopted by schools, governments and NGOs focusing on imparting education through the use of technology and the internet will be analysed. The aim is to identify the advantages and challenges associated with implementing various forms of online education in slums and locate the responsibility of various authorities and institutions in fulfilling the goal of 'inclusive, equitable and accessible' education.

2.0 Assessing the Conventional Model of Education in Urban Slums

I. Low teacher to student ratio:

The condition of schools in urban slums is very poor. According to Pratichi Report (2002), nearly 20% of schools were run by a single teacher while about 55% schools had two teachers. Average number of teachers in schools surveyed was found to be 2.44 which is almost similar to 2.55 as observed in Pratichi Report 2002. Hardly any schools were identified where there were sufficient numbers of teachers to fulfil the requirement of one teacher per class or section. Thus, it becomes unmanageable for the teacher to control the class and carry on with the teaching-learning activities smoothly. Students' attendance falls as they find the classes uninteresting. (Rana & Banerjee, 2006)

II. Lack of infrastructure:

Pratichi Report (2002) says that an equal percentage of schools (37.5% each) were found to have a single or double room where all four classes were accommodated. Though it was found that in almost all schools bench, table, blackboard and teaching aids were available but still the overall

environment of none was found to be appreciable. Most of the schools had a dull, gloomy look. Thus, the very essence of joyful learning was absolutely missing in these schools. Most of the teachers confessed that they do not use teaching aids regularly while teaching in class.

III. Drop-out ratios:

In a survey conducted in a slum of Kolkata, out of the total 968 children of 6-14 years age group it was found that 27.27% were non-enrolled (NE), 24.17% were drop-out (DO) while 48.56% were reading (R) or continuing education. Net Enrolment Ratio (NER) at elementary education level was found to be 72.73%. Regarding parental educational status of these children, it was found that more mothers (55.97%) than fathers (44.71%) were illiterate. Almost an equal percentage of parents approximately 26% reported that they can only write their names and failed to recall how far or till which class they had exactly studied in formal school. Not a single mother was found who had studied after class X. (Nath, 2020)

According to data available with the Ministry of Human Resource Development for 2009-10, the dropout rate for children studying in Classes I to X was 2.0, however, for 2010-2011, this has increased to 22.9, a jump of more than 20 percentage points. The dropout rate for the nation has however declined for classes 1 to 10. Presently, the dropout rate for children studying between Classes I to V in Delhi decreased, in line with the overall trend in the country, from 13.3 in 2009-10 to 5.9 in the 2010-11, however, although dropout rates have declined post-implementation of the RTE, the present dropout rate in the capital for classes 1 to 10 is still alarming. The Ministry of Human Resource and development claims that the number of children out of school in the 6-14 age group has come down to 3 million in 2012 from 8 million in 2010.

2.1 Reasons for High Drop Outs:

● A large number of children residing in slums are first generation learners. Their parents are mostly illiterate. Hence they can't assist them in their studies. Also, the school education was not enough. Hence it was found that they mostly relied on private tuitions. But the problem was paying the tuition fees and also the quality of education provided wasn't up to the mark.

● Another problem was that the schools were situated far away. Hence children were reluctant to walk long distances to reach school. Especially girl students were forced to

discontinue their education due to concerns relating to safety and harassment. Hence, most dropped out before reaching puberty.

● The slums generally consist of migrant populations from nearby states. So, they may/may not understand the local language. Education in schools is mostly imparted in mother tongues which becomes difficult for the children of other states to understand. Thus, a language barrier is seen.

● The migrant population often visits native places during different times in a year for various reasons which leads to absenteeism of children from schools. Consequently, they lag behind their other fellow classmates in studies which affects their performance.

● Since the parents are not financially stable, children are often made to engage in different activities to support their family. It happens mostly if the bread earner of the family passes away or becomes incapable. Girls are generally given duties that revolve around looking after younger siblings and doing household chores. Children were also found to be standing in long queues to fill water from tankers or a common hand pump/tap present in the locality. This leads to huge drop-outs from schools.

● Another major cause of drop out of girls is the narrow mindset of society. They don't feel that education is equally important for girls too. There is a prevalence of child marriages. This leads to early pregnancies and affects the health conditions of girls too.

3.0 Online Education: Opportunities and Challenges

Online Education, as the name indicates, is the use of the internet and related technology to impart education. In this system, students usually do visit the school premises but remotely access education from their homes or a designated centre. Though Online education has become extremely popular and accessible for college courses and graduation-level studies, it is still a novel concept for children in schools. The different forms or names of Online education or learning could be e-learning, m-learning (mobile learning), computer-based distance education, etc.(What Is Online Education?, n.d.)

3.1 Opportunities

● In a study conducted to examine the status of school and education in slums of Delhi, it was observed that the government schools face infrastructural limitations as they are unable to accommodate the increasing number of students. (tsujita, 2009) Education

through the internet and electronic resources does not require investments in huge physical infrastructure which makes it more accessible. Schools do not need to set up huge buildings, playgrounds, libraries, etc. but only need to make resources available online.

- For example, an initiative by the 'Wake Up India' foundation allows students who can't attend classes in school to attend 'e-classes'. The foundation identifies a room in each slum furnished with a server and a smartboard. This initiative helps in bridging the resource gap through e-learning which is not only easily accessible to the children living nearby but also is an effective way through which students can be provided quality education without building schools or hiring multiple qualified teachers.(Sahuliyar, 2018)

- Online education can be more attention-grabbing and easy to understand for children as it makes use of graphics, video and audio technology to enhance the learning experience. Innovation in online learning spaces has made it possible to connect millions of students on one network, make available a wide variety of educational content and modules to students and make students more interested in learning. Online education can help in connecting the best of teachers to students hundreds of miles away. For example, Mobile applications like Byju's connect the best teacher in a specific field to students all over the country. An international project, 'Hole-in-the-wall' makes use of educational games and videos to allow children to teach themselves by driving their curiosity and interest. (lupieri, n.d.)

- Online education requires investment in majorly two things: the Internet and a device to access the internet which makes it a cheaper option than conventional school education. Children living in slums usually come from poor families and one of the major reasons why they do not attend school is the expense. Because of the low expense involved, it becomes easier for government, NGOs and civil society organisations to make education accessible to children in slums via the use of technological tools. Online education can help Parents send their students to receive high-quality education without bearing the weight of huge costs.

- Technology has often been called a democratizer in education, allowing students from all backgrounds to access the same resources and tools. (Parseghian, 2011) It will help in reinstating confidence in the students from an underprivileged background, providing

them with an avenue where even they could finish their primary education and fulfil their aspirations. Equitable and accessible technology would allow these children to gain an education which they would otherwise have to forgo.

- Another opportunity that Online education presents is making children more tech-savvy and digitally literate. It makes them more prepared and confident for the dynamic world we are living in wherein technology and the internet dominate our lives.

- Online education can also allow children to learn at their own pace as they are not learning together in a classroom filled with 50 or more students. If an Online education model makes use of pre-recorded videos as either primary or an additional source of education, the student has the agency to revisit these videos. The students can also access videos related to topics that they are either interested in or have not completely understood. It also lowers the pressure of teachers who are expected to focus on multiple students at once.

3.2 Challenges:

- Many families residing in urban slum areas do not have smartphones, let alone computers or laptops. Some said they don't know how to use WhatsApp, while some parents are engaged in essential services and need to take their only phone with them on duty. In one report it was discovered that there were constraints like a household with three students having just one phone. This problem has been brought to light by the Covid-19 pandemic. News stories from around the country have furnished displaying the lack of resources in poor households to access Online education. (Jebaraj, 2020)

- Another infrastructural challenge is the availability of cheap, affordable and fast internet. Moreover, even if the Internet is available many people use it to communicate with friends, use social media, or access entertainment avenues rather than seek educational materials. As the availability of the Internet and electronic devices is limited, if the students do not prioritise education over other facilities of the Internet it becomes a problem. Kids living in homes without the Internet are increasingly at a disadvantage as coursework and workplace skills become more dependent on technology. (Abbas et al., 2019)

● The other major challenge is sociocultural, which has a number of facets including norms that usually block girls' access (physical, social and economic) to education and technology, lower faith or trust of parents and family members in providing or supporting the education of their children and the hopelessness associated with investing in education. Among slum residents, the most common belief about higher education – or even completing school -is that it's a waste of time and money. (Education, 2017) People do not understand the importance of literacy. Almost half the population (Bhan & Rodricks, 2012) of children in Indian slums is unable to read at their appropriate level. The problem of 'Child labour' is also very real and is a by-product of India's continuing cycle of illiteracy, and leads to declining children's attendance and retention. As children grow up the parental pressure to leave schools in favour of any employment opportunity also increases.

● Low/no digital literacy among the target users is also a challenge towards making online education accessible. Family members or children themselves may find it difficult to use the technological resources and devices effectively and this may discourage them from learning on the internet. While the bulk of solving this problem may be in training facilitators and determining what resources they need, it can also be useful to give the children tools that are low cost and easy to implement.

● One of the major challenges to making Online education accessible and equitable to children in Urban slums is the home environment. Most children living in slums do not have their 'personal' study room where they can study at their homes. The environment in their homes may not be suitable for learning and studying. The lack of space, peace and privacy would add as a hindrance to an efficient study routine. The housing conditions can be appalling and can lack basic amenities like electricity. This would also put these children at a disadvantage from children who have the facility to be in an education-friendly environment like that available in schools. (Mahabir et al., 2016) These children may not have highly educated parents who can aid their children as they learn through an online medium.

● Online education relies heavily on self-learning which can be especially challenging for young children. It requires students to pay attention in the absence of a teacher to keep an eye on you, check your progress personally or demand your attention. In a pure self-

learning environment the propensity to drop out or pay half-hearted attention increases. Children get distracted and lose attention. Even if there is a mechanism to check attendance, it would be difficult to guarantee students' attention and interest in a virtual setting. When students learn alone they can become bored and distracted easily even if the course content is good. (India Today Help Desk, 2018)

4.0 Insights drawn from Online Education in Indian Slums

4.1 Malwani, a slum in the suburbs of Mumbai:

The slum faced problems like no electricity and the absence of teachers and lack of interest among students. In such a condition, introducing a technological solution seemed a tough challenge. But in 2013, Neil D'Souza and Soma Vajpayee founded Zaya learning taps. This social enterprise is bridging the education gap by bringing world-class learning resources to marginalized communities. It has already served over 100 schools and 20,000 children.

They designed the ClassCloud, which is a small, battery-powered device that creates a powerful local hotspot in offline learning centres or schools. Specific content is pre-loaded on the Zaya Micro Cloud, which runs on battery for about 10 hours and does not require electricity. The Micro Cloud is like a wi-fi router that can be carried anywhere. It is supported by low-cost hand-held tablets, on which students can access content. About 60 students can connect to the wi-fi device at a time.

The content uploaded on the Cloud is as per the prescribed syllabus by the state. After the regular instruction and lesson by the teacher, each student is given a tablet to understand and learn the lesson at his/her own pace. The lessons are designed as per the needs of individual students. The students take the assessment tests and reports are generated for teachers and parents.

Each student is asked to create a profile on the Cloud and personalized lessons are loaded on the tablet once they log in. Students learn by watching videos, playing games and taking quizzes on their tablets. Since these tablets do not require electricity or Internet connection, the model can work even in those schools that do not have a good power supply. Some content was developed by different content partners.

The ClassCloud, which costs around Rs. 5,000, is purchased by the school. Zaya then charges Rs. 50 per child per month from the school for their services and devices. This interesting

technology deserves to be used more widely, especially in schools that do not have a good power supply.(Pareek, 2015)

4.2 Tikiapara, Calcutta:

Tikiapara, one of Calcutta's poorest neighbourhoods has a high crime rate and prevalence of drug abuse. But a ray of hope arises when we look towards the Samaritan Help Mission School located in the heart of the slum. Though the school lacks infrastructure, it makes ample use of technology. Students are made to learn by help of PowerPoint presentations, video conferencing etc. they are divided into groups and made to use the computer and prepare slides. There are around 1500 students, most of whom are children of daily wage workers, rickshaw pullers and migrant workers.

"Technology is a very big, cheap and attractive tool," says Mamoon Akhtar, the school's principal and founder. With a youth population expected to be the largest in the world by 2020 and youth illiteracy rates hovering above 10 percent, digital learning may help develop the skills that many students need to compete on the job market. In particular, the use of ICTs in classrooms can extend student participation from poor or marginalized communities, decrease drop-out rates, and provide access to experts around the world at any time.

In addition to providing Skype lessons with teachers from around India and the United Kingdom, the school helps students and their families to open bank accounts. While banks usually avoid opening branches in slum communities, online banking and a new smart card system allows everyone to manage their savings. (lupieri, n.d.)

4.3 Sangam Vihar & Mundka (Delhi):

The impact of closing schools due to COVID-19 is more severe for disadvantaged children whose families faced high economic costs because of no work. In response to school closures, RISE-AROH recommended the use of distance learning programmes and platforms that RISE and teachers can use to reach their students remotely and limit the disruption of education. The pandemic is having profound effects on children's mental well-being, their social development & their safety. Children and families living in Sangam Vihar & Mundka or other crowded conditions are especially vulnerable. The key insights from Education in COVID-19: students

are continuing their studies more effectively and are more concerned about the pandemic situation; students are improving & spreading hygiene measures through their home only.

They learn through innovative & creative activities. Coming to RISE, these kids take part in regular major events & festivals which bring changes not only in the amount of knowledge they gain but also in the abilities to think and acquire habits, skills and attitude which characterize an individual who is socially accepted and adjusted. All the RISE kids are getting much better scores in school now. Parents are relieved from the burden of paying high costs to private tuition. Children are spending more time in studies & meaningful activities instead of getting involved in vain activities in their free time. (Gupta, 2020)

5.0 Role of Government and Educational Institutions

The Government and educational institutions have a major role to play in making Online Education an accessible and effective model of education for children in Slums. The challenges that have been highlighted earlier can only be overcome through a close collaboration between the Government, the private sector and Civil Society. It is the government's responsibility to ensure that all children under the ages 9 to 15 have access to quality education. Online Education has emerged as a successful alternative for underprivileged students that would allow them to gain quality education. At the same time, the Coronavirus crisis has made Online Education the only option through which children can access education. It has also brought to light the benefit and necessity of technology in a 21st Century world. Majority of children living in slums go to government schools which highlights the role the government has to play in providing accessible and quality education to these children. (tsujita, 2009)

- As mentioned above, access to high-speed Internet is the major challenge for children in slums. Both Public and Private sectors can collaborate in making the Internet more accessible in these areas. The government can establish Wi-Fi hubs or make Wi-Fi services available at an affordable price. In today's world, the Internet should not be a luxury. The Internet has become a necessity in a globalised and highly interconnected world. Ensuring affordable and effective Internet access to all is as important as ensuring the availability of clean drinking water, electricity and food. For example, organisations like 'EveryoneOn' are collaborating with private sector telecommunication companies to

provide low-cost internet to all. (Schwartz, 2013) Under the Digital India campaign, the government has collaborated with telecom providers to make available free Wi-Fi to more than 50 railway stations. (Rosenfeld, 2017)

● The Government has time and again come up with schemes to distribute laptops or mobile phones to children from low-income backgrounds. These schemes, however, have failed for one reason or another. (India Today, n.d.) It is important that the government implements these schemes effectively taking care that the beneficiaries are genuine. It is also important to ensure that the laptops would be actually used for educational purposes. The children need to be given proper guidance and made aware of the uses and benefits so that the device's potential is not wasted.

● The educational institutions that have shifted their learning to the online medium as a response to Covid-19 cannot ignore the challenges faced by children in slums. Furthermore, any attempt of implementing an Online education model in a post-COVID world cannot succeed without training the children and their families to effectively use technology. Therefore, education institutions (public and private) need to invest in 'facilitators' who would help the children in accessing technology and making optimal use of the Internet. These facilitators can be an educated professional in the locality or a teacher living nearby. Digital Literacy training is a must for the success of any Online Education model.

● It is also crucial to make quality educational content available to students as well as teachers. For example, In rural Pakistan, the nonprofit Developments in Literacy (DIL) provided teachers with smartphones to gain access to teaching tutorials and download lesson plans at Wi-Fi hubs that were specifically established for them. This allowed teachers in rural areas of the country to educate children by showing these videos and also training themselves. To ensure that the disability of inefficient Internet access does not hinder education the organisation introduced an m-learning application for teachers by providing downloadable learning content only on the first day of each month. The organisations working towards making education accessible could also work similarly, where one person could download the content (audio/video/text) and then share it offline. (Teaching the Teachers Through Mobile Learning | Archive - U.S. Agency for International Development, 2015)

- The government and CBSE have also launched free television channels that provide quality educational content for students as their schools are in lockdown. Such measures can become more standardised and streamlined so that e-learning can become efficient and mainstream. Some areas that the government needs to look into is following a particular schedule, covering complete curriculum, certifying curriculum, etc. The government needs to support the e-Learning model and lay out the fundamentals of e-Learning and online classrooms which can complement the existing system of education. The government can also launch its own e-learning application, collaborating with e-tech companies that allow poor children to access online education without paying expensive subscription fees. (India Today Web Desk, 2020)

6.0 Conclusion

There are multiple challenges surrounding the implementation of any successful Online Education model for children in urban slums in India which have been highlighted in this paper. There is a long way to go before e-Learning becomes more accessible and equitable for children from low-income backgrounds. The Coronavirus outbreak has forced the education system to be online and tech-oriented which has brought to light the need to innovate and develop the Online education model to bridge the gap between students from different backgrounds.

The various examples concerning current Online Education models that were discussed in the paper show the positive effects of technology and the internet. However, the implementation of Online education that is in place for senior students cannot be the same for young children. Young children engaged in primary education would require extra help from 'facilitators' and 'teachers' who could help them optimise 'e-learning'. Thus, it would be naive to say that Online education would be able to successfully replace the Conventional school system but at the same time it can highly help teachers and schools to provide quality and efficient education to their students. The Government, NGOs and educational institutions can together work towards overcoming the barriers that prevent children from attending schools in this area through efficient awareness, incentive programmes, etc.

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