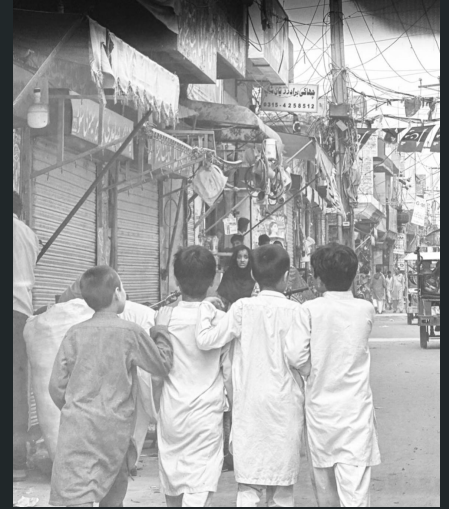


Digital Education in the Developing World



How can digital education shape the future of millions of children in Pakistan?

Teach the World Foundation
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Introduction

My name is Amina Rashid, and I am a highschool senior at Stone Ridge School of the Sacred Heart in Bethesda, Maryland. I was fortunate to be able to intern at Teach The World Foundation this summer, understanding the complexities of digital education, interacting with school-children, and researching ways to aid the education sector in Pakistan. One of the main digital learning models I researched this summer was Teach The World's **microschool** program. I visited three centers in Lahore, Pakistan and interacted with school-children (ranging from 6 to 14 years old), their parents, and the Foundation's facilitators who make this program possible. After immersing myself in this program and understanding how digital learning tools like tablets and educational games aid impoverished children in Lahore, I immediately thought of the ways this microschool program not only aids in their learning, but becomes a second home for children from extremely dire circumstances. The objective of this research presentation is to provide helpful information on how digital learning is imperative for the advancement of the education sector and plays a critical role in improving social stability. It aims to give the reader an insight to the much needed microschool system as a means to reduce illiteracy in the developing world.



Causes of Illiteracy

Economic instability, food insecurity, natural disasters, and transportation explain the main causes of limited access to education in underserved areas globally.

Economic instability - Families from incredibly low-income communities in Pakistan do not have the means to provide a significant financial investment in their children's education.

Food insecurity - Children do not have a consistent source of nutritious food in such areas, resulting in a lack of focus when learning and eventual decrease in performance levels.

Natural disasters - Natural disasters disproportionately affect the underdeveloped world and often raises levels of illiteracy due to limited access to schools/educational resources.

Transportation - Millions of children are not able to attend schools/educational centers due to limited transportation access (usually commuting from remote areas). Teach the World Foundation aims to avoid this issue overall by expanding the **microschools** program.



Current Status of Child Illiteracy in Pakistan

22.8 million children between the ages of 5 and 16 are not attending school in Pakistan (2022).

In their 2022 survey, the Pakistan Institute of Development Economics stated an estimated 22.8 million children between 5 to 16 years of age who are not attending school represent 44 percent of the total population in this age group. Additionally, 30 percent of children between the ages 5 to 16 were out of school with considerable regional disparities. This situation indicates a serious challenge to ensure that disadvantaged children attend and succeed in their educational pursuits. (<https://pide.org.pk/research/22-8m-children-between-5-16-years-of-age-not-attending-school-in-pakistan/>)

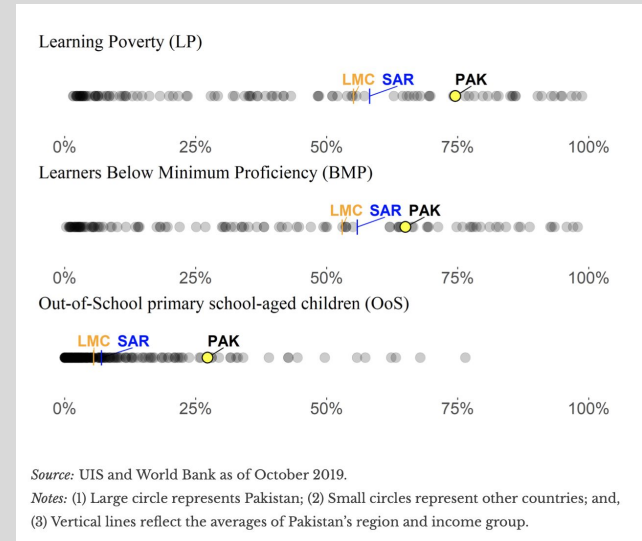
Girls are more disadvantaged compared to boys in both enrollment and dropout rates of the schools. The girls account for 60% of children out of school. (<https://www.pakistantoday.com.pk/2022/02/27/gender-inequality-in-education/>)

Effects of Covid-19 in Education - Pakistan

As a result of the Covid-19 pandemic, the education sector was significantly affected globally.

In Pakistan, **more than 22 million school-children were already out of school prior to the pandemic**. Once Covid-19 hit, an additional **41 million students** were affected due to nationwide school closures.

Almost three years after Covid-19 first began, Pakistan, much like the rest of the world, is faced with the question: **“How can digital education shape the livelihood of millions of children in Pakistan in a post-pandemic world?”**



Illiteracy and its Adverse Social Impact

1. HEALTH: Illiteracy negatively impacts the health of the developing world and significantly limits access to health resources. Illiteracy disproportionately affects women more as they are running households and looking after the children.
2. CRIME: Illiteracy has a clear connection with promoting crime in local communities and estimates show that 60-80% of prisoners have reading and writing skills below basic levels. This has a high cost to the society with illiterate people being less productive at work. There is a high need for social service to address and remedy their situation including need of administering justice in the developing world.
3. FINANCIAL: Illiterate people are more likely to be on welfare and unemployment benefits thus burdening the government's budget.
4. INCOME: Illiterate people in developing countries have much lower income potential. Illiterate people earn 30%-42% less than their literate counterparts and their ability to increase income potential is significantly lower.

<https://worldliteracyfoundation.org/wp-content/uploads/2022/08/The-Economic-Social-Cost-of-Illiteracy-2022.pdf>

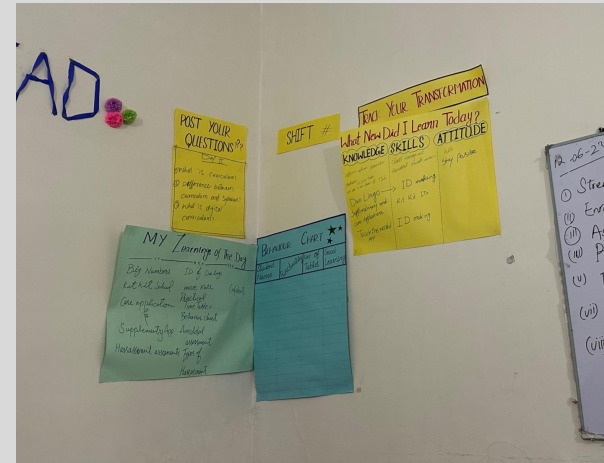
Role and Benefits of Digital Learning in Reducing Illiteracy

Digital learning is a powerful tool to reduce illiteracy. This achieved through:

1. Enhancing accessibility of digital learning resources to address the digital divide.
2. Develop effective content quality to motivate and engage learners.
3. Facilitate learning and teaching with use of digital tools and support student' learning needs.
4. Different approaches such as gamification, interactive content, and well-designed courses.

If digital learning is properly implemented, it can play a critical role in enhancing the learning ability of students with ADHD.

<https://files.eric.ed.gov/fulltext/EJ1165856.pdf>



In the Field: Microschools - Lahore, Pakistan

Millions of children do not meet a **foundational level of literacy or numeracy** under the age of 14. This is a striking contrast to the endless opportunities for intellectual growth offered at my Sacred Heart institution back in the United States.

After working with Teach The World Foundation in Lahore, Pakistan this summer, this contrast became even more clear. Street-children commuting between narrow streets find a refuge in what the Foundation calls “**microschools**.” I observed children learning the alphabet (Urdu and English) and how to count to twenty for the first time. Despite every challenge imaginable, the unwavering display of joy on the children's faces was evident.



What are Microschools?

Microschools (underprivileged communities receive a digital form of education)

- 75-100 students in each microschool (there tend to be 3-5 microschools in a community)
- Single room: at least 2 1/2 sq ft with a washroom and drinking water
- 2 types of applications (comprehensive content for students in English and Urdu as well as math concepts through educational games)
- *all other applications are removed from tablets to ensure no distractions while learning
- Tablets and headphones (26 per microschool), charging cabinets, solar panels for electricity
- Facilitators are trained in a 4-day training seminar before assuming the role as a supervisor for the children

How does a typical “microschool” day go?

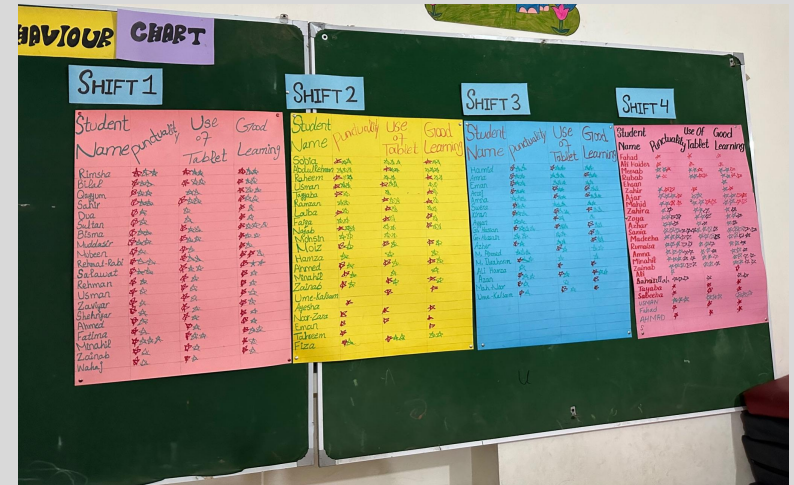
-4 shifts in each microschool (each shift has 25 students)

-1st shift starts at 8am

-1 hour charging break for tablets

Microschools beyond the classroom:

- Engage the communities with meetings after a survey
- Centers bring a sense of ownership to the community
- Facilitators educate the parents about the importance of education



MICRO SCHOOLS *in action*

Lahore,
Pakistan



Future of Digital Education

The digital education sector is expected to reach \$458 billion by 2026 as several digital learning tools become increasingly available. Why should we pursue digital learning platforms in the education sector in the underdeveloped world?

1. Focus on reaching the most marginalised children.
2. Digital education can enrich group activities and project-based learning.
3. Digital learning tools are able to improve learning outcomes in a short amount of time, especially for academically weaker students.

For more information on the availability, role, holistic learning opportunities, and the significance of further research in digital education, please

visit: <https://www.unicef.org/media/132096/file/Pulse%20Check.pdf>

Recommendations

The digital learning sector is expected to be \$45.8 billion by 2026 as several digital learning tools become increasingly available. The future of digital learning in developing countries like Pakistan holds great potential. There is a clear need for alleviating illiteracy in Pakistan and Pakistani parents seem to be committed to achieving increased education for their children. My work experience and research shows that:

1. Microschools are an effective tool to educate children in areas where a regular school and teachers are not available. Therefore, there is a great need to expand the microschool system to effectively address illiteracy in Pakistan.
2. Digital learning increases focus on reaching the most marginalized children.
3. Digital learning requires increased internet connectivity and easy access to smartphones and tablets. Such resources must be more accessible to as many children as possible.
4. Digital learning can enrich group activities and project based learning. There is a need to expand the online education platform to provide for diverse needs of the children.
5. Digital learning tools are able to improve learning outcomes in a short amount of time, especially for academically weaker students and those with learning disabilities.
6. Teach The World Foundation may work with the Pakistani government for federal financing and expand its teaching model.

Sources of Interest

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For More Information

Visit Teach The World Foundation at <https://www.teachtheworldfoundation.com> to learn more about the impact of digital education in the developing world.



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