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Experiment With Holistic Rural Development in Northeast India:

Early Results and Challenges



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Poverty poses many challenges, affecting opportunity, skill acquisition, education, self-esteem, health, family stability, and a clean environment. These challenges cannot be adequately addressed by humanitarian efforts that focus on only one of these aspects at a time. Often, attempted solutions temporarily treat the symptoms, rather than the root causes of the disease. In order to help generations finally break the cycle of poverty, rather than just endure it, a more comprehensive, holistic approach is needed.

Akshar Forum, an experimental livelihood school in the semi-rural village of Pamohi, Assam, in Northeast India, tests cutting-edge methods in education in the context of underserved communities and rural development programs. Started in 2015, the school links 42 children and their parents to the vast knowledge resources of the Internet to teach them how to earn a living, start a business, initiate development work in their own communities, and act as stewards for their local environment. The school is developing a number of for-profit social enterprises: a shop for handcrafts, a soap-making business, a health clinic, a community bank, an office for legal and financial services, a laundromat business, and an environmental remediation company—all designed to provide vocational training to teenage students while simultaneously working toward the development of the community.

The school functions on the belief that all of an individual's basic needs must be met in order to achieve self-actualization and escape cyclic, systemic poverty. Akshar Forum

employs a student-centered model to help each individual student find the most fitting career path and maximize their earnings in a competitive labor market.

Akshar Forum is an ongoing experiment; we have implemented a series of innovative practices, supporting active participation from students and parents, and making modifications as we assess the efficacy of various strategies.

Students Teaching Students: A viral model of education for exponential dissemination of knowledge

Every student at Akshar Forum is trained to be an effective tutor and instructor to children in grade levels beneath them.

- **Wages for Students.** Student teachers are paid a small “wage” in toy money, which they exchange for school supplies, clothing, food, etc. This gives poor children the opportunity to secure their basic needs, while feeling the satisfaction of earning it themselves. Their wages are commensurate with their academic grade level and skills as a teacher. Students with more knowledge and greater patience and compassion receive higher wages for teaching. Disobedient students are punished by paying fines and receiving fewer teaching positions, rather than by detention or corporal punishment.

Results: Despite having only one year of data, we have had great success with this approach.

- i) Many of our students, some as young as 8 years old, had been coerced—either by their parents or local foremen—into performing manual labor, breaking rocks during 10-hour shifts at the local stone quarry for 200 rupees a day, usually at the expense

of school attendance. After we started providing “wages” for teaching, this practice disappeared entirely and worker children began attending school every day. This may be because parents realized the school could provide needed supplies for the household.

ii) Since they can proceed through the curriculum at their own pace, and since their grade level determines their wages, we saw a marked increase in the amount of schoolwork performed by students, both at home and during free periods. Students reported feeling motivated to learn more, so they could gain more teaching positions and thus earn more. Furthermore, we have been able to assess students’ mastery of topics based on their ability to teach it.

iii) Through teaching, the children gained greater sympathy for their adult teachers. A collegial atmosphere developed between students and adult teachers; we expect they will be even more helpful as they get older and gain more experience in teaching. Student teachers steadily gained self-esteem and leadership ability, and they have developed a stronger work ethic—all invaluable livelihood assets. They also learned about personal finance and accountancy, civic duty, and the rewarding feeling of a good day’s work. Previously defiant students and children with behavioral problems became model students after receiving a degree of respect and positive attention from younger students.



photos courtesy of author

Older student leading younger students through a lesson prepared by senior teacher.

Using fines and threatening fewer teaching positions has proven to be even more effective than detention and timeout for disciplining students. Most interestingly, the students displayed greater capacity for metacognition (thinking about thoughts) by simplifying complex concepts for younger students. Their skills as teachers grow every day.

iv) Hiring students has allowed us to achieve optimally low teacher-student ratios affordably. Small classrooms—ideally, no more than seven students—allow for active discussion, focused collaboration, and near-total engagement. Teachers can focus on teaching, rather than crowd control. Furthermore, since every student has started receiving daily one-on-one tutoring from one or more older student teachers, their pace of learning has accelerated exponentially. While more time is required to make accurate predictions, most of our students are currently on track to a significantly early graduation.

- **Small Classrooms.** Typically, classrooms in underserved schools serve 40 students. The small classes at Akshar Forum allow for personal learning environments. Senior teachers assign older children, college students, and volunteers to lead small groups of children through lectures, videos, activities, and projects.

Results: Students in smaller classes show far higher rates of engagement, concentration, and retention. Junior teachers can ensure every student is following the material. Since their wages are much lower than a professional

teacher's, using college students, volunteers, and older children as junior teachers has allowed us to achieve optimally low student-teacher ratios while maintaining a cost per child that is competitive with government schools.

A Focus on Livelihoods: Training both children and parents to maximize their earning power

Parents and students come to understand that the school's mission, first and foremost, is to teach them how to prosper. Consequently, both children and parents adopt a growth mindset, priming themselves for skill acquisition.

- **Women's Business Training.** Unemployed mothers and young women from the community attend training sessions to start a small business enterprise. They learn to make handcrafts from clay and recycled plastic, which Akshar Forum markets and sells as household items and jewelry. We provide micro-loans to the women for initial expenses, then purchase finished products from them. They learn the fundamentals of accounting and balancing a budget. Currently, we manage distribution of their products, but the goal is to help the mothers found their own self-sustaining, autonomous social enterprises they can operate in partnership with Akshar Forum. To this end, we have been helping the mothers acquire essential documents, such as birth certificates and identity cards, and set up bank accounts.

Results: The mothers, some as young as 18, are eager to start earning money. They have been extremely receptive to English language and computer literacy training and are also motivated by a desire to help their children with homework. In addition, the women's cooperative is quickly becoming a kind of women's council for the



Mothers attend a training session with a professional artist.

village, which suffers high rates of domestic abuse and alcoholism. However, attendance and punctuality have been an issue, as the women are expected to manage a heavy load of housework and, in some cases, they are not able to gain permission from their husbands to participate.

- **Men's Employment.** High rates of unemployment and alcoholism among the men of the village of Pamohi contribute to the instability of our students' homes. Akshar Forum, a constantly growing school, offers construction jobs to the fathers (although more highly skilled labor is available). The men are also trained and employed for building furniture, installing electrical appliances, and digging wells. We are in the planning stages for

a local business focused on community development: sanitation, environmental remediation, and installation of water filters and solar panels, specifically to employ the fathers and unemployed young men of the community. In addition, Akshar Forum is reaching out to new companies and factories to find stable, gainful employment for the fathers, and invite them to attend alcohol addiction workshops.

Results: The men, traditionally more detached and reserved, are starting to feel like a part of the school community and to take pride in building classrooms for their children. Although less receptive to literacy projects, the men are eager to gain vocational skills that will make them more employable. The men also required

assistance with filing basic documents. More time is needed to encourage serious change in this group.

Student-Centered Curriculum: Training for initiative, independent agency, and enterprise

Akshar Forum strives to provide the same quality of education as elite private schools, which are starting to embrace increasingly student-centered pedagogies. The goal is to create a comfortable, nurturing intellectual space, comparable to the nurturing environment that affluent, educated parents can provide for their children. This, we believe, is the only way to bridge the achievement gap between children in richer and poorer schools.

- **Individual Learning Pace.** Students proceed through the Cambridge curriculum at their own pace, mastering each topic before proceeding to the next one. In conventional schools, some children must be rushed through grade levels without properly mastering the basics, leading to further frustration down the line and, eventually, a distaste for learning. And children who could progress faster than their peers are held back, so the group can proceed at the same pace.

Results: We have found that when students can take their time to master each step, teachers can ensure that *every* student enjoys doing schoolwork and that every student is challenged to the greatest extent. This creates a relaxed, stress-free learning environment, as students are fully engaged and ready to cooperate with teachers. We have also experienced unusually high attendance rates (over 90%) and a dropout rate of zero (thus far), despite many of our students having dropped out of government schools. Some students

said they were unable to keep up with the pace of learning at other schools and, after repeatedly failing grades, stopped attending school. Students who have failed in other schools are quickly regaining confidence and accelerating along the learning curve; academically talented students are greatly motivated by the option of early graduation. Some students are advancing rapidly in certain subjects. For example, 10-year old Rajesh, a former child laborer at the local stone quarry with no prior schooling, easily completed four grade levels of mathematics within one year. At this rate, we have little doubt Rajesh will be able to pass the Cambridge Ordinary level mathematics examination well before his thirteenth birthday.

- **Independent Learning Periods.** In addition to classroom assignments and traditional lectures, a significant portion of the school day consists of learning periods when students are encouraged to explore their talents and improve skills across a wide variety of intelligences. Teachers observe the students' preferences (to determine aptitudes and career options) and help them with the activities they choose to do, providing guidance and encouragement.

Results: Students choose to engage in a wide range of activities, including reading, writing, drawing, playing sports, and watching English language films and documentaries. Some older students use this time to tutor younger children to earn more money. Others use this time to ask teachers for help to address individual weaknesses. Teachers use the time to discuss homework, assess the students' preferences, and help students think about



Students engaged in a variety of activities during independent learning period.

future career options. A few students did not know what to do without being given clear instructions (learned helplessness); they have since learned to take the initiative to work on an area of personal growth. The students love being at school, and we expect this enthusiasm for schooling and high attendance to translate into more positive academic outcomes.

- **Optional Homework.** Students are free to assemble their own homework packet at the end of the day, under advisement from their senior teacher. Students are also free to opt out of homework for the day. Students who don't do homework receive fewer teaching positions.

Results: Contrary to conventional wisdom, students complete even *more* homework, at a far higher standard of quality, when they are free to choose their own work. Students show off their accomplishments and often compete over who can complete the most homework. The students' choices reveal

their preferences as well as strengths and weaknesses, which the senior teacher notes.

Technological Literacy: Bridging the digital divide

Akshar Forum teaches students to access the vast knowledge resources available on the Internet using computers and tablets. Use of technology can help to compensate for the shortage of teachers in underserved communities.

- **Laptop Presentations.** Teachers use laptops to present learning videos, lectures, documentaries, and films.

The teacher sits beside the display and explains the content to the students, pausing for questions and discussion. The junior teachers can be assisted by videos of world famous lecturers, science documentaries, and compelling visual aids. Film study is used to teach English language and the art of storytelling. Young students watch animated lessons about the alphabet, numbers, nursery rhymes, classic stories, and basic spelling.

Results: Using a computer, even the junior teachers can keep students engaged. A wealth of knowledge can be accessed on the Internet, presented via entertaining multimedia that combines visual and auditory learning. Teachers are able to encourage lively discussion after watching videos. The older students are becoming proficient in operating laptops, after leading sessions with younger students.

- **Tablet Applications.** We are gradually incorporating tablets into classwork, with applications that test students on English language and mathematics. Sites like Khan



A young junior teacher presents a video of alphabet flashcards with accompanying sounds and cartoons.

Academy, EdX, and TED offer material on a wide spectrum of topics, with videos and interactive exercises.

Results: Tablets fully engage the students, using visual and auditory stimuli. Use of tablets can mean decreased costs associated with printing worksheets and purchasing workbooks. At the same time, students gain a degree of computer literacy simply by completing exercises on the tablet.

Healthy Living: Health, hygiene, and environmental remediation
Akshar Forum teaches essential principles of health and sanitation, in addition to training children and adults to act as stewards for the local environment.

- **Student Health.** We have implemented a number of programs designed to improve the health of our students and their parents. In partnership with local universities and nongovernmental organizations, we hold periodic medical camps that offer check-ups by doctors. One such camp included a seminar on Ayurvedic herbal medicine delivered by university professors to the mothers of our students, including natural remedies for common illnesses. Volunteer doctors provided us with a comprehensive list of our students' health issues, including malnutrition and parasitic diseases. We provided treatment options directly to the parents. The students, many of whom did not regularly use soap or toothbrushes, also received instruction on basic hygiene, sanitation, and health.

Results: Initially, students were mistrustful and afraid of the doctors, but quickly



Tablets provide students learning the alphabet with visual, auditory, and tactile reinforcement. Instruction can continue without a teacher present.



A student with aspirations of being a doctor learns to clean and treat minor injuries.

learned to trust them and heed their advice on health and sanitation. Most of the students have adopted regular hand washing, shampooing, and bathing practices. In addition, older students have started to treat and clean the injuries of younger students, proclaiming themselves to be “doctors.” Parents are also showing greater awareness of health issues and taking greater care to protect their children from disease.

- **Student Nutrition.** Before we started a school lunch program, our students would eat mostly cheap junk food. They used to drink unfiltered, unprocessed well water without hesitation. Some of our students were severely malnourished, with unemployed, alcoholic parents who sent them to school without food. We now provide a lunch for our students, including whole milk to compensate for protein and calorie deficiencies. We also

provide clean, filtered water to all the students and encourage them to treat water at home.

Results: Malnourished students are starting to approach healthy weights. Rashes and parasites have been addressed, with greater vigilance from the parents regarding possible complications. In addition, healthier eating practices are being adopted at home, and we have taught parents about the dietary needs of growing children.

- **Nature Preservation.** Initially, our students and their parents engaged in the widespread practice of discarding litter and refuse wherever they stood. We have instructed our students and parents in proper disposal of waste and organized a series of environmental clean-up operations at the nearby nature sanctuary, a major dumping ground.

Results: Students and parents have learned to take pride in their beautiful, lush environment and have stopped randomly discarding and burning refuse. Mothers are incorporating used plastic into their handicrafts. Plans are underway to secure a contract from the local government for the fathers to install rubbish bins throughout the sanctuary.

- **Tree Planting.** Students and parents engage in regular tree planting. The goal is to incubate a rapid afforestation enterprise that can create mini-forests on private or public land, serving as carbon sequestration factories and providing edible fruit in the process. The process involves performing a thorough analysis of soil and selecting saplings ideally suited to the environment.



Even young students enjoy participating in tree planting activities.

Empty land can be converted into dense young forests within two years.

Results: Our students learned a great deal about biology and ecology and developed a greater sense of connectedness with the environment. They now believe they can help to protect the environment from large-scale degradation, and they are willing to work toward that goal. A program like this implemented on a massive scale could have significant effects on the climate, while simultaneously helping children develop into responsible global citizens who can make scientifically sound decisions when they vote or buy products.

Conclusions

The majority of our new practices have yielded very promising initial results. Most important of these are the intangible changes we are starting to see in the students and parents: a greater sense of dignity and self-worth; feelings of responsibility for their lives and

environment; greater confidence, ambition, and a stronger work ethic; and optimism for the future and their children's futures. We expect these changes will help many of them to overcome the challenges of poverty and income inequality. We also hope that governments and organizations will start to address the issues of the whole individual, rather than treating separate domains of life.

Employment is unattainable without education. Education is futile if children are malnourished and abused at home. Enterprise is impossible without self-esteem and independence. We know what human beings need in order to prosper; we must help them to earn these basic needs, to create a more educated, equitable, and stable populace, equipped to overcome the great challenges we will face.

If we have educated, empowered, enterprising people, it may be enough to avert the existential threats facing the global community. And it starts by educating the whole child. •