Big Ideas Berkeley: **Mobiles for Reading category | Dost | Sneha Sheth & Sindhuja Jeyabal**

1. Problem Statement

757 million adults still lack basic reading and writing skills, resulting in a massive social injustice and lower earning potential for families[i]. Positive environments during early childhood (birth to age six) – including an educated mother and intellectual stimulation – can improve the child's well-being, school readiness, and success in life.[ii] Many parents, specifically women who account for two-thirds of all illiterate adults[iii], lack the information and education required to provide their children these positive early learning experiences. Our team's Big Idea is to innovate at the intersection of early childhood education and parent engagement. **By preparing less literate mothers to deliver early learning experiences for their children, we will increase children's intellectual and social achievement in school and beyond.**

Without early learning experiences and support for cognitive development, many kids are unprepared to thrive in primary school. UNESCO estimates that more than 250 million primary school children cannot read, write or do basic math, resulting in great inequality and a loss for governments of approximately $129 billion annually.[iv] At least one-quarter of these illiterate children live in South Asia and more specifically, in India,[v] where only half of 5th graders can read at a 2nd grade level.[vi] If we can empower moms to tackle this situation, they can help unlock potential that exists within their family and communities and enable social and economic growth.

In India, low-income urban parents are prioritizing their household spend on mobile phones and education, presenting a demand for innovative education solutions. Our team has seen the impact of parental engagement and education within our own families in India and has launched a small pilot (100 users) in Mumbai. Our field research found that low-middle income urban mothers are willing to spend $1-3 per child per month before their children reach primary school age. Further, 70% of these mothers have their own cell phone that is not shared with another family member. Projections estimate India's urban slum population to rise over 100 million by 2017, representing an enormous number of families who would be impacted by a mobile literacy innovation.[vii]

2. Existing Solutions

In India, early childhood solutions are focused on child nutrition, while in developed countries, early literacy solutions involve elite daycares or smartphone apps. Our team has analyzed comparable solutions below and sees a gap in engaging urban mothers in developing countries.

1. Traditional daycare or community centers in urban slums: Centers can potentially have a deeper impact than a mobile phone option, but are limited in scale, vary in quality, and face high teacher-student ratios. Furthermore, daycare centers are not accessible to all parents, and offer little training to parents. Centers achieve infrequent (monthly) face-to-face interactions with illiterate, busy parents. Examples include Kidogo (Kenya) and CORP (India).

2. Parent engagement voice call services: Existing services have potential to scale but are exclusively focused on pregnancy and child nutrition issues. Most rely on grant funding, but

some sell their services to larger NGOs. These services do a good job of focusing on maternal and child health, but do not enable the mom to influence the child's learning. They collect little feedback or information to ensure the content is curated for the user. Examples include MAMA, TotoHealth (Kenya) and mMitra (India).

3. Parent engagement apps: Apps have potential to scale but are typically focused on developed country, literate populations. Examples are limited but a new company named Muse is in its start-up phase. At present, apps requiring smartphones would not address the needs of urban slum populations in India, though this could change in the next 5-10 years.

3. Proposed Innovation

Our Big Idea, "Dost," will give low-income moms a leg up on their child's primary school readiness and amplify the impact of existing early childhood education programs. Through short, prerecorded voice messages delivered via a call to feature mobile phones, Dost offers moms a low-cost and highly scalable approach to access the knowledge they crave and unleash their child's potential. Dost is unique because it delivers action-oriented content and can reach illiterate moms using technology already in their hands.

Dost's end users are illiterate women who have children below the age of six. They own a feature phone and know how to use it, but are limited in their ability to read. Dost's customers are NGOs and CSR departments trying to provide access to early childhood education. These program's touchpoints with their end beneficiaries are limited to monthly in-person meetings at best, making it difficult to keep moms engaged and informed. They need a cheap mechanism to communicate with moms in a mass customized and frequent medium.

Here is how we envision Dost works. We reach target users – primarily low-income mothers from urban communities – through existing networks and ask them to dial a number to sign up for Dost. Four times a week, a user receives a phone call with a prerecorded voice message. The message is no longer than 2 minutes, and typically falls within the following two categories: 1) Knowledge and tips related to child development and 2) Do it yourself home activities to promote number and English language literacy. The content concludes with a touch-tone response question for feedback. Over time, Dost collects more data about its users' demographic profile and goals via touch-tone responses, allowing Dost to customize the content deployed in real time.

Dost aims to be an invaluable tool for low-income urban families as they begin their child's educational journey. Voice calls are the single best way to reach millions of these families today, and in a few years, these families will begin using smartphones and buying data. As that transition occurs, Dost will develop an application and move beyond voice call content. In the near term, milestones to prepare for implementation include:

- Expand and produce Dost content library
- Build Dost's technical platform, allowing for robust content customization and user interaction

- Develop and test multiple financial models, including direct to customer, through partner organizations, or via grant funding
- Continue to develop marketing and distribution partners with large networks, e.g. global NGOs, community-based organizations, schools or hospitals
- Re-launch pilot with 1,000 users in Dharavi and apply data science techniques to draw insights on which features and content are most relevant for our users

The team anticipates implementation challenges such as lack of community buy-in or culturally irrelevant content. As part of a mitigation strategy, Dost will partner with NGOs such as CORP Mumbai and the India Literacy Project, who have years of credibility and trust within their communities. These organizations have agreed to facilitate testing and implementation of Dost and will support the co-creation of content and user onboarding / interaction processes.

4. Team Bios

Sneha Sheth conceptualized and ran the pilot launch of Dost during Summer 2015 and Sindhuja Jeyabal joined the team in Fall 2015. Together, they are working on Dost in the Social Lean Launchpad course offered at Berkeley-Haas with mentorship from Sandeep Shroff (San Francisco) and Gayatri Lobo (Mumbai). We are seeking expertise in early childhood curriculum development and hope to find it at UC Berkeley.

Sneha Sheth (Strategy and Implementation Lead): Sneha is a Berkeley-Haas MBA student with experience designing programs for women's empowerment and education in Mumbai, Cairo and Nairobi. Sneha is an expert in bridging the communication and information gap between low-income populations and the institutions aiming to serve that segment's needs. Her skills span fundraising, market research, partnership development and financial analysis. Before Berkeley-Haas, she worked at Dalberg, Teach For India, and Oliver Wyman. The most impressive thing Sneha has accomplished is in her role creating The Women Entrepreneurs Opportunity Facility, the first financing mechanism dedicated to lending capital to women-owned businesses in developing countries. The solution will unlock $600 million in the form of ~100,000 loans for women entrepreneurs. (Please note this project is CONFIDENTIAL.)

Sindhuja Jeyabal (Product and Design Lead): Sindhuja is a graduate student at UC Berkeley's School of Information focusing on data science and outcomes measurement for international development. Her interest in education technology began as a computer scientist working on product design and development for Adobe System's e-learning solution. There, she saw the impact targeted educational content can have on the learner. Last summer, she interned as a data scientist at Castlight Health. Sindhuja has expertise in data mining, web-service design, and mobile application development. She holds a B.E. in Computer Science from the Birla Institute of Technology & Science in Pilani, India. The most impressive thing Sindhuja has accomplished is succeeding in hackathons as an international student and a woman in tech. Two specific projects include Yapi Kapi and SaveSense. Yapi Kapi won first place at UC Berkeley's Hack The Hearst competition, and SaveSense – a social-finance app that helps millennials save money – won the grand prize of $12,000 at the CapitalOne People Money Hack.

[i] UNESCO Institute for Statistics, September 2015.

[ii] National Center for Education Statistics. Parental Education Indicator. July 2010. https://nces.ed.gov/pubs2010/2010015/indicator1_5.asp

[iii] UNESCO Institute for Statistics, September 2015.

[iv] Engle, P. L., Fernald, L. C. H., Alderman, H., Behrman, J., O'Gara, C., Yousafzai, A., Cabral de Mello, M., Hidrobo, M., Ulkuer, N., Ertem, I., Iltus, S. and Global Child Development Steering Group. 2011. Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries. The Lancet, Vol. 378, No. 9799, pp. 1339-53

[v] UNICEF. The State of the World's Children 2015. November 2014.

[vi] Pratham. ASER 2014: ANNUAL STATUS OF EDUCATION REPORT (India). Main Findings. January 2015.

[vii] India Census Data reported in Times of India. http://timesofindia.indiatimes.com/india/By-2017-Indias-slum-population-will-rise-to-104-million/articleshow/21927474.cms