



Play ‘n’ Learn

Improving Children’s Literacy and Numeracy Skills with Entertaining Android Game Apps

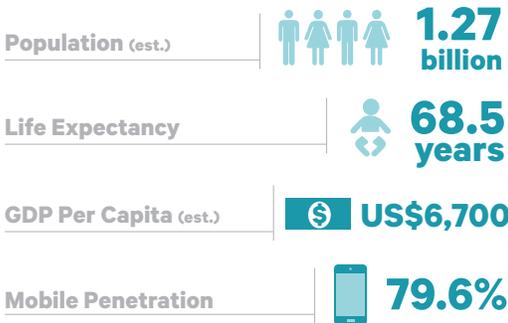
In underserved communities in India, school children ages 6-8 are improving their literacy and numeracy skills while playing fun and entertaining educational games on smartphones and tablets. The Play ‘n’ Learn program combines Qualcomm mobile technology and digital content from Sesame Workshop India’s (SWI) popular Galli Galli Sim Sim (GGSS, the Indian Sesame Street) outreach and television programs to demonstrate how today’s mobile platforms can be used to improve access to quality educational content and transform learning, regardless of a child’s socioeconomic status.

Challenge

- The Annual Status of Education Report (ASER) 2013¹ found that literacy and numeracy skills have declined in the past six years among children ages 5-16 studying in India’s rural schools.
- The Inside Primary Schools report from ASER² noted, “the evidence suggests that children’s learning levels are far from satisfactory and that considerable work still needs to be done to guarantee learning for all children.” Among the challenges are lack of engaging content in classrooms, teacher shortages, low motivation and poor infrastructure.
- The increasing need to improve learning outcomes at all levels is expressed in the Government of India’s 12th Five Year Plan.

INDIA

2017 Statistics*



Solution

- The increasing adoption of smartphones in India has the potential to positively influence the education segment.
- SWI developed a set of 24 games which were mapped to the primary grade school curriculum to improve vocabulary, comprehension, STEM (Science, Technology, Engineering, Math) concepts, identification of shapes, shadows, habitats, numbers, alphabets and spatial understanding in addition to promoting hand washing and sanitation.
- The games featured SWI’s GGSS content and popular characters such as Raya, Boombah, Chamki, Elmo, Googly and Grover. All games are available for free download on the Google Play Store.
- The first phase of the Play ‘n’ Learn program was launched in May 2013 among 40 children from an under-resourced neighborhood of South Delhi.
- The children received 3G enabled smartphones equipped with the educational games.
- After the initial implementation, 3G tablets equipped with the games were provided to more than 370 children in grades 1, 2 and 3 in four government primary schools of the South Delhi Municipal Corporation.
- The digital games were also introduced in 50 primary schools of Patna and Vaishali districts of Bihar, reaching around 4,500 additional children.
- In addition, the games focused on improving sanitation and hygiene were integrated in the “Raho Swachh, Jiyo Mast”³ pilot campaign, reaching over 500 children in urban slums of Kolkata.
- To date, the games have been downloaded over 70,000 times from the Google Play Store.

*Sources: CIA World Factbook (<https://www.cia.gov/library/publications/the-world-factbook/>); Mobile penetration data provided by Ovum World Cellular Information Service and based on market intelligence.

Impact Research^{4,5,6} conducted over the period of the intervention showed that:



Up to 250% Increased Scores

Class 1 and 2 children from the community had more than 1.5 times improvements in scores for word knowledge and imagination as compared to children not exposed to the games. Boys exposed to the games showed four times greater gains in Hindi reading and five times in Hindi comprehension in comparison to boys not part of the intervention. Class 1 and 2 children from the community had more than 2.5 times improvements in scores for Hindi comprehension as compared to children not exposed to GGSS games. Amongst children exposed to the games, girls showed more than 1.5 times more gains in numeracy than boys.



Improved Word Knowledge

Children from Classes 1, 2 and 3 in the Delhi schools showed greater gains in comprehension, word knowledge and imagination. Children exposed to GGSS games in Class 1 showed three times the improvement in word knowledge and imagination as compared to children not exposed to the games.



Increased Math Engagement

Teachers' observed that children's engagement level in Math and Hindi were higher when games were used in classrooms.



Greater Acceptance of Multimedia Among Teachers

Teachers' attitudes towards the use of multimedia in classrooms improved by the end of the intervention as they reported their comfort level increased after using the tablets in their classroom and the majority of them felt that tablet sessions should be introduced in Class 1.



Improved Attendance

Half of the teachers interviewed in Delhi said that the tablet sessions had improved attendance especially on the tablet session days. Teachers reported that tablet sessions have had positive feedback from parents.

Program Stakeholders



¹ [HTTP://WWW.ASERCENTRE.ORG/KEYWORDS/P/205.HTML](http://www.asercentre.org/keywords/p/205.html)

² [HTTP://WWW.ASERCENTRE.ORG/P/62.HTML](http://www.asercentre.org/p/62.html)

³ SUPPORTED BY THE BILL & MELINDA GATES FOUNDATION, SESAME WORKSHOP INDIA HAS IMPLEMENTED A PILOT CAMPAIGN IN KOLKATA, WHICH AIMS TO IMPROVE SANITATION RELATED BEHAVIORS AMONGST THE PARTICIPATING CHILDREN AND COMMUNITIES

⁴ IMPACT ASSESSMENT OF DIGITAL INTERVENTION ON PRIMARY HINDI & MATHS SKILLS IN MARGINALIZED COMMUNITY, BGM POLICY INNOVATION PVT. LTD. (SEPTEMBER 2013)

⁵ IMPACT ASSESSMENT OF DIGITAL INTERVENTION ON PRIMARY HINDI & MATHS SKILLS IN MUNICIPAL CORPORATION OF DELHI SCHOOLS, NEW CONCEPT INFORMATION SYSTEMS PVT. LTD. (JUNE 2014)

⁶ ACR DIGITAL QUALITATIVE STUDY- VAISHALI, BIHAR – NEW CONCEPT INFORMATION SYSTEM PVT. LTD. (MAY 2014)

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