Play.Connect.Learn

The Need

While enrollment in primary school is almost universal in India, recent research[1] has indicated that more than 90% children in Grade 1 (age 6) cannot read at grade level. In fact, a recently released global report[2] on education indicates that, in rural India in 2016, only half of grade 5 students could fluently read text at the level of the grade 2 curriculum. These findings indicate that these students face the prospect of lost opportunity and lower wages in later life because schools are failing to educate them to succeed in life. *Galli Galli Sim Sim* (GGSS) is addressing this need by providing innovative and engaging literacy content that is aligned with the national curriculum, to make a meaningful difference in children's reading outcomes.

The Play.Connect.Learn (PCL) Project

Galli Galli Sim Sim (GGSS) - the Indian adaptation of the popular Sesame Street is a multi-platform initiative that combines the power of television and educational outreach to help children in India be better prepared for school and for life. Sesame Workshop in India (SWI) through the PCL project aimed to improve children's early grade reading skills—specifically, foundational literacy skills and reading comprehension—in their mother tongue, Marathi, by creating and distributing a smartphone application (app) to families for use by their children outside of school. The app featured self-paced, audio storybooks with accompanying comprehension games and assessments which enabled children to progress at their own pace. This application was developed with support from a Marathi-language expert and was distributed to over 12,000 families spread across 6 districts of Maharashtra, India. The intervention took place from June 2016 to June 2017.

The Curriculum and Content

The content for the PCL project was informed by the outcomes of the language curriculum outlined in the National Council of Educational Research and Training (NCERT)[3]. For the PCL project, storybooks appropriate for Grade 1 and 2 were contextually adapted to make them relevant for children in the state of Maharashtra. The children in the project received reading experiences through the smartphone app that contained self-paced reading material in the form of audio storybooks, comprehension games and in-built assessments. SWI provided three, leveled packages for children and their families. Along with these packages, SWI provided additional digitized (PDF) storybooks to inculcate the habit of reading in children.

Methodology

The impact of this initiative was measured through a quasi-experimental design with a matched control group[4] featuring a pre-test at baseline - before commencement of the intervention (June 2016) and a post-test at endline – at the end of the intervention (April to July 2017). The study used the Early Grade

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[1]Annual Status of Education (Rural) Report - ASER 2016
[2]World Development Report 2018 (WDR 2018)—LEARNING to Realize Education's Promise
[3]The National Council of Educational Research and Training (NCERT) is an autonomous organisation set up in 1961 by the Government of India to assist and advise the Central and State Governments on policies and programmes for qualitative improvement in school education.
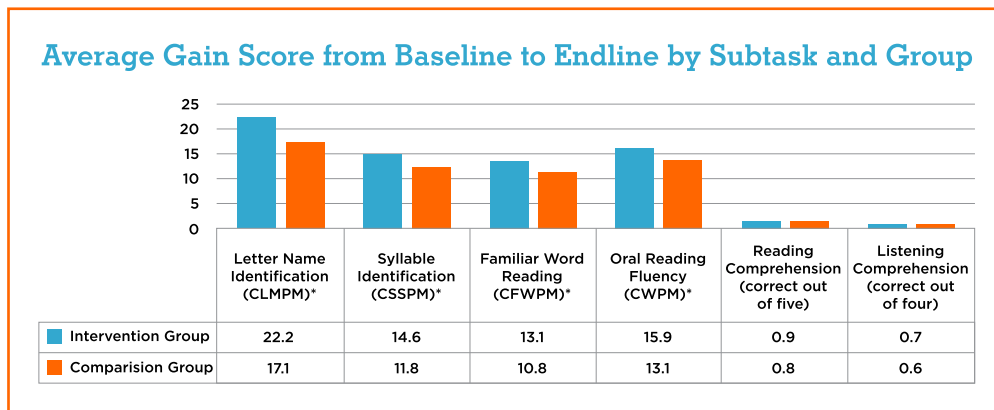[4]A group of children with no access to our intervention.

Reading Assessment (EGRA) tool modified to assess reading levels of children in Marathi. Families in the treatment group received the three different packages approximately every 3 months and were visited by a PCL team member who could help answer questions about the use of the materials. Families in the treatment group who did not have a smartphone were given one.

Results

The study shows that on average, students who received the PCL intervention had statistically significant gains in their reading skills over the life of the project on 4 of the 6 indicators tested which measure pre-reading and foundational skills— namely, letter name identification, syllable identification, familiar word reading, and oral reading fluency (ORF) — than students who did not receive the intervention.

Average Gain Score from Baseline to Endline by Subtask and Group

	Letter Name Identification (CLMPM)*	Syllable Identification (CSSPM)*	Familiar Word Reading (CFWPM)*	Oral Reading Fluency (CWPM)*	Reading Comprehension (correct out of five)	Listening Comprehension (correct out of four)
Intervention Group	22.2	14.6	13.1	15.9	0.9	0.7
Comparision Group	17.1	11.8	10.8	13.1	0.8	0.6

*Note: * indicates the gain scores for the intervention group were significantly higher than the gain scores for the comparison group at p<0.05. N sizes: Intervention Group n=313; Comparison Group n=314.*

Additionally, the proportion of students in the intervention group who received zero scores at endline was statistically significantly lower than that of the comparison group on three subtasks: syllable identification, familiar word reading, and ORF. The treatment and the comparison group did not differ on these skills significantly at baseline making these results even more compelling.

What's the takeaway?

The PCL project was successful in improving children's early grade reading skills - specifically, foundational literacy skills and reading comprehension - in their mother tongue, Marathi. Given the promising results and the potential for the PCL project model to be scaled, SWI looks forward to continuing this important work especially considering the estimated upsurge in smartphone penetration and connectivity over the next few years.

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For more information, please contact:
Siddharth Pillai
Sesame Workshop India Trust
siddharth.pillai@sesame.org
+91 8800091792

Galli Sim Galli Sim
SESAME STREET
www.galligalisimsim.com