

# PlanetRead: Executive Summary

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## Same Language Subtitling on TV:

Putting Children's Reading Literacy on a Path to Lifelong Practice and Improvement



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# Same Language Subtitling on TV: Putting Children's Reading Literacy on a Path to Lifelong Practice and Improvement

## Making it impossible to remain a non-reader

Thanks to the Right to Education Act (2009), India has achieved near-universal enrolment of children, aged 6-14, in school. That big bold step by Parliament has not, however, been accompanied on the ground with a deliverance of "quality" education. This is acutely encapsulated in the Annual Status of Education Report (ASER, 2014) that only 48.1% rural children in Grade 5 could read a Grade 2 level text.

The scale on which such a destructive level of reading, and by consequence, educational achievement is playing out, boggles the mind. According to Census 2011, there are 205 million children in the 6-14 age group in India's schools. Half of them are on course to becoming non-reading and poorly-educated youth and adults. At least for the last decade since ASER has been putting out its annual reports, not much has changed, and it won't fundamentally through school-system tinkering or small-scale boutique projects that may have a feel good quality, but are practically impossible to scale.

We need a disruptive solution, a solution that can change the reading acquisition dynamic, from a national status quo of low achievement to one in which it becomes impossible to remain a non-reader. An observation first, it is impossible to grow up in India and not develop at least a passing and lifelong interest in Bollywood movies and songs. For the overwhelming majority of 1.31 billion people, Bollywood is a passion without parallel.<sup>1</sup>

## Same Language Subtitling (SLS)

In essence, Same Language Subtitling (SLS) is Bollywood fortified with subtitles, for mass literacy. Conceived in 1996, SLS is simply the idea of subtitling mainstream TV content in the "same" language as the audio. What you hear is what you read. Several previous research studies have found that SLS causes automatic and inescapable reading engagement among viewers. Especially on song-based content, regular SLS exposure is known to contribute to reading skill improvement.

From 2002-13, the Indian Institute of Management, Ahmedabad and non-profit PlanetRead ran several SLS pilots in partnership with Doordarshan, India's national/state TV network. SLS was implemented across India on song-based programming in 8 major languages: Hindi, Bengali, Gujarati, Marathi, Telugu, Tamil, Kannada, and Punjabi. In all those pilots, SLS was not scaled up and only implemented on one weekly episode in any language/state. But even in a low frequency state, SLS had a measurable and positive impact on reading skills when implemented over a sustained period.<sup>23</sup> So what could happen if SLS were to be scaled up on every song, in every language, on all of mainstream TV, as the SLS project has been advocating for, since 2006?

## SLS scale up in Maharashtra state

Under an All Children Reading Challenge (ACR) grant from USAID, PlanetRead was able to scale up SLS massively in the state of Maharashtra, population 114 million, and 9.2 million school children in the 6-14 age group with access to TV.

From June 2013 to May 2015, nearly two years, PlanetRead added SLS on all the songs of 10 weekly Marathi movies telecast in prime time, on Zee Talkies, the state's most popular 24 x 7 Marathi movie channel. The song-subtitled movies were further repeat-telecasted in other slots on Zee Talkies and on Zee Marathi, also the state's most

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<sup>1</sup> India has nearly 800 million TV viewers already and slated to cross one billion in 2-3 years. The average Indian watches a little over two hours of TV a day. Content is available in a mix of more than 20 languages, on 600 channels. Bollywood produces around 1000 movies a year, each with an average of 5-6 songs. Bollywood songs are a dominant force on TV in India.

<sup>2</sup> Kothari, Brij and Tathagata Bandyopadhyay (2014). Same Language Subtitling of Bollywood film songs on TV: Effects on literacy. *Information Technologies & International Development*, 10(4), 31-47.

<sup>3</sup> Kothari, Brij, Avinash Pandey, and Amita Chudgar (2004). Reading Out of the "Idiot Box": Same-Language Subtitling on Television in India. *Information Technologies and International Development*, vol. 2(1): 23-44.

popular Marathi general entertainment channel. Together, this resulted in an unprecedented scale up of SLS in the Maharashtra, far more than even the project had planned for or anticipated. Did the SLS scale up in Maharashtra have any impact on school children’s reading skills in the state?

### Methodology

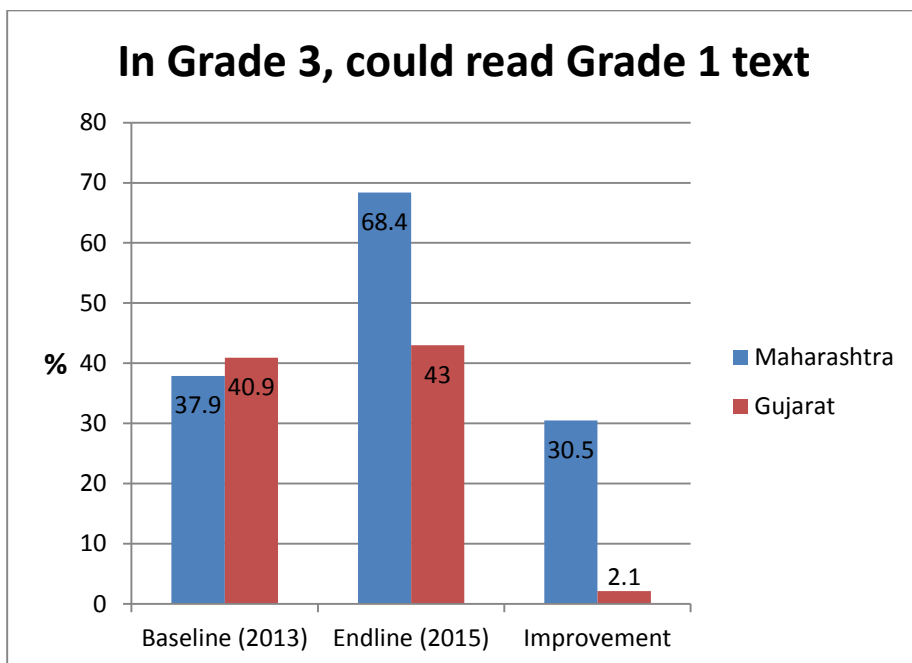
The Baseline (June 2013) and endline (May 2015) impact data were commissioned to an independent agency, Pratham’s ASER group, arguably India’s most reputed agency for a survey of reading skills. All the randomly sampled children were administered a series of reading exercises/tests with increasing level of difficulty, from decoding letters, reading simple and complex words to reading short texts at Grade 1, Grade 2, and Grade 5 levels.

### Impact of SLS on children’s reading

Generally, Grade 3 is a good point to assess a school system’s deliverance of reading skills. The trajectory of further reading skill development and educational progress is to a large extent determined by what has transpired by the end of Grade 3. So we took a snapshot of Grade 3 reading skills in Maharashtra, at the baseline (June 2013) and the endline (May 2015).

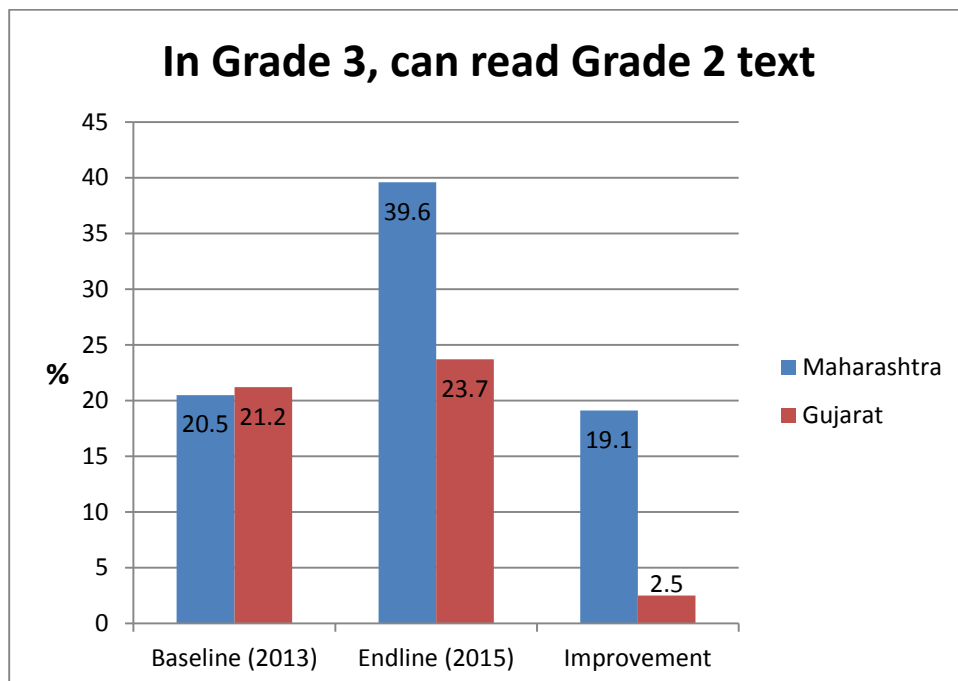
In Maharashtra, 30.5% more children in Grade 3 progressed to Grade 1 reading ability. In Gujarat, only 2.1% did (Figure 1).

**Figure 1: Percent in Grade 3 able to read at Grade 1 level**



The pattern is similar for those in Grade 3 and able to read at a higher, Grade 2 level (Figure 2). From baseline to endline, 19.1% more children are able to do so in Maharashtra as compared to 2.5% more children in Gujarat.

**Figure 2: Percent in Grade 3 able to read at Grade 2 level**



Clearly, something significant happened for children’s reading in Maharashtra that Gujarat could not match. But how do we know the impact was due to SLS?

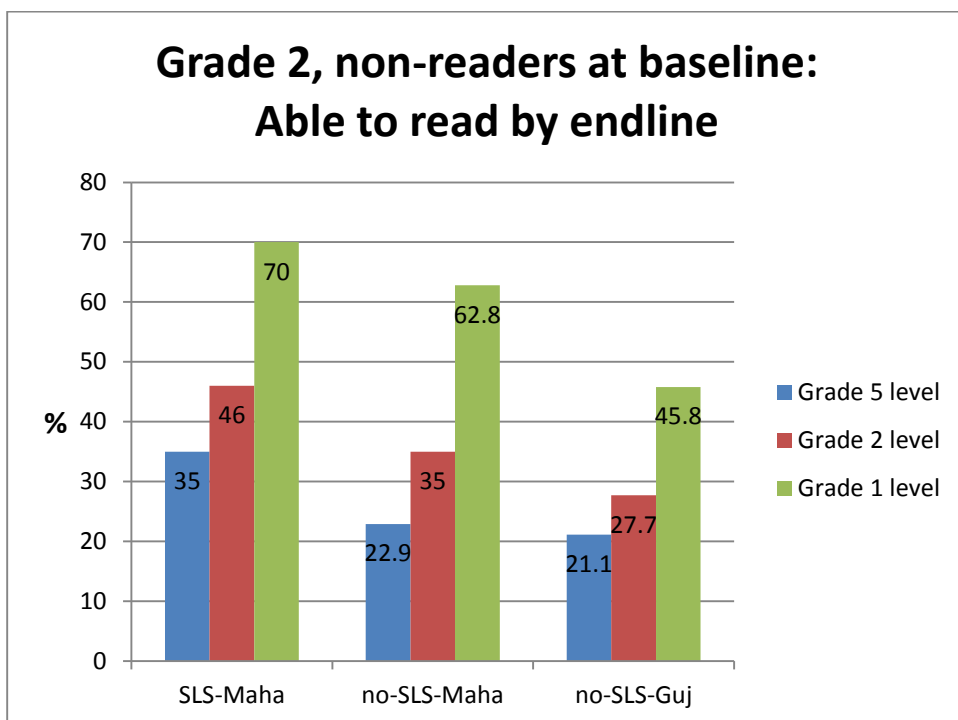
To answer that question, we did a more focused comparison of impacts on those who clearly would have got SLS exposure simply because of access to Zee’s Marathi channels at home (SLS-Maharashtra or SLS-Maha) and those who could not have, at least not to the same extent, due to the non-availability of those same channels at home, in Maharashtra (no-SLS-Maha) and in Gujarat (no-SLS-Guj).

*Impact on Grade 2 children at risk*

Specifically, we looked at the impact of SLS on children in Grade 2 at the baseline, who could not read a Grade 1 level text, in other words, those already falling behind in early grades and unable to read a simple text. What happened to these at risk children after 2 years, by which time they would have nearly completed Grade 4, in the SLS and no-SLS groups?

At every reading level measured, the SLS group did markedly better than both the no-SLS groups (Figure 3). Within Maharashtra, which is a tighter comparison, 12.1% more at-risk Grade 2 children, at the baseline, advanced to Grade 5 level reading ability by the endline; 11% more children in the SLS-group transitioned to Grade 2 level reading; and 7.2% more children in the SLS-group transitioned to Grade 1 level reading. The impact of SLS is even stronger when the SLS-group in Maharashtra is compared to the no-SLS-group in Gujarat.

Figure 3: Grade 2, non-readers at baseline, able to read by endline, in Grade 4

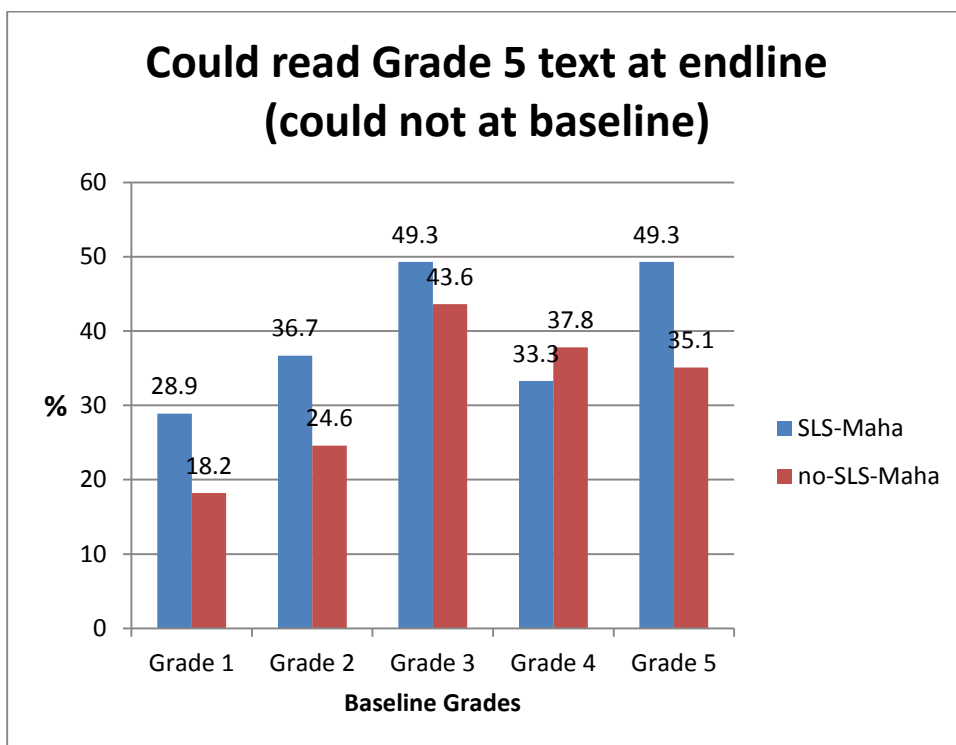


Why did the no-SLS group in Maharashtra do better than the no-SLS group in Gujarat? A possible explanation is that SLS has both direct and indirect impacts. When an intervention contributes positively to raising the reading skills of a significant proportion of children, in our case 38% who had direct access to Zee’s Marathi channels, it raises the reading bar for all children. Another factor may be that children in the no-SLS-Maharashtra group could have enjoyed Zee’s Marathi programming at other people’s houses in the community, which is a common phenomenon in India.

*When should SLS be introduced?*

The earlier SLS is available at home, in parallel with beginning reading instruction, the more a school child will be able to leverage it to reinforce at home what is learned in school. This is confirmed when we look at the impact of SLS on children in different grades at the baseline. All the children in our sample could not read a Grade 5 level text at the baseline. So it is instructive to ask, for every grade at the baseline, what proportion could read a Grade 5 level text, by the endline.

**Figure 4: Impact of SLS in different grades at baseline**



For baseline Grades 1-3, the SLS group clearly outperformed the no-SLS group, however, the difference between the SLS and no-SLS group was largest for Grade 1, slightly smaller for Grade 2 and even smaller for Grade 3 (Figure 4). Earlier grade availability of SLS is better. In Grade 4 (baseline), the impact of SLS was not apparent in our data, although, it resurfaced for those in Grade 5.

*Girls and boys compared*

An analysis of girls and boys, separately, found that both leveraged SLS well. Figures 5 and 6 present for girls and boys, respectively, the proportion that could read a Grade 5 text at the endline. Except for Grade 4 (baseline), for all other grades, the SLS-group did better than the no-SLS group in Maharashtra. Although boys and girls benefited from SLS, boys showed more substantial gains from SLS, especially for Grades 1-2 at the baseline. Without SLS, boys were generally found to be lagging girls in reading achievement. But with SLS, boys were able to close the gap, and for Grades 1-2, leap-frog over girls’ reading achievement. It is not difficult to see why this occurred. Social norms probably make it possible for boys to watch more movies on TV, and the viewing experience itself, less interrupted by household demands.

Figure 5: Impact of SLS on girls in different grades at baseline

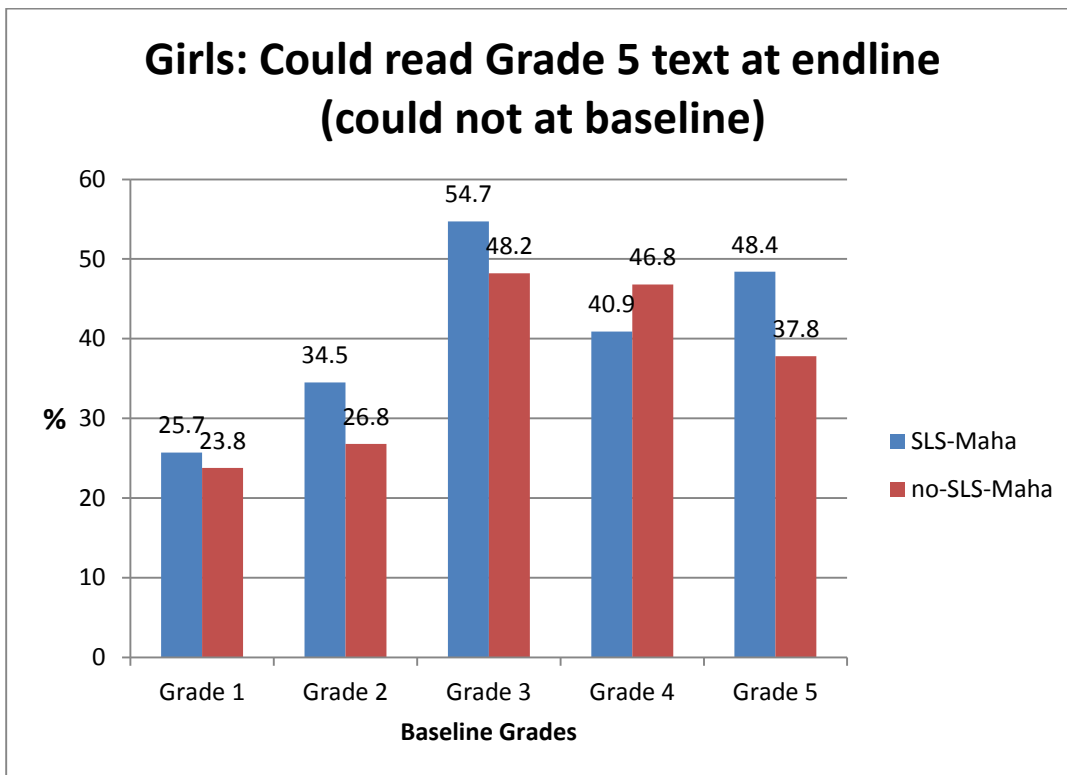
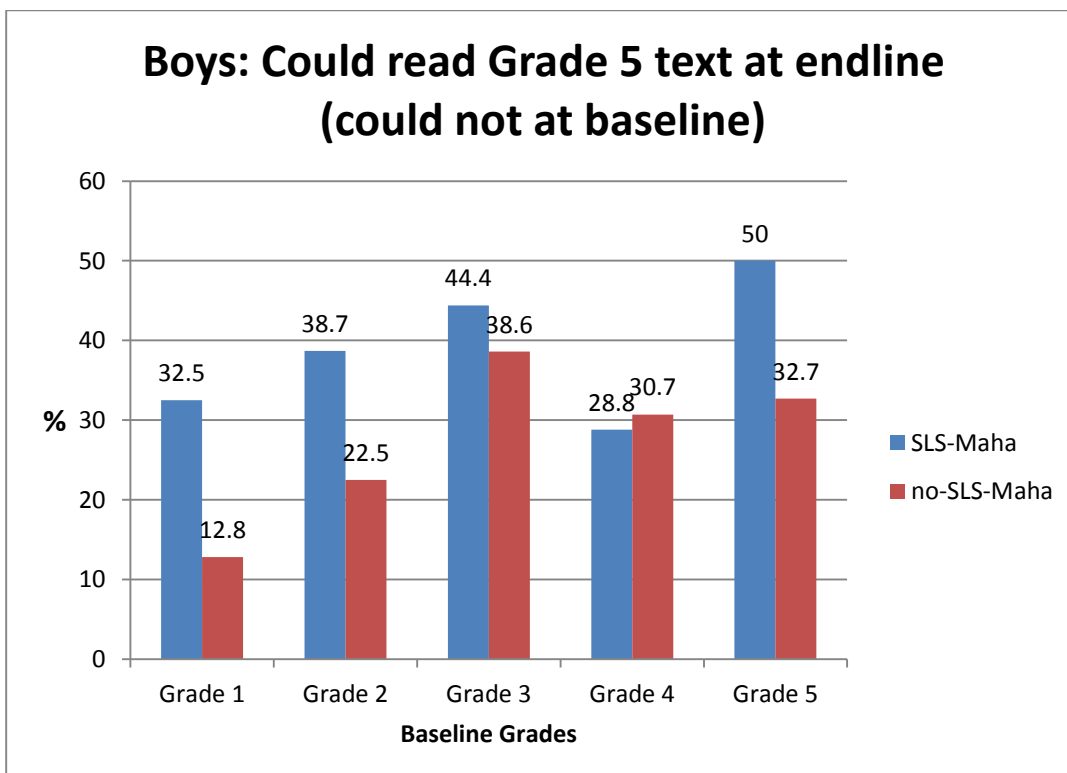


Figure 6: Impact of SLS on boys in different grades at baseline



The weakest readers were those who remained unable to read, even by the endline, a Grade 1 level text. What impact did SLS have on their early reading skills?

Even among children who did not advance to functional reading ability, outcomes for the syllable, simple word, matra/vowel, and complex word exercises showed that mean improvements in the SLS-group were higher than the no-SLS group and the group difference in means were statistically significant.

Less than 4% children remained at absolute zero ability in the SLS-group (could not read a single letter) and who can be clearly said to not be helped, either by schooling and/or SLS. This small percentage most certainly had a learning disability that neither the quality of schooling nor SLS could address.

### **The big picture**

In Maharashtra, 9.2 million children have access to TV at present. Based on our sample, 38% or 3.5 million children have access to Zee Talkies and Zee Marathi. The direct beneficiaries of the SLS intervention are estimated to be 96% of those with direct SLS-exposure, or 3.4 million children. If SLS were to have also been scaled up on DDK Mumbai (state TV for Maharashtra), it would have given direct SLS exposure to 5.7 million children and advanced the reading skills of 5.5 million children. We also saw that the no-SLS group in Maharashtra generally did better than the no-SLS group in Gujarat, suggesting indirect effects. Therefore, the estimated number of children who benefited directly or indirectly from our SLS intervention in Maharashtra, was between 3.4 to 5.5 million.

Our analysis, of course, only focuses on school children aged 6-14. The population of Maharashtra is 114 million (2012). Around 60% or 68.4 million have access to TV and of these, 38% or 26 million have direct access to Zee Talkies and Zee Marathi.<sup>4</sup> Conservatively, an estimated 25 million viewers of Zee Talkies leveraged SLS to improve their reading skills. If SLS were to be also implemented on DDK, Mumbai, the direct beneficiaries would have been as high as 66 million TV viewers. We chose not to implement on DDK, Maharashtra so that our impact study could have a no-SLS group in the state.

The annual cost per direct child beneficiary in our SLS intervention on Zee Talkies was:  $(\$300,000) \div (3.4 \text{ million school children}) \div (2 \text{ years}) = \$0.044$ . Every US dollar gave regular reading practice to 23 school children, for one year.

The annual cost per beneficiary (all ages/viewers, with access to Zee Talkies) was:  $(\$300,000) \div (25 \text{ million people}) \div (2 \text{ years}) = \$0.006$ . Every US dollar gave regular reading practice to 167 people, for one year.

If an SLS scale up could deliver strong improvements in two years, it is not difficult to imagine what can be achieved over a lifetime of inescapable reading practice at home, as part of daily and already consumed entertainment. With a massive scale up of SLS in all languages in India, and on all songs, the context of reading skill acquisition can flip from: "Is it possible to make everyone a good reader," to, "Is it possible to stop anyone from becoming a good reader."

In this sense, SLS is a positively disruptive solution – extremely low cost, evidence-supported (from several published research studies, including this one), and a large scale reading intervention. SLS is a solution, not just for India, but in any country where song-based programming is consumed on TV, including developed countries that have their own low reading challenges.

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<sup>4</sup> Access to Zee Talkies and Zee Marathi is probably more than 38% because this figure is based on our rural sample from 4 districts in Maharashtra. Urban access would be much higher.