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The unexpected way that Bollywood could help millions

In India, more than a quarter of the population can't read. One possible solution? Adding karaoke-like subtitles to music on broadcast TV.

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Yashoda Lakshman Keni, a resident in rural India, hops on the bus to a nearby village to visit relatives.

Untold World

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Three years ago, she might not have been able to make that trip to see her family. She wouldn't have been able to read the signs.

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Like a lot of women in her village, Keni never went to school. But a few years ago, the 42-year-old attended adult literacy classes held in Kalambusre, her village in the western Indian state of Maharashtra, and gained basic knowledge of the alphabet and numbers in her mother tongue, Marathi.

Beyond that, she couldn't do much more than try reading simple words in a newspaper. But now she can read bus stop instructions.

So how did Keni bring her abilities to the next level? Surprisingly – by watching a lot of TV.

She used a programme that combines eye-tracking technology with karaoke-like subtitles that helps people learn the words at the same rate as they're spoken or sung. It could be one way nations build up literacy globally.



Rangoli is a musical TV show in Gujarat, India that uses same-language subtitling to teach viewers how to read with karaoke-style scrolling lyrics (Credit: PlanetRead)

In 2011, there were 780 million literate people living in India, or **74%** of the population. But an estimate from PlanetRead, an Indian non-government organisation, shows that at least **400 million** “literate” Indians – mostly rural and semi-urban – cannot actually read simple text in everyday life.

But the twist? There are *also* **780 million** Indians who watch on average **more than three hours** of TV every day.

Like many of them, Keni spends a lot of her time relishing Marathi-language movies on Zee Talkies, a private Indian broadcast channel. She enjoys reading along with the subtitles displayed with the songs. And it's improved her literacy.

"It has helped me pick up complex words," she says.

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In Vadod, a village in India's westernmost state Gujarat, 22-year-old Chhayaben Sondha could only speak her mother tongue, a regional language called Gujarati, before she began following Rangoli, a weekly show that features Bollywood songs from India's popular Hindi-language film industry. And while Sondha's reading level was higher than Keni's, complicated texts like bank forms are all in Hindi, one of the official languages of India.

In 2011, there were 780 million literate people living in India. The same number watch on average more than three hours of TV every day

Rangoli is broadcast nationally, and gave Sondha a chance to practise her rudimentary Hindi.

"Reading the lyrics of songs helped me understand the usage of vowels in Hindi," she says. Now she can fill forms to open a bank account.

For the 400 million "illiterate" citizens in one of the world's most rapidly developing nations, TV has emerged as an educational tool. And for India, like many of the world's developing nations, literacy is crucial to fuelling economic success.

In India, some people cannot help their children with homework, read doctors' prescriptions, understand government's welfare schemes, or explore employment opportunities or read newspapers. And there's little opportunity of reinforcing reading skills outside school.

So to make functional readers out of the struggling ones, PlanetRead came up with a simple idea of adding "same language subtitling" (SLS) to film songs for the country's movie-hungry population.



Kids watching a song, subtitled in Hindi, featuring the popular Bollywood actress Aishwarya Rai. (Credit: PlanetRead)

The subtitling is karaoke-style: words are highlighted as lyrics scroll by. Viewers read in the same language that they hear. (Ten of India's regional languages are available.) As most Indian film tracks have repetitive lyrics, audiences get a chance to practise reading the same words again and again.

“The reading engagement takes place, not because the TV viewer is consciously trying to read along the songs, but because the brain automatically registers consistent associations between sound and text,” says Brij Kothari, founder of PlanetRead.

According to Italian researchers, **subtitling** helps us understand both audio and visual elements better. And PlanetRead claims subtitles evoke an automatic and inescapable reading response in the viewer, based on studies it's done on eye-tracking.

And if subtitles are displayed on a TV show, people are likely to read them, according to a **study** at the University of Nottingham. **A 2013 study on the reading comprehension skills** of secondary school students in Kaneohe, Hawaii, showed that students exposed to SLS scored significantly higher in the tests.

In 1996, Kothari went to villages, railway stations and slums in Gujarat with his team, carrying two screens to show people songs with and without subtitles to find out which one they preferred.

“We were surprised at how many liked the subtitled songs,” Kothari says. “And so we thought, okay, the biggest hurdle is out of the way.”

The reading engagement takes place because the brain automatically registers consistent associations between sound and text – Brij Kothari

The SLS project was rolled out in 1999. In 2002, SLS was added to national television on 30-minute weekly shows featuring Bollywood songs.

Some of its shows were aired 10 times a week with two repeat telecasts at one point, giving the viewer an opportunity to watch movies with subtitled songs, 30 times a week. That repetition aids in education.

“Among those watching the subtitled shows, newspaper reading increased from 34% to almost 70%,” says Kothari, who published a study about his findings in the **International Review of Education**. It discovered that a weak reader exposed to half an hour of weekly SLS gains the capability of reading a newspaper within 3-5 years.

Plus, PlanetRead’s innovation is inexpensive. Execution of subtitling on 50 weekly television shows would cost just \$1m annually, if the government can be convinced – but it would cover all of India’s 22 official languages. Given the 400 million weak readers it would reach, the expenditure on one person’s learning would be less than a cent.

“Among a bunch of literacy projects in India, what differentiates PlanetRead’s work is that they are utilising existing television shows and experiences people are already used to,” says Michael Trucano, senior education and technology policy specialist at the World Bank.

But this literacy tool – which could be implemented elsewhere in the world – can be met with obstacles.

It’s been hard to convince government to get on board. And no other NGO has adapted SLS, either.

Broadcasters were convinced that SLS would detract from the entertainment value of song programmes. “I agree that subtitles can take away from viewing pleasure,” Kothari says. But he thinks the idea should be considered for its educational value. India hasn’t introduced closed-captioning yet, which allows a viewer to switch on and off the subtitles at will.

But Kothari’s research showed that 90% viewers actually prefer songs with SLS than without, including the literate.

Private broadcasters had another requirement – they wanted to be paid for permitting SLS because their medium was contributing to literacy. Plus, some thought Bollywood song lyrics offered little educational value at best and prompted sexual overtones at worst.

Infringement of copyrights is an issue that was brought up by private broadcasters, but so far PlanetRead hasn't faced any problem. They say they can skip films or songs in case of a resistance from the owner of rights.

Some thought Bollywood song lyrics offered little educational value at best and prompted sexual overtones at worst

Finally, sceptics said that the lyrics go too fast. A weak reader will simply ignore the SLS. (Despite eye-tracking and baseline studies suggesting the opposite).

Films that already come with translated subtitles in other languages are few and far between and will have to be left out of the SLS project, as only a single subtitled track can be added to a programme.

For over 10 years Kothari had little luck at the national policy level, or with private TV networks. Without the active backing of national policymakers, PlanetRead knew it could not reach every weak reader in their preferred language.

National literacy is squarely the mandate of Prasar Bharati (Broadcasting Corporation of India). "All that Prasar Bharati needs to do is necessitate SLS on all songs, in all Indian languages, on all TV networks. That's it. It will instantly switch on 30 minutes of daily reading practice for 800 million viewers, for life," Kothari notes.



Villagers in Gujarat sitting together and following the lyrics of a Bollywood songs with subtitles. (Credit: PlanetRead)

What's next for SLS, at least in India?

PlanetRead is currently layering animated children's books with SLS for rural children. In partnership with **Project DRUV**, which is disseminating curated web content in villages, these video books are reaching 5000 households in rural Rajasthan through their televisions.

Grants and awards from the likes of USAID, World Bank and US Library of Congress have supported Kothari's organisation to reach 200 million viewers in 10 languages.

A recent policy meeting led to an acceptance of PlanetRead's idea in principle by the government. And this July, Kothari submitted a policy paper for implementation of SLS on all song-based programmes with a suggestion for the government to include it as a corporate social responsibility (CSR) activity for private broadcasters. As per the government's Companies Act which came into effect in April 2014, every firm with a net worth of five billion rupees or more needs to expend 2% of its annual profits on CSR projects. This would take care of the expenditure of subtitling.

If the idea can finally succeed in winning such support, millions of kids and adults could potentially improve their language skills... not only in a classroom, but watching TV and mouthing Bollywood lyrics.

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