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Creating Community of Young Readers during Covid-19 Lockdown: A Comprehensive Study of a Digital Reading Platform: Storyweaver

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Abstract

Reading stories to children when they are young is the most effective way to keep them creatively engaged. Children in multilingual countries require free access to story repositories for leisure reading. In India, a country with hundreds of mother tongues, books are largely published in English and Hindi, owing to market economics. Various studies have shown that learning and reading become more important in one's mother tongue, and that when a child reads in two or more languages during early years, gains a deeper understanding of language and its effective use.

In this paper, the researchers have tried to discover; to what extent Storyweaver (SW) helps fill the gap between different types of reading requirements and availability of resources in their native language? This paper explores the possibilities for more visibility for educators, parents, authors, publishers, illustrators and translators to showcase their capabilities across the global platform especially in under resourced areas. The paper will also explore if the educators can customize the resources of SW according to their individual requirements. This paper will try to determine whether SW can serve different leveled readers with appropriate resources. This paper will also explore the usage and popularity of this digital repository in context to literacy promotion and act as a savior for vanishing regional languages.

Keywords- Reading, Stories, Multilingual, Digital Repository

Introduction

Reading is an excellent way to instill values, information, or any other message in our children without making them feel as if they are being lectured. Parents and teachers are well aware that when the lecture method is used with young minds, the majority of them ignore it. Even the straightforward tales can do wonders when it comes to teach any topic, value, or other type of lesson. Reading stories helps their cognitive development, which refers to how one perceives and thinks about the world in terms of intelligence, reasoning, language development, and information processing. Children use this knowledge to make sense of what they see, hear, and read. It broadens their knowledge, mind, and opens the door to the continuation of ideas and an infinite number of possibilities. Reading aloud to a child has a significant impact from the instant he or she is born. Daily reading will help the child's brain make connections between the written and spoken word as he or she grows, broadening the child's vocabulary. Reading, educators have long claimed, makes people smarter, and research backs them up. Over 150 research studies conducted over the last 35 years strongly support Goethe's statement: "It is proven that children who can read well are more likely to have higher confidence levels." Another critical aspect of boosting self-esteem and confidence is to understand where and how you can improve your fit. A

person who only knows one language does not truly understand that language." According to the findings, bilingual children may develop more mental flexibility as a result of perceiving in two different languages. Language, ethnicity, and poverty can all result in an extremely high risk of falling far behind. Children gain a deeper understanding of language and how to use it effectively when they continue to develop their abilities in two or more languages throughout their early years of education. They have more practice processing language, especially if they develop literacy in both languages and can compare how the language skills are structured in reality. Children in India are deprived of access to literature in multiple languages due to a variety of constraints. We come from a country rich in cultures; therefore, if we do not want our diversity to be lost, we must take stronger measures to preserve our regional languages by providing easy access to resources in native languages as well as maximising access by our children and educators. A child should understand that his culture or language is not the only culture in the world; rather, there are many other cultures and languages that coexist and work well.

Literature Review:

According to the Annual Status of Education Report, 2018, only 27% of children in Grade 3 can read at grade level. In the wake of the pandemic, students have been forced to shift to a virtual model of schooling. This transition has not been smooth for millions of disadvantaged children because of a lack of access to digital technology and relevant content.

A recent study conducted by the American Academy of Pediatrics found reading to children of any age weakens several regions in the left part of the brain. The areas in the brain that become active involve understanding the meaning of words and concepts tied to memory. The home literacies embedded in the learners' home languages facilitate the flow of knowledge and connect the home and school literacies that validate the learners' identities, as well as their linguistic and cultural capital in multilingual settings (Cummins et al., 2005).

Morrow (1996, p. 56) states that "several experimental studies that have sought out the effects of storybook reading as an everyday classroom routine on child development found that children in the treatment groups produce higher scores in the areas of vocabulary, story comprehension, and decoding that do the children in the groups who are not read to".

According to a publication released by the Canadian government, reading encourages children to "explore our thoughts and feelings" (Rubin & Wilson, 1995, par. 6). The same source states that reading stories can also help children learn to have "respect for the ideas of others" and "encourage the children to reflect on different points of view".

In a study looking at the correlation between academic performance and social behavior, the results highlighted those children with poor reading skills were more aggressive in their behavior in a later year and the ones with good reading ability were consistent with improved social skills.

Now, if we talk about the resources from where children and parents can read stories without any constraint of timings and cost, there are several storytelling repositories in India today, serving the readers in their unique ways. Few of them are available free of cost where some are paid as well. If we talk about access to all and access the same content into many languages, there is one excellent digital repository of multilingual stories available for children to access an endless stream of stories in their native language named Storyweaver(SW) by Pratham Books. SW is an initiative by Pratham Books, set up as a not-for-profit children's book publisher in 2004 with the mission to see a book in every child's hand. The key objective was to publish good quality, affordable storybooks in multiple languages to support reading acquisition among

children. About 50% of children in India are not reading at grade-appropriate levels. Among the many factors that contribute to it is the lack of quality-reading material in their native tongue. In India, there is a shortage of supplementary reading resources in local languages for children.
SW began with 800 books in 24 languages in 2015, but fully developed in 2017, after receiving funding from Google.org expanding its wings in the areas of content creation, distribution, and easy open access to the platform. Among its other contributors are CISCO, ORACLE, and NASSCOM. SW has published over 36925 original titles in over 301 languages in the last decade. These books span a variety of genres, including early readers, fiction, and nonfiction, and cover a wide range of topics. The themes in the books are grade-appropriate. SW has had the privilege of working with many of the country's most well-known and award-winning authors and illustrators. It recently received the prestigious 2020 Library of Congress Literacy Award for satisfying the varied reading needs of children during Pandemic Covid-19. Though it cannot be used without an internet connection, users can browse for stories and download them while online, then read them later offline or have them printed. Furthermore, it provides public domain tools that provide every person and organisation in the world, a free, simple, and standardised way to grant copyright permissions for creative and academic works, ensure proper attribution, and allow others to copy, distribute, and use those works.

Characteristics:

Options for Reading Online/Offline	SW is a platform that offers a free portal to an incredible collection of open-source stories for children. Stories that pique children's imaginations provoke their curiosity and transport them to far-off places. A child may explore various concepts in Mathematics, Science, Environment, History, emotional intelligence, and much more. A child can read online as well as download to read offline. After downloading, the content is available without the need for an internet connection. Readers could save the stories to their offline library for future reference.
Download and save	A user can save a story for later reading. The content is available in three formats: web-resolution PDF, A4 print-ready PDF, and digital-friendly E-Pub.
Translate	To preserve their linguistic and cultural heritage, communities all over the nation can create reading resources in their native language. One may submit suggestions to add a language that is not currently available on SW and they'll add it. This platform's major tool is hassle-free translation, which allows one to convert stories into the language that children are familiar with. Unicode, the universally accepted standard for font display, is being used here. Besides that, Google input tools can be used for translation.
Open Content	All of the content on this site is readily accessible at the national and international levels to diverse categories of users such as parent, teacher, child, educator, or institution.
Themed Booklists	Keeping a child's sustainable development goal in mind, there are approximately 15 lists about most required topics such as climate

	action, gender equality, healthy living, quality education, clean energy, sustainable cities and communities, Water Sanitation, life below water, life on land, economic growth, consumption, and production, reduce inequalities, zero hunger, peace, justice, and strong institutions available on SW.
Foundation Literacy Program	Pratham Books, in collaboration with the Central Square Foundation and education experts, has formed a Foundation Literacy Program in Hindi for Grades 1 to 3 that includes six different reading levels and 180 books. This program was designed for use in low-resource environments, with the goal of directly benefiting millions of children as well as educators in India.
Reading Programs for Different Age Groups	SW has a six-month Reading Program for Grades 1-8 in various languages, books, and activities. Every month, a child looks forward to a new reading theme.
Curated Book Lists	SW has approximately 220 curated Book Lists on specific themes such as Environment, History & Culture, Humour, Inspirational stories, Biographies, Language & Grammar, Life Skills, Read aloud, STEM, Sustainable Development Goals, Wordless stories, Writing prompt, Comprehension for Fluent Readers, Technology & Engineering concepts for Advanced Readers, Profession & Aspiration, History, Poetry.
Flash Cards Making	A teacher can make a set of flash cards related to the story for his own class or group using CREATE feature available. One may choose the search box to choose the required images and layout styles and go for it.
Collaborative Reading	An educator may use the stories available on this digital platform, the way he wishes. He may download and get prints of story for collaborative sessions.
Hassle free Story Writing for Authors	SW promotes the author's work and ensures that it will be widely disseminated. The author is adequately credited here. There are no restrictions on sending the story to other publications. Even after publishing, the author retains the right to edit. Proper guidelines for authors are provided here to make the writing process as easy as possible.
Remote Areas Accessibility	While government is always talking about online education and resources during pandemic, it is also true on the other side that in several parts of the world, it does not quite describe education for a huge number of underserved children with little or no access to the resources. The platform is focusing on serving its users at a global level through collaborating with volunteers and NGO’s and continuously bridging the gap between a child and a book.
Multilingual Stories	This is a platform for anyone who enjoys reading and writing and publishing multilingual children's books. All stakeholders, from educators and publishers to parents and authors, can use this interactive platform to create a rich digital repository of diverse

	children's stories.
Recommended Story Lists	A good number of recommended lists are being provided on the READ tab to pick and choose a story which is most read, most liked, or recommended by the editors.
Free of Cost	As non-profit children's book publisher with the noble goal of putting a book in every child's hand, Pratham Books was one of the first publishers in India to widely open license their content. The stories are available for free reading, translation, versioning, and download.
Reading Campaigns	Read at home with Storyweaver, Freedom to read 2019, Freedom to read 2020, Weave a story, Frame story challenge, Wonder why week, Spotathon, Ghoshticha Shaniwar, World storytelling day 2021 are some of the most well-known reading campaigns run by SW from time to time.
Educator's Blog	A good number of institutions, educators, parents, and children have found a platform through this blog to express their views and experiences about different titles. A reader can converse here with authors, illustrators or other collaborators.
Creative Commons License	All of the content on this site is openly licenced under Creative Commons. The CCBY4.0 licence is used for all stories and illustrations. This licence allows users to distribute, remix, tweak, and build upon the work while giving credit to the book's donor/funder, original author, illustrator, and translator, where applicable, for the original creation.
Workshops	SW works directly with organisations and educators by hosting workshops. The full-day session highlights the importance of reading and delves deeply into this platform. Participants are also given time to experiment on their own, interact with the team, and network with other participants. Any organisation that works with underprivileged children and wants to bring more stories to them should contact the team directly.

Reading levels: SW promotes the United Nations Sustainable Development Goals (SDG 4) on quality education. Realisation of these objectives will necessitate a rapid and sustainable acceleration through appropriate and effective technology that will allow for greater disruption in the quality of children's books. SW makes use of open source to freely share the best books. By providing children with thousands of books today and millions more tomorrow, digital technology enables infinite growth and acceleration.

Determining the correct Reading Level for a child can be tricky. SW associates levels with a child's reading development. A 10-year-old who prefers Level 1 stories and a 6-year-old who can read Level 3 stories effortlessly. This happens across languages, too, as kids have different fluencies in different languages. Based on this criterion, SW has categorized 4 reading levels as discussed below:

Table 1 Guidelines for choosing reading levels

Level 1 – Beginning to Read	Level 2 – Learning to Read	Level 3 – Reading Independently	Level 4 – Reading Proficiently
Easy words, word repetition Short sentences, less than 5 on a page Text and pictures should support each other Big fonts Rhyme and rhythm Word range: 0 to 250	Simple concepts (especially in non-fiction) Stories with linear, engaging plots Word range: 250 to 600	Longer sentences Popular topics (adventure, mystery, etc) Well sketched-out characters Word range: 600 to 1500	Complex plots Longer, more nuanced stories Rich vocabulary, Language plays (metaphors, similes, etc.) Word range: 1500+

Table 2 Readability Test Score

Sr. No.	Readability Indices	Score
1	The Flesch Reading Ease Formula	68.1
2	The Flesch Kincaid Grade Level	6.1
3	Gunning Fog Scale	8
4	The Smog Index	7.2
5	The Coleman Liau Index	9
6	Automated Reading Index	3.2

The Flesch Reading Ease Formula- Based upon a 0-100 scale, this test suggests that high scores mean that text is easier to read and low scores mean difficult to read. Students from grade 5 to 8 can easily read if it scores 60-70. SW has a score of 68.1 in this test which means it is easily readable by children.

The Flesch Kincaid Grade Level-The Flesch Kincaid Grade Level is a widely used readability formula which assesses the approximate reading level of a text. The higher the reading score, the easier a piece of text will be to read. The Flesch-Kincaid reading ease formula is:

206.835 - 1.015 x (words/sentences) - 84.6 x (syllables/words). The score of SW is 6.1 which show it is neither too easy nor too difficult to read.

Gunning Fog Scale- If a Fog score is 5 then its readable, 10 is difficult, 15 is more difficult and 20 is quite difficult to read. SW has a score of 8 in this test which shows its easy readability.

The Smog Index- It actually calculates the years of education; an average person needs to understand a piece of writing. In this method, total 30 sentences from beginning, middle and end from the text are collected. Every word with 3 or more syllables is also counted and then a formula of square rooting the number and rounding it to the ten chasing by adding three to this figure is applied. The final result indicates the reading level. SW has a score of 7.2 in this test.

The Coleman Liau Index- This test was designed by Meri Coleman and T.L. Liau defines readability by looking at the number of letters in a piece of writing rather than syllables or words. SW has a score of 9 point in this readability test. Like Flesch-Kincaid, this index provides a grade level at which the text should be easily understood. This index is calculated with the following formula:

CLI = 0.0588L - 0.296S - 15.8

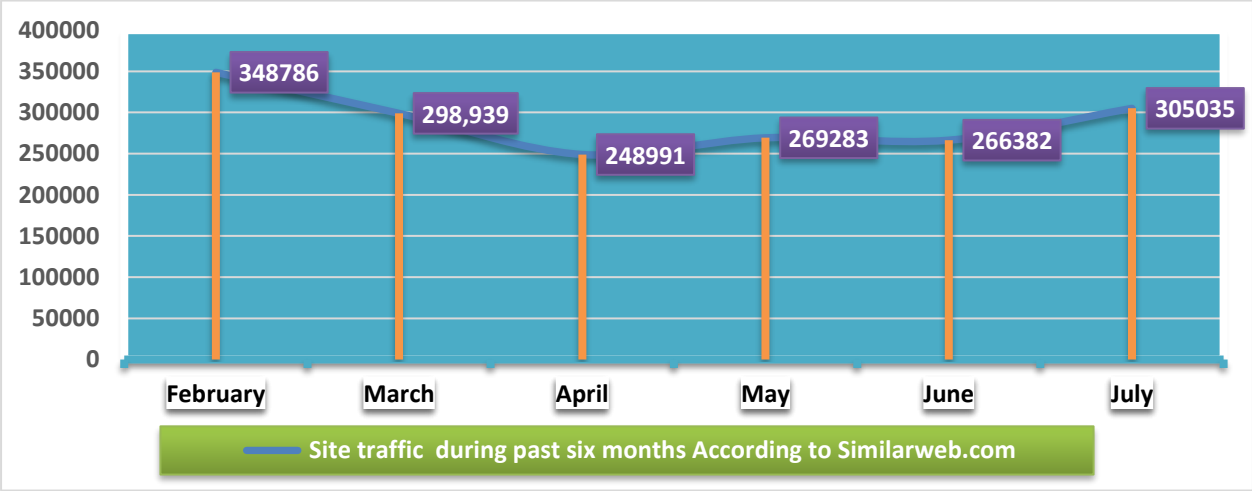
L denotes letter and S denotes syllable here.

Automated Reading Index- Outputs a number which approximates the grade level needed to comprehend the text. For example, if the ARI outputs the number 3, it means students in 3rd grade (ages 8-9 yrs. old) should be able to comprehend the text. SW has a score of 3 points in this test which shows its reading appropriateness according to age group.

Table 3 Storyweaver's Global and Country Traffic Rank

Traffic Checker	Global Rank	Country Rank
WebFX	159,333	17,573
Similarweb	170,307	12,163
Alexa	159,333	17,573

Storyweaver's Global Traffic during past six months



Global Ranking is a measure of a website's popularity in contrast to millions of other websites around the world. Country Rank, on the other hand, is only analysed in relation to other similar websites in that country. Table1 contains statistics on SW's internet traffic and global engagement over the last three months. Alexa, WebFX, and Similarweb are well-known online analytical tools for determining a website's country or global rank by collecting data from various browsing extensions and direct sites over the previous 90 days. According to Similarweb, the above figure shows a large number of visitors to the site over the last six months. During this period different countries were observing lockdown period due to pandemic.

Indigenous languages- SW has made a big impact and offered a much-needed boost by making story books available in tribal languages. Such books are an excellent tool for primary education in those languages addressing the vacuum of multilingual. It empowers the tribal community by enabling them to create storybooks in their own languages including Hindi to Konkani and Bhoti, Sanskrit to Surjapuri, Occitan and Southern Kurdish. Tribal and under-served tongues comprise 30 percent of the languages on this platform. The platform is of great help as it enables quick content creation methods, facilitating translations based on vernacular language scripts in

those languages which never had been printed before. The beneficiary languages include Santali, Gond-speaking tribal community which resides across seven states in India and therefore faces a unique problem — they are unable to converse with others. SW team, along with CGNet and Swara organizations is working with the Gond community since 2014, to translate storybooks from Hindi to Gondi. The aim was to create a repository which could be distributed to schools, and also gather sufficient data to pilot a machine translation tool. These books help children as they see the value in their own mother tongue.

Image Credit: Sarayu Krishna Kamat

Suchana, an NGO in West Bengal translated more than 60 books into tribal languages such as Kora and Santali. To save the imprints of mother tongue, Konkani Bhasha Mandal translated 100 plus stories into Konkani. Uganda Christian University, The Rossetta Foundation, Subsahara Publishers (A Ghanaian Publishing House) and The Asian Foundations are few more names associated with SW, working towards removing language barriers into the way of information access. A Pune based content creation company Media Vidya has picked Marathi stories from this platform and converted those into audio books. Some renown publishers such as Harper Collins and Unicorn are using storyweaver's content in their Hindi and English course books. Mguru integrated its content into a mobile literacy app. This platform has helped many educational startups as they are picking ready and free to use content and trying hands in creating story's different versions such as in gamifying and activity books.

During one of its reading campaigns 'Freedom to Read' in 2019, SW launched readings in 100 native languages, on the occasion of International Mother Language Day. Several mainstream, minority and under reserved languages were used in translating the resources. Online trainings and webinars were provided to the national, international collaborators and volunteers to assist them and curate these resources according to their need. These digital storybooks proved a strong facilitator between the language spoken at home and the medium of instructions at school. Below given is the cloud image of languages in which sources are translated:

Stakeholders- SW has made its network strong by joining hands with several stakeholders such as Mantra4change, Mindspark, Chippersage Education Private Limited, Clix, Meghshala and now even with CBSE (Central Board of Secondary Education). All these names are famous for addressing the issues of poor-quality education in India and are continuously working towards empowering the under resourced institutions, improving effective teaching methodologies, providing learning solutions for language fluency, open education system, digital literacy, improving teaching instructional methods and shaping critical thinking capabilities of children. The CBSE has set the goal of foundational literacy in its National Education Policy 2020 and to achieve it, has joined hands with SW. It has launched two year reading mission in which any CBSE school in country or abroad can participate and use the resources to improve.

Conclusion-Reading entails more than simply converting written words into verbal form. It is about comprehending words that were once concepts in the minds of great thinkers. It is about perceiving how those ideas can be linked to personal experiences. SW is a truly innovative platform that offers simple tools for creating, adapting, and translating new stories for children in their native language. It's an ideal location for parents, educators, writers, translators, and illustrators to work collaboratively on new stories for children and help to pave the way for the next generation of readers. Through personal or a parent's account, a child can write a story, translate a story, and upload an illustration. Everyone is given credit for their efforts, whether they are authors or illustrators. People from all over the world can read a digital story because it has no boundaries. Aside from providing increased visibility, SW is a growing digital repository on a global level that allows one to showcase his work to publishers who are always on the lookout for new authors. It brings together readers, authors, illustrators, and translators to create

stories for children using open-source technology, with the entire content freely accessible and downloadable.

When children have access to enjoyable and engaging stories in their native language, they improve their reading skills, which are critical for their growth and development. Stories teach new words and ideas to children, ranging from picture books for the very young to more complex narratives for older children while also allowing them to explore their imaginations. Children who read frequently improve their reading abilities, which later lead to success in school and other areas of life. Millions of children around the world are still deprived of reading resources; this free resource can provide them with limitless opportunities in their native language, regardless of cultural or geographical constraints. SW can be used to serve under resourced patrons in public, academic, and even mobile libraries in the future. The content may be used by various curriculum designers involved in publishing children's course material to make their journey of learning joyous and meaningful. Also, volunteers are suggested to come forward to save our precious but dissipating languages through SW's translator services.

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