# Santhali Language in the Digital Media Space

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**Abstract:** Digital media in the Indian perspective is vastly diverse from the other cultures of the world. The internet revolution comes with the challenge of selective language accessibility online, as well as limited language options used for the dissemination of information by digital media platforms. There is scarcity of languages in the digital space, as the internet is not exposed to all the languages of the world, thus restricting its reach to some of the most used global languages as well as the people using them. This means that a large number of people speaking other languages are left without using and benefitting from the various online platforms.

India has a huge collection of languages. These languages are grouped as official, vernacular, local, classical and indigenous languages. These languages are used throughout the nation according to the literacy, knowledge, cultural inclination and preference of an individual. The relationship of the ordinary Indian and the digital space is a definite test when it comes to language diversity. While there has been a steady rise in the literacy of the tribes but the participation of the tribal scribes in mainstream media is almost insignificant. The tribal language print media circulation remains negligible or more-or less non-existent.

The present paper studies the growth and existence of Santhali language in the digital media space. It also gives an insight into the digital media divide based on language and the entry of the digital media into the Indian indigenous language space.

**Key Words:** Ol Chiki, Santhali/ Santali, Digital Media, Indigenous language, linguistic diversity.

**Objectives**

- To understand the linguistic diversity of India.
- To understand the digital media and Santhali language interface.
- To understand Digital media in tribal context.
- To analyze the importance of Digital Media in the revitalization of   Santhali languages.

**Research Methodology**

For the purpose of the study, secondary data analysis of research papers, Government reports, news articles, interviews, speeches and websites were done. Books on Media, Communication theory, Tribes and languages were also studied, to give a deep insight and understanding on the topic.

## I.    Introduction

The World Wide Web (www) has been the latest addition in the mass media family for quite some time and it remains to continuously evolve and grow by the day. The digital media platform has been a resourceful platform of integrating science with social sciences and also in efficiently promoting the same. The digital media podium ensures user participation and in the process enables social, cultural and economic development. The demographic vastness and the linguistic diversity in India, encourages the flow of information both by the use of traditional and new age media. The Indian census of 2011 records a total of 705 ethnic groups, notified as Scheduled Tribes (ST) or Adivasis of India. The overall Schedule Tribe population adds up to 10.42 crore of

which only 1.04 crore live in urban areas while the rest still inhabit the rural Indian landscape. Schedule Tribes constitute 8.6 % of the country's total population and 11.2 % of the total rural population (General). The entire process is a very complex and challenging issue. Digitalization has created a new cosmos of knowledge and ways of engaging with the knowledge in languages beyond English.

**Digital Revolution**

*Web 1.0*

To begin with the information age started in 1996 with 1.0 web era. British computer scientist, Tim Bemers Lee fathered the World Wide Web (www) in 1990 and thus was born the "Dotcom epoch. 1.0 web had static web pages with access to information and content round the clock. It consisted of read only web pages.

*Web 2.0*

The year 2006 marked the birth of the web 2.0 edition. This second generation web was a revolution in the field of communication as it allowed two way communications between the user and the web. It initiated the 'read-write' feature on the web. This phase saw the birth of social media. To sum it the entire 2.0 web was two way communication allowing interaction and in a continuous manner.

*Web 3.0*

The next phase progressed into the 'read-write-execute' era, marking the birth of third generation web 3.0. This era encouraged personal searches in portable devices that included tablets, mobile handsets, smart phones, laptops, speakers and so on. This also marked the creation of converged media devices and platforms. One could create information, modify and pass on information as per his desire. Artificial intelligence became the buzz word and one could devices that understand human commands and helped its user by receiving and decoding their command with an appropriate result. This was the age of the 'semantic web', where gadgets were given a brain like humans. The era encapsulated - Internet of things (IOT) and total automation, Robotics, Big Data, Artificial Intelligence (AI), Internet of things (IOT) and total automation.

The highlight of web 3.0 was the identification of digital changes as a motivating force in societal amends. (Domingos , 2015).

*Web 4.0*

This era marked the convergence of artificial intelligence and social computing. Anytime, anywhere and any medium era of information flow is the reigning trend. It culminates the web 2.0 and web 3.0 connecting all devices in real time making it the 'Symbiotic Web'. Digitization, automation and automatic data interchange are the influences of 4.0 web.

**The Digital Scenario in India**

Today's times are the digital times. India has kept pace with the digital era by providing a huge task force of computer and software engineers globally. India has been also successful in creating the 2nd biggest internet user foundation, globally with China as the foremost leader. In India the internet was initiated in 1986 with the launch of the Educational Research Network (ERNET), as an educational and research facility was made available to the Indian Institute of Science, NCST Mumbai and the top five Indian Institutes of Technology at Delhi, Chennai, Kanpur, Kharaghpur and Mumbai . The Dept' of Electronics (DoE), New Delhi was also provided with the facility. The funding support was extended by the Indian Government along with and United Nations Development Program (UNDP). In 1995 a network was operated by the National Informatics Centre for interactions connecting government organization. State-owned Videsh Sanchar Nigam Limited (VSNL) made the accessibility to internet services in India public on 15th of August 1995.The coming 10 years' showcased challenges and measured growth. In 2004, the Government of India put together its broadband strategy. The growth of the broadband sector in the country gathered robust speed post 2005.

India presently has 36 per cent internet access. According to a report by Internet and Mobile Association of India (IAMAI) India has a user base of 451 million active users, of which 385 million are above 12 years of age and around 66 million fit in to the age group of 5 to 11 years.
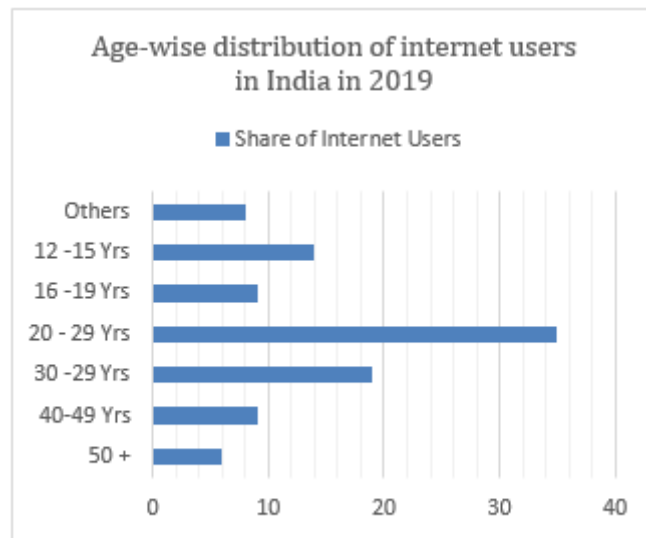
FIGURE 1: *Age-wise distribution of internet users in India in 2019*

A market research by Kantar IMRB revealed twofold growth for 2019 and projected, it is likely that the number of internet users in India will reach 627 million by year end . Nearly 293 million active internet users live in urban India, while 200 million active users are in rural India. The report found that 97 percent of users opt for cell phones as one of the gadgets to access the internet.
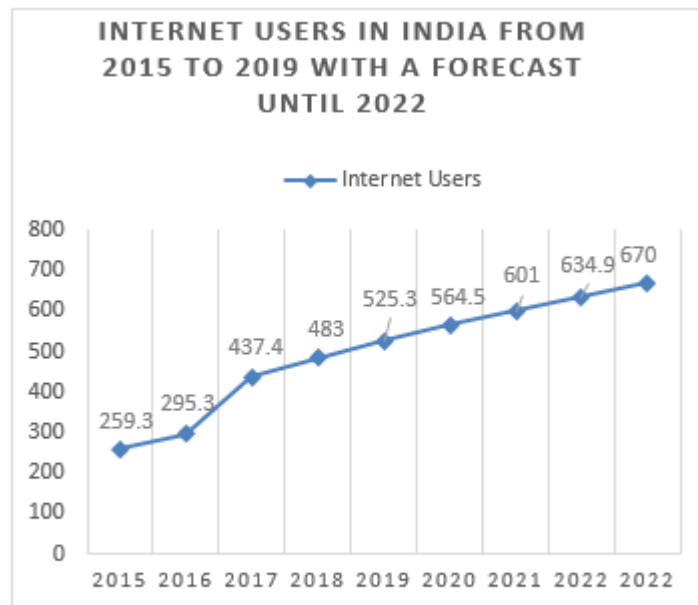


FIGURE 2: Internet users in India from 2015 to 2019 with a forecast until 2022

McKinsey's report titled 'Digital India - Technology to Transform a Connection Nation' positions India with 560 million internet subscribers in 2018, preceded only by China. It rates as one of the largest and fastest-growing markets for digital consumers. The report predicts that with low data costs India will see internet users' peak up by about 40 per cent and the number of Smartphone users  to double up  by 2023. On an average, Indian mobile data users consume 8.3 gigabits (GB) of data on a monthly basis. It also shows the Indians have 1.2 billion mobile phone connections.

**Presence of Indian Languages in the Digital space**

Languages in India are classified into assorted cubicles. According to Article 344 (1) and Article 351 of the Eighth schedule of the Constitution of India, 22 languages are recognized as scheduled languages. Bodo, Dogri, Maithili and Santhali which were Non-scheduled languages, were declared Scheduled languages in 2003 by the 92nd Amendment.
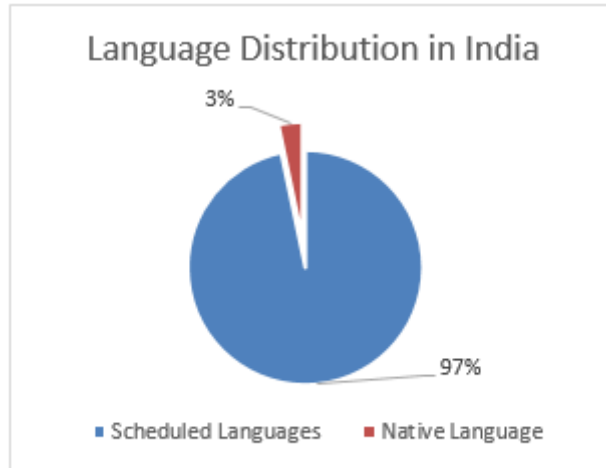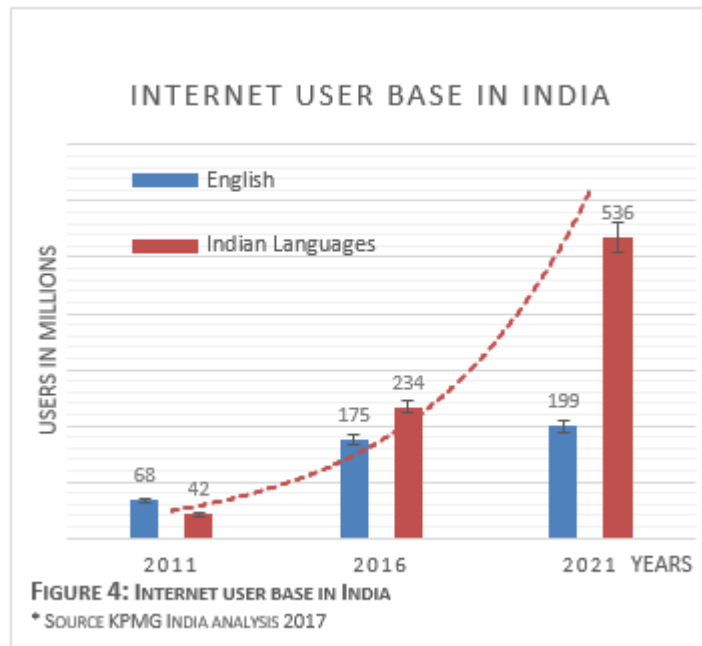


FIGURE 3: LANGUAGE DISTRIBUTION IN INDIA

A major part of the population of India comprising 96.71 percent use one of the 22 Scheduled Languages listed in the Indian Constitution as their mother tongue. The remaining 3.29 percent of the population speak their native language (General). Language promotes the flow of communication and dissemination of messages in human society .Democracy requires the dynamic participation of every citizen and media plays a vital role in ascertaining the same. The sociolinguistic reserve of India is unimaginably enormous with an intricate array of languages, having firm presence throughout its population. The Indian media is majorly functional in form of press, radio, television, satellite and the new age converged media help to maintain a relationship with the people and its elected chosen representatives. The challenge media in India faces is to make available the required technology and to communicate through a variety of languages.
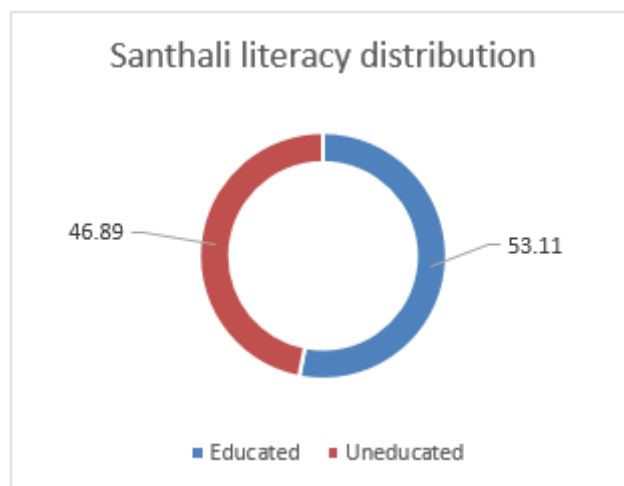
New age media circulates information by the use of the web connecting both humans and machines. The restraining factor besides the technical aspect is the language. The most used language prevalent in the digital space in India incidentally is not English anymore. According to a 2017-18 report carried out by Google and KPMG India reveals that the vernacular Indian language users have surpassed the English language users on the Internet platform in India. As against 175 million English language users, India presently has 234 million vernacular Indian language users. The report predicts 9 out of 10 fresh Internet users will use an Indian language. The online Indian language users belong maximum to the Tamil language thereafter follows Hindi , then Kannada followed by Bengali and then the Marathi speaking users. Next to follow are the Telugu users , then Gujarati and finally Malayalam.

**FIGURE 4:** INTERNET USER BASE IN INDIA
\* SOURCE KPMG INDIA ANALYSIS 2017

Google search Engine is available in Tamil, Hindi, Kanada, Bengali, Marathi, Telugu, Gujarati and Malayalam. It will add three more vernacular-Oriya, Urdu and Punjabi shortly. Tamil is the most used language on Google search platform. The report predicted that subsequently in the coming four years English users would be left behind by the Hindi users alone. Consequently in India, Hindi will soon become the most used language on the Internet. Out of the total Indian language internet user base, 30% will be formed by Tamil. Bengali, Telugu and Marathi. Google Translate can translate between English and nine widely used Indian languages — Hindi, Bengali, Marathi, Tamil, Telugu, Gujarati, Punjabi, Malayalam and Kannada. Google Assistant on smart speakers, smart phones and computers can now converse with users in Hindi and in eight other Indian languages that includes Gujarati, Kannada, Urdu, Bengali, Marathi, Urdu, Tamil, and Telugu.

**The Santhali Language**

According to the 2011 Census, carried out by Registrar General & Census Commissioner, India, the total tribal population (Schedule Tribes) of India stands at 8.6 per cent in 27 out of 29 states and 3 out of 7 Union Territories. Santhals are the third largest and most advanced tribe in India. The literacy rate of Santhali approximately rests at 53.11% (Census 2011).

In 2004, Santhali was included in the 8th schedule of the Indian Constitution as a scheduled language. Their dialect belongs to the Munda-Austro-Asiatic group and is derived from old Kherwali language, spoken mainly in Odisha, West Bengal, Jharkhand, Assam, Bihar, Tripura and Mizoram.

The aboriginal Santhali's developed 'Ol Chiki' as their script in the first half of the 20th century approximately in 1925. The script was developed by the dedicated Santhali linguist Raghunath Murmu . Ol chiki has 30 alphabets and is written from left to right. The script is made up of 6 vowels and 24 consonants, along with 5 basic diacritics. The shapes of the alphabets are inspired by nature, life and physical forms that are present in the Santhali habitat. There is a unique set of digits that represent numbers also uses the decimal number system. The punctuation symbols used are mostly borrowed from Latin Roman language .

**Santhali Language in the Digital space**

Out of the languages identified in the 2011 census only 22 Indian languages have been made available through Wikipedia and that includes Santhali .The digital technology and the www revolution has allowed giving this indigenous language its due by giving it presence in the digital media space. The conventional Santhali media is still to make a profound mark but the efforts of the Santhalis to establish their indigenous lingua on the internet is mark worthy. Listed are a few relevant resources, showing the presence of the Santhali language the digital media space.

**The Santhali Wikipedia**

Wikipedia, the free online multilingual encyclopedia available for I-way users has content available in 309 languages.  It is also available in 22 Indian languages.  Santhali became the first Indian tribal language to have a dedicated Wikipedia edition in the native Ol Chiki script in 2018. The Santhali Wiki page was made live on 2nd August 2018 as a focused endeavor to promote the indigenous Santhali language. The Wikipedia page has content developed by contributors by Santhali community users from India, Bangladesh and Nepal. The creation of a Santhali Wikipedia marked a major leap in the development of Santhali language and script, paving way for other Indian tribal languages to get a dedicated Wikipedia page in the coming times. The Santhai Wikipedia can be accessed on. https://en.wikipedia.org/wiki/Santali_language

**Online Daily Newspaper -***"Khoborkagaj"*

Santhali daily newspaper "Khoborkagaj" published by Johar Publications of Jamshedpur in Ol Chiki script can be read online on www.khoborkagoj.com. A dedicated App can also be downloaded on Google Play for accessing this daily Ol Chiki newspaper.

**Santhali Keyboard Assistance**

For text messages, typing the Swalekha Indic keyboard assists in typing messages in the twenty two official Indian languages that includes the Santhali , Ol Chiki script . It helps in typing using the Ol Chiki script on the social media platforms that include Facebook and Twitter. It also allows you to type emails and blogs in the Ol Chiki script. It supports next word predictions, auto corrects words and spellings typed in Ol Chiki , emoji selections. G-Board is the Google keyboard facility that allows Ol Chiki glide typing and voice typing with auto correct facilities and suggestions from the enabled language.

**Santhali Language Lexicons**

The Special Development Council , Ministry of Tribal Affairs  Government of Odisha has designed Language Lexicons in 21 tribal languages that also includes trilingual  dictionaries in Odiya , English and Ol Chiki .These dictionaries can be downloaded online free of cost.

KHANDBAHALE.COM provides multilingual lexicon support to several Indian languages including Santhali. Santhali Dictionary is a bilingual resource that translates a keyed in word from English to Santhali or Santhali to English. It also displays meanings with language script in Unicode will be displayed along with roman script, adjacent, related & suggested words. The online Santhali dictionary developed by the provider is a credible Santhali language resource. This online Santhali Dictionary can be downloaded on computer, laptops, Smartphones and tablets enabling offline use.

A virtual speaking Dictionary developed by the Living Tongues Institute for Endangered Languages, Swarthmore College and National Geographic is English to Santhali and Santhali to English Speaking dictionary. The talking dictionary of Santhali currently has 472 word entries and 472 corresponding audio files. The dictionary can be accessed on http://talkingdictionary.swarthmore.edu/santali/

### Santhali Web Portal - *Wesanthals*

The wesanthals.tripod.com portal is a website dedicated to Santhali culture, tradition and language. The portal shares information regarding the Santhali tradition and culture through its online Ol Chiki e-newspaper "Disom Khobor". The e-newspaper "Disom Khobor" is published fortnightly, with an    attempt to convey news and events happening in the Santhal society locally and nationally. It also presents national news in a comprehensive manner to the Santhali online readers in the Ol Chiki script. The portal has a Santhali -English and English-Santhali dictionary, with a guide that teaches the Ol Chiki script to beginners.

### Story Portal -*Storyweaver*

The Storyweaver portal by Pratham books is a resourceful online forum where folktales and stories are available. The Storyweaver portal has around more than nineteen thousand stories for children in around two hundred thirty languages, that include Indian, foreign, indigenous, creoles. These stories are woven with simple words, colourful illustrations and kid friendly story plots and characters. The story genre includes fables, folklore, story, myths, life skills, mathematics, fiction, history, activities and so on .There are stories having audio versions and GIF illustrations.  Each story can be read in the various languages that it has been translated into. The digital storytelling platform is an open source, free to use digital source available for reading and downloading stories. The available stores can be translated into any language by anyone. The site has 34 stories listed in the Santhali Ol Chiki script. There are 27 stories in Santhali Devanagari script and 76 stories in Santhali Bengali Script. Storyweaver has collaborated with a network of organizations and developed gateways to digital libraries in hundred languages. The stories have been segregated into new reads, early readers, middle readers and advanced readers. The focal point of StoryWeaver is on marginalized, local and tribal languages.

### Santhali YouTube

YouTube is the largest Over the Top (OTT) platform of the digital universe. It has acted as a potent media for content creators. Google's Video sharing platform has been highly supportive in promoting Santhali films and music videos, audio- visual news and current affairs. Like other media platforms, The Santhali Film industry has seen very slow growth since the official inception of the language in 2003. The Santhali film industry is young and the films produced are low budget and usually are not released in cinema halls due to lack of distribution support and offer low revenue generation . Around 8 to 10 films are produced on a yearly basis in the Santhali language and almost all are available on You-tube for viewing by the target audience. The digital scope has been a savior when it comes to reaching the Santhali viewership. YouTube is accessed generally through mobile phones mostly by young viewers.

### Internet Saathi

The presence of Santhali language on the internet has clearly created options for the Santali clan to create publication collections of user generated e-content. On social media Ol chiki has created windows for one to one conversation in the native Santhali language. Digital media has altered the communication patterns in India by providing greater opportunity to the marginalized and isolated population allowing them the gateway to convey, connect and contribute. Initiatives like Internet Saathi run by Google and Tata Trusts  have the focus on educating rural and tribal women regarding the use of the Internet by making them online confident and capable. The aim of 'Internet Saathi' is to create networks of internet savvy women who further impart training to other women in their local population and adjoining villages. The Internet Saathi programme has already helped over 22 million women across India to benefit from the Internet. In Odisha the programme will cover over 16,000 villages and the Santhali speaking population.

### Pradhan Mantri Digital Saksharta Mission

The Pradhan Mantri Digital Saksharta mission is the digital literacy programme run by the Government of India in all States and Union Territories of the country to enable the rural population in becoming Internet literate. The objective of the mission is to benefit from the digital platforms by democratic participation and also by encouraging livelihood opportunities. The target is to make 6 crore rural Indians, internet educated by 31st March 2020. The medium of instruction used in these digital tutorials include all the 22 official languages of India. Santhali is also one of the mediums of instruction. Informational videos in Santhali language are available for each module.

**Santali Resources Online**

The list of various online Santali resources available includes Ol Chiki Tech, Technical resources by OFDN, Linguistic resources on Santali language/Ol Chiki writing system, Omniglot, Santali Ol Chiki converter to convert text in legacy encoding to Unicode, Santhali Ethnologue, Santali Wikipedia, Santali dictionary by Special Development Council, Mayurbhanj, Planning & Convergence Department, Government of Odisha, The Language Archive, Recording of biblical verses, Santali Localization, Romanization Tables at Library of Congress Syllabus for UGC NET Santhali.

Several other digital provisions like Ol Chiki input tool , open licensed Unicode fonts, Legacy fonts, Google Noto Ol Chiki, Ol Chiki.ttf,  Ol Chiki_Classical.ttf, Ol Chiki_Royal.ttf,  Chiki Usar, Guru Gomke -the stylish Santhali type face are available for use on computer.

For the Android users GBoard by Google, Indic Keyboard Swalekh Flip, Multilingual O Keyboard + emojis, Santhali numerics keyboard ,Santhali notepad, Santhali calendar , Khobor Kagoj app, online version of the Santhali newspaper Khobor Kagoj. Personal blogs and Vlogs are also present in the digital space, giving prominence to the Santali language.


## II.     Suggestions

- The Ol Chiki script has made its headway online. The requirement now is to develop more content that is socially, educationally and functionally helpful in the day to day life of the Santhali Community.
- More e-publications with up-to-date information of local and national interest should be developed actively and provided in Santhali script.
- Dedicated educational websites with Santhali academic content should be made Live for the benefit of the Santhali student community. This is important because the younger generation Santhalis mostly constitute the digital Santhal population.
- More content in other Indian indigenous languages should be added and made available on Wikipedia and similar platforms.
- Revitalization of aboriginal languages through digital platforms should be generously supported through Government and charitable aids and funds , as it not only promotes written content but also visual and animated content that makes the information user friendly and takes it beyond the realm of language yielding better results .
- More digital media promotion and popularization projects should be awarded to the active local community for the enrichment of the Santhal's and other aboriginal tribes.
- Government should develop more projects for the digital inclusion of the Santhali Tribe and other marginalized tribal communities. This in turn will help to create ways to regulate post execution updates on these projects that should be done on regular intervals to weed out loopholes and make them more result oriented.
- More public internet facilities like internet kiosks in Santhali language should be felicitated for increasing user access at the grassroots level.
- Open and free access to open multimedia content about news coverage of current issues, socio-economic affairs,   cultural history, lifestyle and literature with the scope to widen the use of Santhali languages should be made available.

## III.     Conclusion

The digital media is a socio-cultural trend. It creates much multiplicity that stems out of language friendliness. Access to the digital room depends on the availability of a digital friendly gadget that may include a laptop, Smartphone, I-pad with awareness related to operating the gadget and the utilization of a language that the digital space recognizes. Language either in spoken or written form is a critical constituent and also a limitation of the digital media space. This is because it informs only in the language that it understands, thus limiting the reach and output of the communication process. It won't be wrong to say that the digital space is language sensitive and thoroughly language driven.

India has a culture that is orally dominated as compared to the written word. More than 90 % of the indigenous languages of India have existed through oration and lack regulated script. The Ol Chiki script of the Santhals was created in 1925 and since then the progress has been very slow. Although Santhali has been included in the Indian Official Language list since 2004, almost sixteen years ago , its traditional media growth is stunted. The digital media has given a considerable communication edge to the marginalized tribal population by

encouraging the growth of a digital audio visual culture that is mostly user fuelled and user driven. The importance of including Santhali in the digital space has come as a motivation to save many such indigenous languages that are on the brink of extinction.

### IV. References

1. Kaka,Noshir., Madgavkar,Anu., Kshirsagar,Alok., Gupta,Rajat., Manyika,James., Bahl, Kushe., & Gupta, Shishir.(2019,Mar). Digital India: Technology to transform a connected nation. Mckinsey-digital Retrieved from:https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/digital-india-technology-to-transform-a-connected-nation.

2. Aravinda, Indulakha (2019, Jul 28). How regional languages are fueling YouTube's growth in India. Economic Times.

3. PTI (2019, Mar 06,). "Internet users in India to reach 627 million in 2019: Report". Retrieved from https://economictimes.indiatimes.com

4. Staff (2019, June 17). Facebook expands ad breaks to more Indian languages. Exchange4Media.com. Retrieved from : https://www.exchange4media.com/digital-news/facebook-expands-ad-breaks-to-more-indian-languages-97467.html

5. Kaushik,Tushar (2019, May 28). Wikipedia looks to ramp up its Indian language content. The Economic Times.

6. Chaturvedi, Anumeha (2019, Apr 27). Facebook introduces fact checking in more local Indian languages, provides additional funding to partners. The Economic Times.

7. Jha, Lata (2019, August).Most of India's digitally monetizable users want vernacular content: Report." Livemint.com. Retrieved from: https://www.livemint.com/industry/media/most-of-india-s-digitally-monetizable-users-want-vernacular-content-report-1565097932712.html

8. Chauhan, Abishek., Chaudhry, Ujjwal., Routray, Abhijit., Subramaniam, Shashank. (2019, August) "Vernacular is now , not the future – A $300 Bn Opportunity Today". Redseer. Retrieved from: https://redseer.com/reports/vernacular-is-now-not-the-future-a-300-bn-opportunity-toda

9. Gartenberg, Chaim(2018, Apr 17). Amazon is making it easier for international customers to order from abroad. Retrivedfromhttps://www.theverge.com/2018/4/17/17246564/amazon-international-mobile-languages-currency-shipping-import-fees-customs-app

10. Staff (2018, Jan 31). "The changing 'lingual' face of Digital India". Times of India.

11. P, Subhashish (2018). "Digital resources for Santali mobile and desktop users". Retrieved from: https://theofdn.org/oer/santali/

12. Goel, Vindu (2018, Sept 4). Amazon's Plan to Reach 500 Million Indians: Speak Their Language. The New York Times.

13. Aneez, Zeenab., Neyazi, Taberez., Ahmed, Kalogeropoulos.Antonis., Nielsen Kleis Rasmus. (2018, March).Reuters Institute India Digital News Report. Reuters Institute for the Study of Journalism / India Digital News Report. Retrieved from :https://reutersinstitute.politics.ox.ac.uk/our-research/india-digital-news-report

14. Anima,P (Dec. 2018). Tell me a story. The Hindu Business Line .Retrieved from

https://www.thehindubusinessline.com/blink/know/tell-me-a-story/article25848620.ece

15. Hilltopicsmu (2017, April 18). The New Digital Divide: Language is the Impediment to Information Access.Hilltopics.Retrievedfrom:https://hilltopicssmu.wordpress.com/2017/04/08/the-new-digital-divide-language-is-the-impediment-to-information-access/

16. KPMG (2017, Apri). "KPMG Indian Languages – Defining India's Internet". The Outlook.

17. Panigrahi, Subhashish (2016, Jul). Open source effort gives indigenous language an official typeface. Retrieved from: www.opensource.com.

18. Saxena, Pooja (2016, Dec) Changing the typographic landscape of a country: one letter at atime. Retrievedfrom:https://https://storyweaver.org.in/blog_posts/95-changing-the-typographic-landscape-of-a-country-one-letter-at-a-time

19. Young, Holly (2015, May 28). "Digital Language Divide". The Guardian. The British University Academy. Retrieved from: https://www.theguardian.com/education/ng-interactive/2015/may/28/language-barrier-internet-experience

20. Orriss, Iris.(2014).The Internet's Language Barrier. Retrieved from: https://www.mitpressjournals.org/doi/pdf/10.1162/inov_a_0022

21. Anderson , Gregory D.S. and K. David Harrison (2013). *Santali Talking Dictionary.* Living Tongues Institute for Endangered Languages. Retrieved from: http://www.talkingdictionary.org/santali.

22. Census, Government of India (2011). Retrieved from: www.censusindia.gov.in.

23. Humayun, Kabir (1961). National Integration in India. The Education Quarterly.