Digitalism and Artificial Intelligence: Fostering the Preservation and Progress of Bhumij Language

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ABSTRACT

The present study explores the intersection of media, digitalism, and artificial intelligence (AI) in the context of the Bhumij tribal language (Ol-Onal). In today's digital era, the integration of AI technologies in media platforms has transformed the way information is accessed, shared, and consumed. However, the impact of these advancements on indigenous languages remains largely unexplored. This research aims to investigate the role of digitalism and AI in preserving, promoting, and revitalizing the Bhumij tribal language. By examining the current state of digital media platforms, the study analyzes the challenges and opportunities for integrating Bhumij language content. It explores the potential of AI-driven language technologies, such as machine translation and voice recognition, in enabling better access to Bhumij language resources it's preservation. Additionally, the study investigates the ethical considerations surrounding AI and digitalism in the context of indigenous languages, addressing issues of representation, cultural sensitivity, and community engagement. Through this research, insights into the possibilities of leveraging digital media and AI for the benefit of the Bhumij tribal language can be gained. The findings contribute to the broader discourse on the intersection of media, digital technologies, and indigenous languages, with implications for language preservation and cultural diversity in the digital age.

Keywords: Artificial Intelligence (AI), Bhumij tribal language, Digitalism, Media, *Ol-Onal*

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I. INTRODUCTION

The role of language and dialect in Human Civilization is comparable to a guiding force or direction and is recognized as a conduit for world culture. In ancient times, humans lacked language, relying on signs and body language to communicate. As human civilization progressed, people learned to use language as a means to express their thoughts and emotions, marking the evolution of communication. All tribal societies possess their own common language (Lingua Franca) that plays a vital role in their culture (Nirgune, 1997). Language holds significant importance in the development of civilization and culture, allowing humans to achieve social and cultural values. While animals also communicate and display traces of culture, their lack of a language impedes complex social development, setting humans apart from beasts. Language has served as a vehicle, propelling civilization towards progress.

Throughout human history, language has been the primary medium for transmitting religious, social, economic, political, and cultural knowledge within communities. It acts as a carrier of culture, interconnected with the life and identity of indigenous tribes, closely associated with natural elements such as water, forest, and the Earth. Language serves as a bridge, connecting individuals to their culture and the wider world. In India, where people of diverse religions, cultures, and languages coexist, language plays a central role in fostering a composite culture, enriching it in profound ways (Mukherjee, 2013, 2016).

Language can be likened to the eyes of civilization, functioning as a vehicle for culture. It allows us to think, contemplate, and communicate our ideas. The social, economic, religious, and cultural aspects of human society find reflection in language and are passed down through generations in the form of folk literature. This keeps the culture alive and contributes to the progress of the people. Folk songs and literature take shape through language, and the dialect or language of a group plays a crucial role in simplifying their learning and expression (Dhananjaya, 2015). Language facilitates the development and dissemination of culture, traditional knowledge, medical expertise, and agricultural practices. It acts as a medium for expressing human thoughts, sentiments, emotions, and connecting people with one another. Language and speech have been intertwined with human history, dating back to the origins of humanity. They serve as carriers of ideas and thoughts within society, forming the foundation of human life. Speech and humans are inseparable, complementing each other in their existence.

Keeping the above facts into consideration the present study was made with an aim of Digitalism and Artificial Intelligence in the context of fostering the preservation and progress of the Bhumij language knowledge is to leverage modern technological advancements to safeguard and promote both linguistic vitality and cultural heritage development. Digitalism refers to the integration of digital technology and practices into various aspects of society, including language preservation and revitalization efforts. Artificial Intelligence (AI) involves the development of computer systems that can perform tasks typically requiring human intelligence, such as language processing and understanding. This interdisciplinary approach can help bridge the gap between ancient practices and contemporary challenges, ensuring the continued relevance and importance of the Bhumij language knowledge in the

modern world. In the context of the Bhumij language, which is a lesser-known indigenous language, the study of Digitalism and AI can have several key objectives as below.

(i) Preservation of Bhumij Language: Digitalism can help in documenting and archiving the Bhumij language through various digital mediums, such as audio recordings, written texts, and digital dictionaries. AI can aid in analyzing and processing this linguistic data, making it easier for linguists and researchers to study the language's structure, grammar, and vocabulary. By preserving the language in digital formats, it can be accessible to future generations and researchers, preventing it from becoming endangered or lost.

(ii) Revitalization of Bhumij Language: Digital tools and AI applications can be used to create language learning resources, interactive apps, and online courses that make it easier for Bhumij community members to learn and practice their native language. This revitalization effort can encourage language usage within the community and strengthen its cultural identity.

(iii) Documentation of Indigenous Ethnomedicinal Knowledge: Digitalism can aid in recording and cataloging traditional knowledge related to indigenous ethnomedicinal practices of the Bhumij community. This includes information about medicinal plants, healing practices, and remedies used in their traditional healthcare systems. By digitizing this knowledge, it becomes more accessible for preservation and sharing.

(iv) Integration of Traditional Knowledge with Modern Medicine: AI can be employed to analyze and cross-reference traditional ethnomedicinal knowledge with modern scientific research. This integration can help validate the efficacy of traditional remedies, leading to potential discoveries of new medicinal compounds or treatment methods.

(v) Empowerment of Indigenous Communities: By utilizing digital technologies and AI, the Bhumij community can strengthen its cultural identity, knowledge, and practices. Empowering indigenous communities with technological tools can also lead to greater self-sufficiency and participation in the wider digital world.

(vi) Cultural Exchange and Collaboration: The use of digital platforms and AI can facilitate communication and collaboration between different indigenous communities, scholars, and researchers, leading to cross-cultural exchanges and the sharing of valuable traditional knowledge.

II. METHODOLOGY

This research study was conducted in the Durdura villages of Mayurbhanj district, Odisha, with the assistance of male and female Bhumij oral singers. The villageis situated in the southern region of Odisha, which is located in the north-eastern part of the country between 85° and 40° minutes to 87°, 11 N, 40 E longitude, and 21°-16° minutes to 22°34, N-Latitude. The region encompasses a total area of 4,392 sq. Km, comprising hills, plains, and dense forests (Ghos and Jana, 2015). Mayurbhanj district is known for its tribal communities, with the three main tribes dominating the area being Santhal, Kol, and Bhumij. The Bhumij tribe resides in various villages within the region.

The current study carefully chose the most suitable data collection method considering research objectives, the type of data required, the population or sample, ethical considerations, and practical limitations. It is customary to employ a combination of methods to cross-validate data and improve the credibility and accuracy of research results. The method of data collection pertains to the particular approach or technique utilized to gather information or data for a research study, survey, or investigation. The selection of the data collection method depends on the research objectives, the kind of data needed, and the resources available. Below are some commonly used methods of data collection:

(i) Surveys: Surveys involve collecting data by asking structured questions from a representative sample of respondents. Surveys can be conducted through various means, such as face-to-face interviews, telephone interviews, online questionnaires, or mailed surveys.

(ii) Interviews: Interviews involve direct communication between the researcher and the participants. Interviews can be structured (with predefined questions), semi-structured (combining predefined and open-ended questions), or unstructured (allowing for free-flowing conversations).

(iii) Observations: Observations involve systematically observing and recording behavior, events, or phenomena in their natural setting. This method is particularly useful when studying human behavior, social interactions, or physical processes.

(iv) Experiments: Experiments involve manipulating one or more variables to observe their effects on a dependent variable. This method is commonly used in scientific research to establish cause-and-effect relationships.

(v) Document Analysis: Document analysis involves studying and analyzing written or recorded documents, such as historical records, official reports, texts, or media content, to extract relevant data.

(vi) Case Studies: Case studies involve in-depth examination and analysis of a single individual, group, organization, or event. This method is often used to gain a comprehensive understanding of a specific context or situation.

(vii) Focus Groups: Focus groups bring together a small group of participants to discuss a particular topic or issue in a facilitated group setting. This method encourages participants to share their perspectives, opinions, and experiences openly.

(viii) Content Analysis: Content analysis involves systematically analyzing written, verbal, or visual content to identify patterns, themes, or trends. This method is often used in media research or textual analysis.

(ix) Ethnographic study: Ethnography involves immersive, long-term fieldwork in a particular cultural or social setting to understand the beliefs, behaviors, and practices of a group or community.

III. ANALYTICAL LANDSCAPE

The Genesis and Area of Bhumij Dialect/Language

The Bhumij tribe is among the 62 Scheduled tribes of Odisha. These people have a deep connection with nature, evident in their life cycle and festivals. They believe their origin is from the earth, hence the name "Bhumij" (created or originated from the earth). In their daily life, they primarily use the Bhumij language but also use Odiya, Bengali, and Hindi as contact languages depending on the language area they reside in (Verma, 2012).Scholars have varied opinions on the origin of the Bhumij language, suggesting that it is the dialect of the Bhumij tribe itself. The Bhumij people claim a connection to the Harappa or Indus Valley civilization, believing that they are descendants of this ancient civilization (Risley, 1892).The Bhumij language has a unique interpretation of the word "Harappa" or "Hodappa." In their dialect, "Hodo" means "man of the Earth" and "Rapa" means "Creation of the dead." This indicates the practice of burying the dead and protecting their bones in a fixed place. This connection with burial practices suggests their affiliation with the Harappa culture (Sardar, 2012) and showcases the similarity between their funeral rites and those of the Indus Valley people.
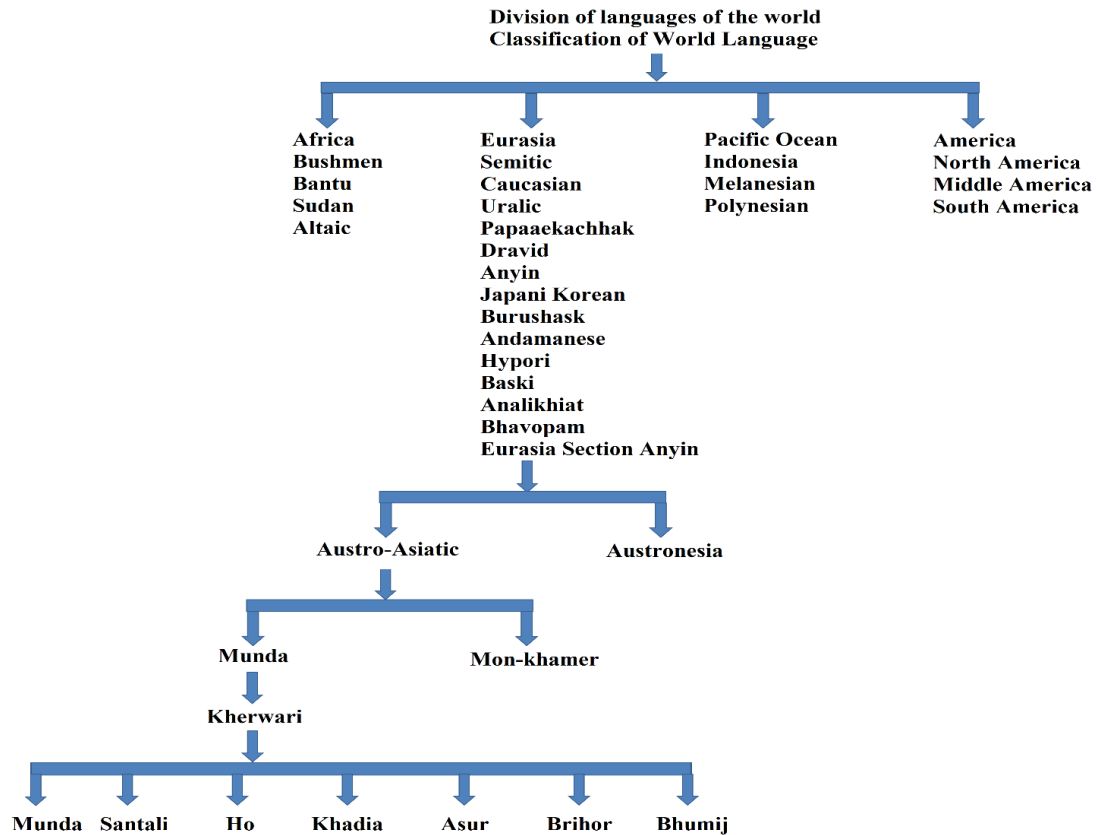
Similarly, the Bhumij word "Manjodado" has been distorted to "Mohenjodaro" with "Man" representing "inquisitiveness," "Jo" signifying "fruition or birth," and "Dodo" conveying "power, energy, energetic, and courageous." This word reflects the unique mental, cultural, and physical characteristics of the Bhumij people.

Linguistic Affinity

Based on the study conducted by Hudson in 1825, the Bhumij language or dialect is categorized as a sub-branch of the Austro-Asiatic Group of languages. However, in 1866, it was grouped under the Kol and Munda languages and dialects, which are also associated with the Nicobarese and languages spoken in Vietnam, classified under the Kolerian Group of languages (Campbell, 1866). The book "Process and Culture of India" (1944) defines "race" (Prajati) as indicating common physical traits, but the racial traits of the Negritos have not been verified in the Indian population. The Proto-Australoids are believed to be the original inhabitants of India according to Campbell (1908).Risley (1892) proposes that the Bhumij language is a branch of the Munda language, and as the Bhumij people migrated towards the east of India, they settled there and spread across the region. Dalton suggests a connection to the Austric Group of languages of the Colerain community, while Peter (1906) places the language under the Eurasian Group of languages, which is a branch of the Austric Group spoken in India. The Bhumij language is ranked fourth in terms of the number of speakers among world languages. It holds the second position in Jharkhand and other states after the state language, recognizing it as a tribal or regional language. The Bhumij people are found in several states in India, including Odisha, Jharkhand, Bihar, West Bengal, Assam, and Manipur. According to DNA studies of this tribe, their origin is believed to trace back to an African female ancestor who lived in Africa 1,40,000 years ago. Over time, the community migrated to South Asia, China, Java, and Europe, evidenced by their physical structure and racial origin. The Bhumij group emerged from a genotype that diversified into different subgroups, and they entered India from Africa (Risley, 1892). As of the 2011 Census, Odisha has the largest number of people who speak the Bhumij language.

Figure 1: Classification of World Languages

Source: Authors' compilation from reviewed literature
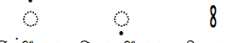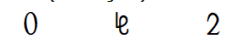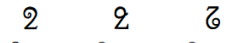
Bhumij Language and Script

Many indigenous tribes residing in various states of India speak a variety of dialects and languages. The creation of literature plays a crucial role in providing social and linguistic identity to any society. Each language or dialect possesses distinct characteristics, setting it apart from others in terms of its unique way of speaking and pronunciation. Consequently, writing any language requires a proper phonetic sound system to preserve its original essence. The Ol-Onal alphabet (Figure 2) was created between 1981-1992 by Ol Guru Mahendra Nath Sardar, a Bhumij linguist from Mahadevdihi in the Mayurbanj region of Odisha. It is used to write Bhumij, a language spoken by about 100,000 people mainly in the India states of West Bengal, Odisha and Jharkhand. Bhumij is considered to be a dialect of Mundari by most people. A number of books have been published in this alphabet. During the process of civilization's evolution, tribal languages are often transcribed using either the Roman script or the Devanagari script, which offer a structured grammar for these languages. On January 18, 2016, the script developed by the esteemed MahendraSardar for the Bhumij language was officially recognized by the

Government of India, becoming known as the "Ol-Onal" script of the Bhumij language. This script is based on the Bhumij language spoken by the Bhumij tribe of Odisha, and its collection of phonetic symbols is arranged according to the traditions and conventions of the tribal society.

The indigenous Bhumij tribe has a deep and intimate connection with nature, water, and land, which has existed for ages. They consider themselves children of nature, and their worship rituals aim to protect and promote the prosperity of nature. Festivals like Baha Bonga, Koram, Magh Puja, Makar Sankranti, and Rozo celebrate this close bond with nature. The name "Ol- Onal" for the Bhumij script is derived from the Bhumij culture, where the tribe creates a special motif called "Alpana" using rice powder. "Ol" signifies rice powder, and "Onal" refers to the motif, thus representing the act of drawing a motif with rice powder. This term reflects the support and development of the Bhumij language.The Bhumij culture and folk literature are being disseminated through several small magazines, given the absence of a dedicated script. This literature is currently written using the Devanagari script with appropriate modifications.Various individuals, such as Messen Mahendra Sardar, Gulab Singh (Chidkubadi), Gobardhan Sardar (Mahadevdi), MadhavSardar, Suresh Chandra, Bablu, Thakur Das Munda, Atish Kumar Munda, Anil Kumar Munda, Shiba Chandra Munda, Shyamlal Munda, and Ram Chandra Sardar, have made significant contributions to establishing the Bhumij language's reputation and visibility (Samad & Sardar, 2011).

Figure 2: Bhumij Script and Language

Source: Authors' compilation from reviewed literature

The Bhumij language has undergone changes influenced by the environment and human civilization. Linguistic studies highlight the significance of language as

man's greatest strength, enabling progress. Just as man evolved physically and mentally, languages also evolve. According to Charles Darwin's principles, dialects of social groups undergo progressive changes, eventually evolving into distinct languages. The script of a language reflects its pronunciation, sound, and signs (Darwin,2009).The Bhumij people believe in their origin from the earth, and this association with the earth extends to their script, known as the Bhumij script, symbolizing their genesis. The term "Ol-Onal" represents a motif drawn on the earth. The writing and reading in Bhumij script are gradually progressing. Alternatively, the Devanagari script is used for writing Bhumij language, facilitating better understanding of their culture. The Bhumij script consists of 30 letters, with 6 vowels (*Ekol Borno*): a, A, U, E, H, U, and 24 consonants (*Theso Burno*): May be, O, h, y, D, B, E, L, Q, F, P, T, d, N, K, Z, g, J, R, S, Y, C, V, X. When writing in the Bhumij script, the vowel 'a' is always combined with a consonant.

For example: K+a= Ka,   M+a= Ma,   S+a= S a
For example, & d~$v¾d~   e~$v¾e   l~$v¾l

For stress the consonant y is always added to a consonant.
For example:
K+y= Ky   B+ y= By   X+y= Xy   P+ y= Py
V$,g~¾B   r$,g~¾Fk   x$,g~¾?k   i$,g~¾Q
G+y= Gy   n+ y= ny
t $,g~¾>   n$,g~¾/k

When writing the Bhumij Language in the Ol-Onal Script, it is essential to bear in mind that the letter "n" is represented by D when it occurs at the end of a word, and by "n" itself when it appears in the middle of a word (Samad & Sardar, 2011).

A Tale in Bhumij Language

Bhumijkomanav   tan   Boga/Bura   Hun   moojadlana.   NenVoga   do buruodomorogburuwongamente he etotayah. Ne Vongaparabko do kisadkovachas-vas chauakantana. Sirmareyanoovachaduplekate he manavtana. Vongaburu, porabkore he hodokonoovasrijanmente he paiteekoookudaehakoSugamchadupmente he metah o tana. Mage ChadupSeter Jan tegemarangburujahirakorevangahuitana. Inahtayommijer-mijerhatudishomkoresuvarenburujahirakorevongahuitana.
Yemanaraburupathsimla path ukam path, dalma path, poodiburu sail buru, pakhnaburupodosiburumatkamburunedaakamdulahnaya,
deuriodohaturenahodokomojsangatekojahira re, burubongareyafooduchauali, sindur, dhunaavachavali,   holoh,   tad   odothapanili.   Hodo   kosukoosoopook   le   tan reyahvongatana.   Onadivar-kanyanel   ne   pelrehyah.   Samyogtana   en dulahhaturenhodo van-vivadahkaterasikaramanjtekomanaoeha.

English Translation of the above Tale

The Bhumij tribe worship Nature related Gods and Goddesses. On such worship which occupies the most prominent place among these worships is called "MaghBonga". They call this worship "BahaBonga" (Big Mountain) also. The farmers start preparation for this worship after harvesting their paddy fields. This worship is especially done on the full moon day or on the first moon day. The Bhumij

community starts all their auspicious work for example, marriage, house construction etc. They perform this worship once in a year in the month of Magh (last week of February and first week of march) in which things related with nature, like trees and bushes, hills like area big mountain, Simla hill, likam hill Dalma Pat, Poonds Sayil hill, Pakhna hill, Podosi hill, and Matkam hill are inated. On that day the worshippers put rice, Lalia (vermilion), Handiya (rice beer), Dhoop (incense) rice powder and the condiment made from rice called Peetha in leaf of Dehri Sal and offer these to their gods and goddesses so that all the members of the Bhumij tribal community would lead life of happiness and peace. On this Magh Bonga Day the village folks forget all their quarrels and bickering and perform this worship together.

(Sardar, 2015)

A Bhumij Folk Song

AamdogoJayaraBudhi, ChiyamEngam Tara
AamdogoJayaraBudhiChiyamSukutiyanTana
Rang ma rasoda tale, Chodor utu Hama
KerahKerohKaltiteleSeva Utu Hama

English Translation of the above Song

O, Jahira mother! Why are you crying again and again?
O, Mother Jahira! Why are you sobbing again and again?
Don't worry! We shall Worship you by pouring *MapiaMapo* juice!
We shall sacrifice Kerah hen to you.

(Samad & Sardar, 2011)

A Bhumij Song

AamDogoJairaBadhaIminKipotiya
AamDogoJairaBudhiIminKiponiya
KekeroehohSodiJeleBonga Utu Aam
Keroh-kerohKalti Tel Seva Utu Hama

English Translation of the above Song

O, Maragburu Old/Jahira you have mean thoughts in your mind about us humans.
O, Jahira Mother! You are very kind to us.
Kindly have mercy on us! We shall sacrifice a cock to you.
O, Mother Jahira! Be kind to us humans, we shall sacrifice a hen to you.

(Samad & Sardar, 2011)

Present Role and Status of Bhumij Language

The foundation of the Bhumij tribe's culture lies in its language, which is believed to have originated from their ancestral mother tongue. Language serves as a powerful tool for conveying thoughts, desires, emotions, and even pain to others. It exists in two forms - oral and written (script). Social, cultural, folk, literature, and

educational aspects find expression solely through language, making its role in cultural development paramount. Sharma's research in 1983 has demonstrated the close connection between the mother tongue and the language spoken by a child, as the mother plays a crucial role in teaching and introducing language to the child, making the mother tongue the fundamental basis of a language.

According to Nigam (1971), various indigenous tribes have interacted primarily through language. Currently, many of these tribes have forsaken their native languages and embraced non-tribal languages. This language shift is predominantly observed in peripheral regions, leading to a delay in preserving their original languages due to the influence of modernization. However, some interior areas remain unaffected by modernization, ensuring that the tribal communities there do not come into contact with non-tribal influences, and in such places, people continue to speak their own mother tongue.

Bhumij Language predominantly belongs to the Bhumij tribe and is primarily spoken by them. According to the 2011 census, the total population of the Bhumij Scheduled tribe in India is 872,000, with 100,000 individuals speaking the Bhumij language. Among these, 376,296 reside in Bengal, 209,448 in Jharkhand, and 248,144 in Assam. In Odisha, there are 28,390 Bhumij people as per the 201 monograph, and they inhabit the districts of Mayurbhanj, Keonjhar, Balasore, and Bhadrak (Otta, Mohanty, 2014).The identity of any Scheduled tribe is closely associated with its dialect or language, leading to the presumption that the language used in their daily lives is their mother tongue. Based on this assumption, it is estimated that there are around 100,000 people in India who speak the Bhumij language.

However, when it comes to education, there appears to be a contradiction in the role of mother tongue. After India gained independence, it was mandated to teach children in their mother tongue at the primary level. This policy was laid down by the government in 1956, and Article 350 made it essential to impart education in children's mother tongues at the primary stage. Moreover, the government's directive also advised teaching children in their mother tongue and the local dialect at the primary level. According to a previous study conducted by the Linguistic Survey of India, Munda and Bhumij are considered different languages. Jharkhand was the first state to recognize the Bhumij language, where both Bhumij and Munda languages exist independently. However, since 2011, Mundari language has been recognized as the mother tongue of the Munda Scheduled Tribe, aligning with their culture and language. Significant efforts were made to promote literacy in Mundari, and since teaching started in Mundari at the primary stage, it prevented the language from becoming extinct. As a result, there was a considerable improvement in the standard of education for the Munda Scheduled tribe.

Bhumij language has been officially recognized for teaching at the Primary Stage for Bhumij tribal children since some time in the past. Additionally, since 2008, Bhumij language has been acknowledged as the Second State language. Tata Steel Company is actively providing education in Bhumij language at the Primary Stage in certain Scheduled tribe districts of Jharkhand. In this endeavor, tribal linguistic scholars such as Sudarshan Bhumij, Suresh Bhumij, Lusku Samad, Maiya Lala, Udhisthir Sardar, and other members of the Bhumij Society have been

instrumental. They have been conducting workshops, training programs, establishing schools with the support of Cultural Society and Tata Steel, and promoting private schools that offer education and conduct examinations in Bhumij Language (as observed in the year 2019 Tata Steel report).

Mayurbhanj district is located in the North-East region of Odisha, near the border of Singhbhum District in Jharkhand, which is known for its dominance by the Bhumij and Santhal communities. As an independent nation, India ensures equal educational rights to all its citizens, and under Article 350(A), Primary Education in one's own mother-tongue has been made mandatory for everyone. This policy is especially designed to benefit Scheduled Tribes and preserve their languages. To facilitate this, Multilingual Education (M.L.E) teachers were appointed in 2007-2008, capable of teaching through tribal languages. However, in the Bhumij-speaking areas, these teachers are delivering education in the Munda language because they belong to the Munda community. This approach hinders the development of Bhumij children since Article 350(A) mandates that education at the Primary level must be provided in the child's mother-tongue. As a result, there is a discrepancy in the government's policy implementation in different states, and this situation has persisted from 1980 to 2011.

Munda language can be likened to a large tree, while Bhumij language is comparable to a small tree. Just like a small tree cannot flourish under the shadow of a big tree, the survival and growth of Bhumij language depend on its ability to function independently as a medium of instruction. Currently, the Bhumij culture is at significant risk of extinction due to the absence of the Bhumij language. Language is an integral part of tribal culture, as it mirrors their unique way of life. Breaking this connection between language and culture puts the very existence of a tribe's culture and language into question.

The Bhumij tribe always strives to safeguard their land, water, and forests while also making concerted efforts to preserve their language and culture. Language is instrumental in shaping and defining a culture's identity. Across the globe, all human societies have a means of communication, even in the most primitive times. Initially, the Bhumij people lacked a formal language and relied on signs and body gestures to convey their desires and thoughts. Over time, through the development of organs and civilization, sign language evolved into dialects and eventually into fully developed languages, mirroring the process of human evolution (Redcliff Brown 1940).

Despite having their own language and culture, the Bhumij people have long been marginalized in society. Every aboriginal tribal community possesses a unique cultural and linguistic identity, but they have been deprived of natural rights and equality, only receiving limited reservations for legal protection. These rights are often controlled by certain groups of city-dwellers. The process of industrial development in modern times and land acquisition issues have further eroded the tribal society's land and linguistic identity (Punita, 2015).

Article 29 of the Indian Constitution, enacted in January 2014, emphasizes the preservation of dialects and languages of Aboriginal tribes. It also grants people the right to maintain their own culture and language. Scheduled tribe communities have the right to use their own languages, practice their faiths, and preserve their

cultural heritage. No state has the authority to impose a different language or culture on any tribal community (XaXa, 2014).

The Government of Odisha's Scheduled Tribes list in 1950 categorizes the Bhumij and Munda tribes separately, indicating their distinct tribal status. An organization called "BhumijMundaSangathan," founded by Jaipal Singh Munda from Jharkhand, aimed to develop the Munda Scheduled Tribe, focusing on preserving, protecting, and propagating the Munda language and culture. During this time, Bhumij tribe members were unaware of their mother-tongue, Bhumij Language, and were mistakenly influenced by Mundari workers who claimed that Mundari was also their mother-tongue. However, census reports and the Linguistic Survey of India confirm that Bhumij and Munda are separate tribes with distinct languages. Despite previous confusion regarding the similarity of Bhumij and Munda cultures, it is essential for both tribes to collaborate and work towards the development of their shared mother-tongue, Mundari (Samad, 2007).

In this state of uncertainty, the Bhumij language faces the risk of extinction. As languages like Bhumij gradually become obsolete, the diversity and uniqueness of the culture they represent are also lost. Protecting the symbols of cultural identity for different Scheduled Tribes is crucial in solving tribal issues, as recognized by the Indian government. In Bihar State, seven languages of Scheduled Tribes are on the verge of extinction, including Bhumij language as one of the principal languages (Gupta, 2014).

After having an understanding of the Bhumij language and culture the 'Health management of Bhumij community 'which explains the traditional knowledge on ethno medicine of the Bhumij community and how their cultural belief is associated with their health management. The health management of the Bhumij community is deeply rooted in their traditional knowledge of ethnomedicine, which encompasses various practices, beliefs, and remedies passed down through generations. The Bhumij tribe, being an indigenous group in India, has developed a rich repository of ethnomedicinal knowledge that plays a significant role in their healthcare practices.

Traditional Knowledge Transmission

The Bhumij tribe places immense value on preserving their cultural beliefs and health practices. Elders and traditional healers play a vital role in transmitting this knowledge to the younger generation through oral traditions and direct mentorship.The transmission of traditional knowledge within the Bhumij tribe is a fundamental aspect of their cultural heritage and identity. Traditional knowledge encompasses various aspects, including ethnomedicinal practices, agricultural techniques, craftsmanship, rituals, and social norms. This knowledge is passed down from generation to generation through oral traditions, experiential learning, and direct interactions with elders and community members.

Oral Tradition

One of the primary methods of transmitting traditional knowledge is through oral tradition. Elders, experienced community members, and traditional practitioners

play a vital role in preserving and imparting knowledge through storytelling, songs, chants, and folklore. They share their wisdom, experiences, and life lessons, ensuring that valuable information is retained and enriched over time.

Experiential Learning

Traditional knowledge is often acquired through hands-on experience and practical learning. Younger members of the community actively engage with elders and traditional practitioners in various activities, such as farming, fishing, and crafts. By actively participating, they learn the intricacies and nuances of these practices, gaining a deeper understanding of their cultural heritage.

Rituals and Ceremonies

Many cultural and religious rituals serve as significant platforms for transmitting traditional knowledge. During ceremonies and rites of passage, the community comes together to perform age-old practices, rituals, and customs. Through active involvement in these events, younger generations learn about their roles, responsibilities, and cultural values.

Observation and Imitation

Young members of the community observe the actions and behaviors of their elders and experienced individuals in different contexts. By imitating their actions and following their guidance, they acquire skills and knowledge about various aspects of life, including traditional healing methods, artisanal craftsmanship, and ethical practices.

Apprenticeship

In some cases, traditional knowledge is transferred through formal apprenticeship systems. Young individuals with a keen interest in specific fields, such as craftsmanship or traditional medicine, seek mentorship from experienced practitioners. They work closely with their mentors, learning the intricacies of the craft and acquiring the knowledge necessary to carry it forward.

Community Participation

The Bhumij tribe emphasizes collective participation in various community activities. Through active involvement in daily life, festivals, and community events, younger members gain exposure to their cultural practices and values, ensuring the continuity of traditional knowledge.

Challenges

Despite the efforts to preserve traditional knowledge, modernization, urbanization, and external influences pose challenges to its transmission. As younger generations increasingly engage with the outside world, there is a risk of erosion of traditional practices and values. It is crucial for the Bhumij community to strike a balance between embracing change and preserving their unique cultural heritage.

Therefore the transmission of traditional knowledge within the Bhumij tribe relies on a rich tapestry of oral traditions, experiential learning, rituals, and community participation. By passing down this valuable knowledge, the Bhumij community sustains its cultural identity and ensures the continuity of its age-old practices for future generations.

Challenges and Preservation

The preservation of traditional knowledge within the Bhumij tribe faces several challenges in the modern world. These challenges threaten the continuity and sustainability of their cultural heritage. Some of the key challenges include:

Modernization and Globalization

The increasing influence of modernization and globalization has led to the erosion of traditional practices and values. Younger generations are exposed to external influences, which can lead to a decline in interest and appreciation for traditional knowledge.

Language Shift

As younger generations interact more with mainstream society, there is a risk of language shift away from the native Bhumij language. Language is a crucial carrier of traditional knowledge, and its decline can result in the loss of valuable cultural information.

Loss of Elders and Traditional Practitioners

The passing away of elders and traditional practitioners without adequate knowledge transfer poses a significant threat to preserving traditional knowledge. As these custodians of wisdom depart, valuable information and skills may be lost.

Limited Documentation

Traditional knowledge is often transmitted orally, and limited documentation exists. The absence of written records makes it challenging to preserve and share traditional practices with future generations.

Lack of Recognition

Traditional knowledge may not receive adequate recognition and support from governmental and non-governmental institutions. This lack of recognition can discourage younger generations from taking an interest in preserving their cultural heritage.

Displacement and Disconnection

Displacement due to land acquisition, urbanization, or industrial development can disrupt the traditional lifestyle and practices of the Bhumij tribe. Such

disconnection from their ancestral lands can weaken the intergenerational transmission of traditional knowledge.

To address these challenges and ensure the preservation of traditional knowledge, several strategies can be implemented:

Cultural Education

Implementing cultural education programs within the community and schools can create awareness and appreciation for traditional knowledge among the younger generation.

Documentation and Recording

Efforts should be made to document and record traditional knowledge through audio, video, and written formats. This documentation can serve as a valuable resource for future generations and researchers.

Intergenerational Exchange

Encouraging intergenerational exchange and mentorship programs can facilitate the transfer of traditional knowledge from elders and practitioners to the younger members of the community.

Community Empowerment

Empowering the Bhumij community to take ownership of their cultural heritage and actively participate in its preservation can foster a sense of pride and responsibility.

Support for Traditional Practitioners

Providing recognition, support, and resources to traditional practitioners can encourage them to continue their practices and pass on their knowledge.

Cultural Festivals and Events

Organizing cultural festivals and events can promote the continuity of traditional practices and reinforce the importance of preserving cultural heritage.

By addressing these challenges and implementing preservation strategies, the Bhumij tribe can safeguard its traditional knowledge for future generations, ensuring the continued vitality and richness of their cultural heritage

IV. CONCLUSION

Digitalism and artificial intelligence have the potential to play a significant role in fostering the preservation and progress of the Bhumij language. As we embrace the advancements of the digital age, it is crucial to harness these technologies in a manner that respects and values the unique cultural heritage of the Bhumij tribe.Digital platforms can be employed to document and record the Bhumij language, capturing its nuances and intricacies for future generations. Online

archives, mobile applications, and digital libraries can serve as repositories of ethnomedicinal knowledge, ensuring that traditional healing practices are accessible to a wider audience and preserved for posterity. Moreover, artificial intelligence can facilitate the translation and transcription of Bhumij language texts, breaking language barriers and fostering cross-cultural exchanges. AI-powered language learning tools can aid in revitalizing the Bhumij language among the youth, encouraging its use and perpetuation within the community. While embracing these technological advancements, it is essential to strike a balance between modernization and the preservation of cultural authenticity. Empowering the Bhumij community to actively participate in digital initiatives is key, ensuring that they retain control over their heritage and knowledge. Simultaneously, traditional practices and beliefs must be respected and integrated into the digital landscape, as they form the foundation of the Bhumij tribe's identity and well-being. Collaboration between technological experts, linguists, anthropologists, and community members can lead to innovative approaches that promote the Bhumij language knowledge without compromising their essence. As we navigate the digital age, let us remember that progress and preservation need not be mutually exclusive. By embracing digitalism and artificial intelligence with cultural sensitivity, we can ensure that the Bhumij language knowledge continue to flourish in the ever-changing world while honoring the wisdom and heritage of the past. Through this harmonious fusion, the Bhumij community can find strength and resilience, paving the way for a future that celebrates both progress and tradition.

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