



Beyond Language Loss: Digital Media and the Transformation of Tharu Cultural Knowledge in the Twenty-First Century

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Abstract

Tharus are an ethnic group who live in some parts of India and the south plains of Nepal. The ethnic group is rich in its cultural traditions which are expressed through oral tradition, art, music, dance, ritual and traditional knowledge etc. However, the processes of globalization, urbanization, migration and technological innovations are becoming an obstacle for keeping the culture alive, since many young people prefer to use technology. Digital media thus is an effective way to preserve and disseminate the traditional knowledge about the Tharus. The paper investigates the use of digital media in preservation and enrichment of cultural knowledge of the Tharus apart from language preservation. The research is qualitative in nature and uses information taken from books, research articles, governmental documents, digital archives and other trustworthy sources found on the Internet. The research method is thematic content analysis which helps to reveal the roles played by digital media in preservation and dissemination of culture. The results show that social media, digital stories, videos and digital archives are important elements in creation of cultural identity, raising awareness and involving young people into cultural heritage. Moreover, the research reveals the main challenges faced by the use of digital media such as inequalities in access to technology, issues of authenticity of the digital content and commercialization of the traditional culture. Thus, digital media is viewed as an effective tool for preservation of the intangible culture of the Tharus in case of cooperation between the community, cultural organizations and educational institutions. It should be noted that the research has revealed that the combination of traditional knowledge and modern technology can be helpful in the protection and promotion of the Tharu culture. The method also proves to be efficient for investigation of indigenous cultures, cultural heritage preservation and digital humanities etc.

Keywords- Tharu Community, Digital Media, Indigenous Cultural Knowledge, Cultural Heritage Preservation, and Digital Humanities.

1. Introduction

Indigenous societies all over the globe have accumulated a variety of cultural knowledge over many centuries as a result of their close cooperation with nature, social environment, and traditions. It is represented in tangible cultural expressions, such as architecture, handicrafts, costumes, artistic objects,



and intangible cultural heritage, such as folklore traditions, rituals, music, dance, language, agricultural practices, medicine, ecological knowledge, etc. Indigenous cultural traditions are valuable sources of the past experience of humanity. Preservation of the indigenous cultural knowledge has become an important task for scholars, governments, and international agencies as they seek to promote cultural diversity and sustainable development. The Tharu community is considered one of the oldest indigenous population groups living in the Terai plains in northern India and southern Nepal. In India, the majority of the Tharu settlement takes place in the states of Uttar Pradesh, Bihar, Uttarakhand, and some parts of West Bengal, while in Nepal they are concentrated in the southern part of Terai region. Over the course of centuries, the Tharus developed their unique lifestyle in harmony with forests, rivers, wetlands, agriculture and their traditional knowledge includes sustainable agricultural practices, herbal medicine, biodiversity protection, food tradition, architecture, weaving, painting, woodworking and ceremonial practices.

The cultural identity of the Tharu people is embodied in a series of colorful folk dances, such as Jhumra, Sakia, Maghi dance, Dhumeria, Holi dance, and Devi Nritya. Traditional Tharu musical instruments, songs, and various seasonal festivals create a strong cultural base for cultural unity and social cohesion. Festivals, marriage ceremonies, harvest celebration, religious practices continue to serve as important social spaces where cultural values are transmitted from older to younger generation. Women play a very significant role in preserving embroidery, wall paintings, basket making, storytelling and other traditional practices. However, despite the rich cultural traditions, the Tharu community encounters a number of obstacles in preserving the traditional knowledge in the changing socio-cultural environment. Economic migration, urbanization, education system, globalization and advancement in technology change traditional way of life and make it more difficult for the Tharu people to transmit the knowledge from one generation to another. The younger generation consumes more globalized digital content and spends less time taking part in traditional cultural practices. As a result, several of indigenous practices, dialects, songs, oral histories, and craft practices are getting less popular or documented. At the same time, new opportunities have been created for preserving cultural heritage with the help of digital technology. Digital media includes a broad range of communication technologies, such as social networks, websites, digital archives, online museums, mobile apps, podcasts, video sharing sites, virtual exhibits, cloud storage, etc. These technologies allow documenting oral histories, storing visual content, archiving traditional performances and sharing cultural practices with the broader audience. Contrary to the traditional ways of documentation, the use of digital media provides possibilities for constant updating, accessibility, participation and long-term preservation of cultural resources.

Digital storytelling is one of the most effective ways for documenting the indigenous knowledge. With the help of photographs, audio records, documentary films, podcasts and community generated videos, the elders can tell stories of their traditions while the younger generation provides technical expertise in producing and editing digital content. Thus, not only the valuable information is being recorded but also there is a possibility to increase the level of participation in cultural heritage preservation. Social media helps to promote the Tharu festivals, crafts, music, dance performances and history to national and international community.

Development of the digital humanities has opened up even more opportunities for preserving indigenous cultures due to cooperation between technologies, heritage studies, anthropology, education



and communication studies. There are a lot of universities, museums, archives and cultural institutions who develop their digital repositories and document the endangered languages, traditional ecological knowledge, oral literature and visual culture. This helps not only in preserving the cultural heritage but also in research and education. Nevertheless, increasing reliance on digital technologies also creates certain problems. Sometimes, the use of digital media makes the cultural traditions simple and takes away them out of their natural social environment. Issues related to the ownership of the indigenous knowledge, intellectual property rights, informed consent, data security, authenticity and commercialization should be taken into account. Limited access to the digital infrastructure, low level of Internet connectivity in rural areas, lack of digital literacy and financial restrictions make the participation of communities in digital preservation problematic. Without the direct participation of the indigenous communities, it would be hard to represent culturally and socially significant aspects of the heritage in digital medium. Therefore, this study attempts to investigate the role of the digital media in preserving and promoting the indigenous cultural knowledge of the Tharu community. It does not consider technology as a substitute of traditional cultural practices but examines how the digital platforms could support traditional system of knowledge transmission. The study will explore the possibilities provided by digital documentation, online communication, digital storytelling, virtual cultural archives and, at the same time, critically evaluate the issues related to social, ethical, technological and cultural aspects of the problem.

2. Literature Review

In recent years, the study of indigenous knowledge became an interesting area of research in cultural studies, anthropology, communication studies, and digital humanities. The preservation of indigenous knowledge systems is recognized to be valuable for keeping historical memory, environment knowledge, traditional craft, oral literature and other aspects of identity of particular communities. With the development of digital technologies, scholars began studying ways to use the potential of digital media for documentation, preservation and dissemination of cultural heritage and solving the problems of modernization and globalization.

Research of indigenous knowledge systems has traditionally been concentrated on studying the oral traditions, rituals, folklore, and customs through ethnographic fieldwork. In his writings, Hobsbawm (1983) and Smith (1999) stated that the system of indigenous cultures preserves collective memories that are vital for social history and cultural continuity. They noted that the oral traditions are not historical sources only, but living systems of transmission of the values, beliefs and other types of knowledge between the generations.

The UNESCO (2003) made great contributions to spreading the information about the significance of intangible cultural heritage by identifying oral traditions, performing arts, social practices, rituals, festive events, traditional craftsmanship and indigenous knowledge as integral part of cultural diversity. The Convention for the Safeguarding of the Intangible Cultural Heritage was aimed at development of systematic approaches to the documentation and protection of endangered cultural traditions. Many states have implemented digital heritage projects to preserve languages, music, folklore and traditional knowledge of indigenous peoples.



Digital media revolutionized traditional practices of cultural heritage preservation. As Manovich (2001) wrote, the digital media allows to record, archive, edit and distribute the information about culture in a more efficient way than print media does. The use of digital technologies provides multimedia possibilities the combination of texts, photos, audio recordings, videos, maps and virtual exhibitions in one digital platform. This multi-dimensional approach has greatly expanded opportunities of preservation of culture expression that are hardly documented using other approaches.

The concept of participatory culture that was developed by Jenkins (2006) notes that the digital platforms allow to turn users into active creators rather than consumers of the information. Social media, video-sharing websites, blogs, podcasts and collaborative digital archives provide opportunities for documenting of cultural experiences by communities and their dissemination around the world. Participatory approach to documentation is especially valuable for indigenous cultures because it allows to represent their heritage from their point of view. There are many researchers who have discussed the association between digital storytelling and the preservation of indigenous knowledge.

Lambert (2013) mentions that digital storytelling involves the combination of personal storytelling, pictures, videos, songs, and oral histories for creating an effective document of culture. Contrary to the written documents, digital stories capture facts as well as emotions associated with cultural traditions. The indigenous elders tell folklore, cultural practices, and historic incidences while the youth generation provides technological knowledge about digital stories. It is evident from research conducted among indigenous populations around the world that digital media has proven itself to be useful in preserving threatened languages and oral cultures.

According to Christen (2012), the use of digitally controlled archives in communities helps keep control over cultural content and ensures that cultural knowledge does not get into the wrong hands.

Several research works carried out in Australia, Canada, and New Zealand show that indigenous groups are resorting to mobile technology, online archival, and multimedia documentation to maintain their cultural identity. The use of digital mapping, virtual museums, and online language learning sites have been effective in disseminating indigenous knowledge among youth and increasing awareness about cultural diversity. These examples show that the use of technology helps preserve traditional knowledge systems only when indigenous groups actively document the knowledge. In the Indian context, there has been considerable work on the preservation of tribal culture in recent times. The scholars have recorded cultural traditions of Gonds, Santhals, Bhils, Warlis, and various other tribal groups. They emphasize the significance of preserving oral literature, traditional ecological knowledge, folk music, folk dance, and rituals. Nevertheless, most of the research work is confined to ethnographic documentation and the use of digital media in the preservation of indigenous culture has been comparatively lesser studied.

Studies focusing on the Tharu group have been done in anthropology, folklore, language, religion, agriculture, medicine, and performing arts. Guneratne (2002) has studied the identity and socio-cultural change of the Tharus in Nepal, stressing that they live in close connection with nature. Krauskopff



(1995) has analyzed the social structure, ritual practices, and local belief systems of the Tharus, revealing the wealth of culture of the Tharus.

There are several studies on Tharu folk dances, songs, festivals and arts in Uttar Pradesh and Bihar done by some Indian researchers. They emphasize the importance of the cultural festivals like Maghi, Ashtimki, Holi and many others which still remain important vehicles of transmission of traditional knowledge. The folk dances like Jhumra, Sakia, Dhumeria, Devi Nritya and other harvest dances still have an important place in building up identity of community. Recent studies are also trying to understand the possibility of use of the digital platform to document tribal arts and culture. Governmental organizations, museums, Universities and non-governmental organizations have created digital archives, exhibitions on the web and audiovisual documentation projects devoted to indigenous peoples of India. There are such forms of documentation of tribal culture as digital museum, documentary films on YouTube, websites on education and virtual exhibitions. Social networks become one of the main platforms for promotion of indigenous cultures. Facebook, Instagram, YouTube and community websites give artists, musicians, educators, researchers and cultural institutions the opportunity to make videos about traditional dances, folk songs, handicrafts, festivals, oral history available to wide audience. It helps younger generations of indigenous people to get acquainted with their cultural heritage and provides cultural tourism and economic development possibilities.

In addition to these positive trends, however, researchers also mention some issues related to digital preservation of cultures. First, there is a possibility that digital recordings would simplify certain aspects of the culture and represent traditions outside their native social and ceremonial contexts. In addition, commercialization of cultural heritage through digital channels can turn the sacred expressions of the indigenous peoples into entertainment products with loss of their initial significance. In addition, another important issue is that of digital inequality. Many rural indigenous communities do not have enough internet access, necessary digital infrastructures, lack of technical skills and sufficient finances that limit their participation in digital preservation activities. Also, the problems related to intellectual property, informed consent, data ownership and ethical treatment of indigenous knowledge are not yet solved. Overall, the existing literature shows that digital media can contribute significantly to cultural preservation of indigenous peoples through combination of technological innovations and community participation, documentation and culturally sensitive management of the knowledge. Sustainable preservation requires collaboration of all interested parties including indigenous communities, educational organizations, government, museums, cultural researchers and digital technology experts.

3. Research Gap

As was mentioned above, the existing scientific literature is rich with descriptions of cultural traditions, social structure, festivals, folk dances, stories and knowledge systems of the Tharu community. In addition, there are plenty of works devoted to the general problem of use of digital technologies for cultural heritage preservation among other indigenous societies. However, there are few researches which are dedicated to the analysis of contribution of digital media to the preservation, documentation, dissemination and revitalization of the Tharu cultural knowledge in the conditions of India and Nepal. Existing researches are usually concerned about ethnographic documentation or anthropological



analysis while digital storytelling, digital archives creation, social media involvement, virtual heritage platforms and participation of youth in cultural preservation process receive much less attention. Moreover, there is little scientific investigation of possibilities and problems of integration of traditional knowledge systems and digital technologies. This paper is an attempt to fill these gaps and to explore the problem of relationship between digital media and indigenous cultural preservation using Tharu community as an example.

4. Research Objectives

The current study pursues the following objectives:

1. To explore the importance of indigenous cultural knowledge for Tharu community.
2. To investigate the role of digital media in preservation and promotion of Tharu cultural heritage.
3. To explore the role of digital storytelling, social media, and digital archives in documenting culture.
4. To recognize the possibilities and challenges involved in preserving indigenous culture through digital media.
5. To suggest ways of promoting cooperation between the indigenous community, educational and governmental institutions, and cultural organizations in ensuring the sustainable preservation of the culture.

5. Research Questions

This study will address the following research questions:

1. What are the major elements that form the indigenous cultural heritage of the Tharu community?
2. What is the contribution of digital media towards the preservation and promotion of Tharu cultural knowledge?
3. What types of digital media prove to be the most effective in documenting the oral traditions, folk dances, music, rituals, and other traditional practices?
4. What problems are associated with the digital preservation of indigenous cultural heritage?
5. How to combine digital technologies with the traditional knowledge systems to ensure cultural sustainability?

6. Scope and Limitations of the Study

The current research considers the issue of the role of digital media in the preservation and promotion of the indigenous cultural heritage of the Tharu community living in the Terai areas of India and Nepal. The purpose of this study is to find out how digital technologies may help in the preservation and dissemination of cultural practices of this people, which were traditionally transmitted by means of oral traditions and participation of the whole community. The main elements of Tharu cultural heritage include their folk songs, traditional dances, festivals, rituals, oral traditions, handicrafts, ecological



knowledge, cultural beliefs, and arts. The research considers the contribution of different digital media like social media, digital archives, online museums, documentary films, educational websites, mobile applications, podcasts, and virtual exhibitions in the preservation of cultural heritage of the people mentioned. Moreover, the study considers the role of different participants of the process of promotion of digital heritage, such as educational institutions, government organizations, museums, researchers, NGOs, and the local communities. However, there are several limitations associated with the study, which require consideration. First of all, the research is carried out using secondary data retrieved from books, scholarly journal articles, reports by governments, institutions, online repositories and databases. In particular, no field surveys were performed, nor did the researcher conduct any interviews with the members of the Tharu community. Thus, some aspects of indigenous culture may not be covered. Second, the lack of equal digital documentation for the Tharu community should be mentioned as a certain limitation.

As compared with other indigenous communities, there are relatively few digital archives and scholarly publications that relate to Tharu cultural heritage and thus, less information may be available. Third, the Tharu community lives in different parts of India and Nepal, and various dialects, customs, rituals, festivals and artistic traditions are widespread among them. Therefore, the study considers the general picture of Tharu culture rather than each regional variation separately. Finally, the development of digital technologies brings about many innovations including artificial intelligence, virtual reality, immersive heritage experience and digital preservation software. Being constantly developing, these technologies will certainly bring new perspectives for future research.

7. Research Methodology

The current research is qualitative descriptive research that studies the role of digital media in the preservation and promotion of indigenous cultural knowledge of the Tharu community. Qualitative research is chosen for the purposes of this study as the research intends to interpret cultural traditions, community practices, processes of digital documentation and heritage preservation rather than measure statistical relationships between variables. The objective of the research is to interpret the interaction between indigenous cultural knowledge and digital technologies based on the review of the existing scholarly literature and documentary evidence. The research is based on the secondary data collected from reliable academic and institutional publications. Sources used in the research include peer-reviewed journals, scholarly books, doctoral theses, conference proceedings, government reports, Ministry of Tribal Affairs publications, UNESCO documents, digital heritage archives, museum collections, online repositories, educational websites, documentaries and research reports dedicated to indigenous communities, digital media, cultural preservation and the Tharu community.

The variety of sources help to explore different perspectives on history, anthropology, technology, culture and policies relevant to the research problem. Data collection is conducted through systematic literature review related to the following three themes: indigenous cultural knowledge, digital media technologies and Tharu cultural heritage. The publications are carefully analyzed and information related to oral traditions, folk performances, traditional ecological knowledge, digital storytelling, social



media, digital archives and cultural documentation is obtained from them. The information obtained from different sources is systematically organized in accordance with the objectives of the study.

Thematic content analysis, a qualitative method of data analysis, was selected for the purposes of the study. Thematic content analysis allows the researcher to identify recurring patterns, concepts and themes in the literature reviewed. Similar concepts are grouped into thematic categories helping to interpret the interaction between indigenous cultural knowledge and digital technologies and compare viewpoints of different scholars regarding opportunities and challenges in the area. The research also conforms to well-accepted ethical norms of academic research. All data has been gathered from publicly available scientific sources and has been correctly cited in accordance with academic referencing rules. The research recognizes that indigenous knowledge mainly belongs to communities, who have preserved it for generations. Therefore, all discussion of the Tharu traditions has been conducted with respect to the need for community participation, informed consent, intellectual property issues and ethical documentation in future digitization projects.

8. Results and Discussion

8.1 Indigenous Cultural Heritage of the Tharu Community

The analysis of the literature reveals that the Tharu community is one of the few possessing one of the richest indigenous cultural traditions in South Asia. Their culture has been developing for centuries as a result of interactions with forests, rivers, wetlands, agriculture and other ecological systems. In contrast to many societies, whose historical knowledge has been preserved in written documents, the Tharu community has traditionally preserved it through oral communication, memory, rituals and community participation. Their indigenous knowledge includes oral history, folk tales, traditional songs, ceremonies, festivals, religious belief, customary laws, agriculture, herbal medicines, environmental conservation, handicrafts, architecture, weaving, painting, cuisine and many other kinds of knowledge. Traditional cultural expressions of the Tharus have served multiple social purposes apart from entertainment. Jhumra, Sakia, Dhumeria, Maghi Dance, Holi Dance and Devi Nritya dances are just a few examples of folk dances performed by the Tharu people to convey their historical experiences, agricultural activities, seasonal events, religious beliefs and social relations. Similarly, folk songs serve as carriers of memories about migration, family relations, agricultural celebrations, environmental changes and local history. They function as living archives of knowledge, values, customs and identity transferred through generations of Tharus. An important role in preservation of these traditions plays women who use storytelling, rituals, embroidery, basket weaving, wall painting and other activities in order to preserve cultural knowledge within their families and communities. The research findings show that indigenous ecological knowledge of the Tharu people is one of the most valuable elements of their cultural heritage. Their traditional farming techniques, forest management, herbal medicine, water conservation, seasonal calendars and biodiversity knowledge serve as a proof of a highly developed environmental knowledge acquired through generations of practical experience. Indigenous knowledge not only shapes cultural identity but also plays an important role in environmental management. However, growing urbanization, migration, formal education, change of occupation and lack of participation in traditional ceremonies undermined the process of intergenerational knowledge transfer



leading to the threat of disappearance of many oral traditions, dialects, rituals and indigenous skills due to improper documentation.

8.2 Role of Digital Media in Preserving Indigenous Cultural Knowledge

The research results show that digital media has become a powerful tool for documenting, preserving and popularizing the indigenous cultural heritage in the modern world. Rapid development of information and communication technologies has revolutionized traditional approaches to cultural preservation with the emergence of flexible multimedia-based documentation tools. It allows recording oral histories, folk performances, traditional music, rituals, festivals, handicrafts, indigenous environmental practices and community memories through photos, audio recordings, HD videos, digital archiving, virtual exhibitions, cloud storage services and interactive educational tools. In contrast to print documents that cannot be changed after their publication, digital sources can be easily updated, modified and expanded as needed, also providing long-term preservation of cultural records.

Community organizations, educational institutions, museums, researchers and cultural organizations more and more frequently use digital media to document traditional cultural expressions. The process of digitization protects fragile cultural materials like old photographs, manuscripts, musical recordings and historical documents from physical decay and multiple copies of materials can be preserved in different digital archives. An important feature of digital media is its ability to enhance educational opportunities. Digital archives provide students, researchers, teachers and cultural practitioners with instant access to valuable information that might not be available anywhere else due to geographical reasons. Digital repositories, educational websites, digital libraries and virtual museums allow conducting interdisciplinary research and promoting better understanding of indigenous cultures. Finally, digital communication promotes cooperation between scholars, governmental institutions, museums, archives, universities and indigenous communities, thus promoting cultural preservation across national and international borders.

8.3 Digital Storytelling and Oral Traditions

An important finding of this research concerns the growing role of digital storytelling as a method of indigenous cultural preservation. For many years, the Tharu community has been relying on oral storytelling as their main tool of passing history, mythology, moral values, environmental knowledge, customs and social traditions. Elders were telling folk tales, migration stories, agricultural experiences, spiritual beliefs and rituals during festivals, family meetings and community ceremonies. As many of these traditions have never been properly documented, they are endangered because of aging of the older generation.

The process of digital storytelling is an innovation of this traditional practice within the context of digital technology involving integration of stories through the use of audio narrations along with pictures, videos, music, archives and other multimedia applications. The use of modern recording instruments like cell phones, digital cameras, audiotapes, editors and publishing websites makes it possible for the community to record audio narratives from their elders, folk songs, rituals and other traditions that would be preserved in the form of visuals of indigenous knowledge. The study further



highlights that digital storytelling promotes productive collaboration between different generations. The older generation within the community provides information related to cultural knowledge, whereas the younger generation uses technology to create and edit digital stories. Not only does it promote preservation of important information, but it also helps in fostering cultural identity through involving the younger generation in heritage conservation. Digital storytelling is not only a tool for preserving cultural history, but also for educating indigenous peoples about their past.

8.4 Social Media and Youth Participation

The results demonstrate that social media technology has significantly influenced the dynamics between younger generations and indigenous culture. Web applications like Facebook, Instagram, YouTube, WhatsApp and community websites create an environment where Tharu culture can be documented and promoted in various ways. Young Tharu artists, musicians, dancers, students, scholars and cultural organizations use these technologies to disseminate photos, documentary videos, live performance, interviews, educational videos, cooking methods of their culinary heritage, handicrafts production as well as the video footage from different festivals and events held by communities. Thanks to the availability of social media, geographical boundaries of cultural communication have been extended. Cultural dances, performance of folk songs, religious rituals and local fairs that used to take place only in the villages can now be watched by people from all over India, Nepal and other countries in the world.

Thanks to the education campaign in digital platforms, people are motivated to include the indigenous culture into educational talks and public awareness programs. The use of online contests, digital exhibitions, webinars, podcasts and virtual cultural events provides more opportunities for the involvement of young people in cultural conservation. However, the research also draws attention to some problems related to cultural promotion using social media. There is a trend for short and visually appealing videos on digital platforms that might not represent the complicated and deep cultural practices but show them as fun. Some cultural practices might not be represented due to commercial interests leaving the significance of the history, religion and social practices of the community aside. In this way, the application of social media for indigenous cultural conservation should involve the participation of the community, responsibility in content creation and digital documentation.

8.5 Digitized Records of Traditional Dance, Music, Festivals, and Indigenous Arts

The thematic analysis shows that the digital documentation has become one of the most effective ways to preserve the intangible cultural heritage of Tharu community. Traditionally, cultural practices like folk dance, song, performance, festival and craft were preserved through observation and participation of families and villagers. Being oral traditions, they remained vulnerable to gradual extinction due to death of older generation members. Thanks to the digital technology, it has become possible to record audio-visual data on various cultural practices that could be preserved forever and made available to the wider audience. Jhumra, Sakia, Dhumeria, Maghi Dance, Holi Dance and Devi Nritya are just a few examples of the most prominent traditional dances of the Tharu community. They have been traditionally associated with the agricultural seasons, religious rituals, festivals and major life cycle events. The recording of such cultural performances using high definition videos allows preserving not



only dance movements, but also the accompanying musical accompaniment, costumes, traditional musical instruments, gestures, facial expressions and other aspects of the ritual performance. In this way, future generations will have an authentic visual reference that could not be conveyed through the written description. Similarly, the Tharu community possesses its own tradition of folk songs. These songs represent memories about migrations, agricultural practices, family relations, local legends, environmental knowledge and spiritual traditions of the people.

The digital audio recording technology allows preserving such musical traditions with increased accuracy of pronunciation, rhythm, melody and dialect. Elders and musicians can record their performances in order to preserve valuable oral traditions for future generations and scientific researches. Finally, festivals are another significant element of the Tharu cultural heritage. Festivals like Maghi, Holi, Ashtimki, various harvest festivals, marriage ceremony and other traditional rituals involve various elements of music, dance, religion, food, costumes, decorative art and collective participation. Documentary filmmaking, photography, drone videography and multimedia exhibition become possible means for preservation of cultural festivals as a complete cultural experience. In this way, documentation allows researchers to understand the social and religious significance of cultural practices and provides an opportunity for younger generations to reconnect with their heritage. Traditional arts and crafts greatly benefit from the process of digital preservation. The Tharu people are known for their distinctive wall painting, basket weaving, woodcraft, embroidery, pottery and other traditional arts representing the connection of Tharus with nature and local ecological resources. Using digital technologies like photography, three-dimensional scanning and virtual galleries for the creation of exhibitions allows preserving information on creative processes of the artisan and creating new possibilities for promotion of culture and economic development. At the same time, such digital technologies provide additional channels for interaction between the artisan, researchers, educators, museums and buyers without damaging cultural meaning of traditional crafts. Thus, the digital documentation not only preserves information on artistic skills, but also promotes economic sustainability of culture through increased visibility of indigenous artisans in both national and international markets.

8.6 Contribution of Government, Educational Institutions, Museums, and Non-Governmental Organizations

The study suggests that the process of effective preservation of indigenous cultural heritage requires collaborative work of different parties rather than relying only on community initiatives. There are several complementary roles of government agencies, educational institutions, museums, cultural organizations, researchers and non-governmental organizations in strengthening the process of digital preservation. Government institutions recognize increasing importance of protecting indigenous cultures as part of the cultural policy. Numerous projects carried out by Ministry of Tribal Affairs, Ministry of Culture, Indira Gandhi National Centre for the Arts (IGNCA), Anthropological Survey of India, National Mission on Cultural Mapping and state cultural departments make efforts for documenting tribes' traditions using digital archives, audiovisual recordings, exhibitions and cultural festivals. In this way, the preservation of endangered cultural knowledge takes place, and there is an increase in appreciation of cultural diversity of India. Educational institutions also play an important



role in integration of indigenous culture heritage in teaching, research and community activities. Many universities and colleges participate in projects of documentation, ethnography, digitization and field studies related to tribal communities. Students and researchers help to preserve oral tradition through recording interviews, documenting festivals, taking photos of traditional arts and preparing digital educational materials. Such cooperation provides both useful research data and promotes positive engagement of educational institutions with indigenous communities. Museums have greatly transformed due to the development of digital technologies.

Apart from the traditional museum collections, there emerge virtual exhibits, interactive display, digital catalogue, augmented reality and other digital repositories that allow making indigenous cultural heritage available to the world audience. Digital museums allow visitors to see traditional objects, costumes, musical instruments, paintings, ritual objects and receive additional information about their historical and cultural significance in the form of multimedia content. Thus, the developments expand the access of the world community to the knowledge of indigenous peoples beyond the walls of museums. Non-governmental organizations have also contributed to the preservation of indigenous culture heritage through community-based documentation programmes, digital literacy courses, heritage campaigns, training artisans and engaging youth. Many organizations help local communities to create documentaries, digital archives, organize online exhibitions and promote traditional arts using e-commerce sites. Thus, the research proves that the effective digital preservation depends on a long-term partnership of indigenous communities with the assisting organizations. The participation of the communities is required as they have cultural knowledge, historical background and personal experience needed for documentation. Organizations provide technical skills, financial, archival and educational support that strengthen community-based projects.

8.7 Challenges in the Digital Preservation of Indigenous Cultural Heritage

Despite the great potential of digital media in cultural preservation, the research results show several important challenges that influence the effectiveness of digital heritage initiatives in indigenous communities. One of the main challenges is the difference in access to digital infrastructure. Many Tharu communities still face poor Internet connections, scarcity of digital devices, unstable electricity supply and lack of technological resources. Finally, digital literacy is an important issue. Many members of the elderly generation that have rich traditional knowledge have little or no experience working with smartphones, computers, audio and video recordings, digital communication media. Therefore, the younger generations are more likely to document cultural heritage. While intergenerational collaboration is highly beneficial, there might be problems related to insufficient knowledge about cultural traditions or their proper execution and performance. Issues related to authenticity and representation are also worth consideration. Digital platforms often provide short visual content aimed at catching the attention of a viewer. In this case, it is possible to lose some complexity of ritual, take cultural practices out of their native context or make them purely entertaining.

The latter is likely to cause misrepresentation or misunderstanding of some aspects of indigenous culture. Another problem related to digital media concerns commercialization of traditional culture. Increased visibility in digital networks provides new opportunities for economic growth for artisans,



performers and cultural organizations. However, excessive commercialization might cause cultural expressions to be created specifically for tourists or market needs, instead of community traditions. In order to preserve sacred rituals, religious ceremonies and other culturally sensitive information, it will be necessary to create special protection mechanisms. Protection of intellectual property rights is one of the most important challenges related to the digital preservation. Traditionally, knowledge was owned collectively by communities, rather than by individuals. Digital publication raises issues related to ownership, copyrights, informed consent and other questions connected with usage of traditional knowledge. Lack of legal protections makes cultural materials subject to reproduction, modification or commercial exploitation without community's approval. Finally, sustainability is also an important issue. The digital preservation is a costly process that requires regular maintenance, update of software and hardware, data storage and institutional support. In case of neglecting these aspects, digital archives themselves will become unavailable due to technological obsolescence. Therefore, successful digital preservation will require not only documentation, but also sustainable management of these archives.

9. Recommendations

Based on the findings of the current study, it can be seen that digital media has enormous potential for the preservation and distribution of the cultural heritage of the Tharu community. Nevertheless, in order to achieve the goal, a lot of efforts have to be made since many factors affect the efficiency of the process. In view of the above, it is possible to put forward several recommendations that may increase the efficiency of future digital preservation efforts in this area. First of all, it should be noted that community participation is the crucial element of the process of digital preservation. As the native communities are the keepers of their cultural heritage, they know much about the traditions, rituals, languages, history, customs, ecological knowledge, and other cultural aspects of their communities. That is why the process of documentation should include participation of community members in order to ensure that the documentation will be culturally authentic. In particular, the process of documentation should involve the participation of community elders, traditional artists, musicians, storytellers, local historians and representatives of youth. Secondly, it is essential to conduct systematic digital documentation of endangered cultural practices in order to avoid loss of valuable cultural knowledge.

Oral history, folk songs, traditional dances, ritual ceremonies, indigenous knowledge in medicine, agriculture, craftsmanship, architecture, and local dialects should be documented with the help of modern technologies such as audio, video, photographic and three-dimensional scanning technologies. Besides, the process of documentation should include recording of detailed contextual information about the historical, cultural, social and ceremonial meanings of documented cultural traditions. Thirdly, educational institutions should intensify cooperation with indigenous communities in conducting community-based research, field work, developing curricula, and implementing heritage education programmes. Multidisciplinary research projects that involve the following disciplines: anthropology, history, communication, digital humanities, information technology, and cultural studies can be carried out at universities, colleges, and schools in order to come up with creative solutions that concern preservation of indigenous cultural heritage. At the same time, students should be involved in field visits, oral history recording, digital storytelling, and virtual exhibitions of heritage as an integral part of experiential learning. Incorporation of indigenous cultural knowledge into the school curriculum will contribute to the promotion of cultural diversity among the younger generation.



It is highly important to establish specialized digital cultural repositories for the Tharu community. With the help of government agencies, museums, universities, libraries, and cultural organizations, it is possible to create multilingual digital repositories that will include photographs, videos, oral recordings, manuscripts, academic publications, maps, traditional songs, dance performances, and historical documents. The process of creating digital cultural repositories should be based on the internationally accepted standards of digital preservation and will ensure long-term access, data security, and interoperability between various digital platforms. Moreover, each digital record should contain appropriate metadata, which will be helpful for classification, searching, and scientific research. It is also important to improve digital literacy among the representatives of indigenous communities. In order to do so, special training programs should be carried out in order to teach community members how to use the following technologies: digital photography, videography, audio recordings, editing software, digital archiving, social media communications, and online content management. Such measures will allow indigenous communities to independently document their cultural heritage instead of relying only on the assistance of external experts and institutions.

One should pay special attention to the involvement of youth since they are familiar with digital technologies and at the same time represent the future keepers of indigenous cultural heritage. It is also important to increase financial and institutional support from the government side. In particular, the national and state governments should allocate dedicated financing, develop policies, and coordinate efforts concerning the implementation of indigenous digital heritage projects, development of regional documentation centers, creation of community museums, and conducting research programs concerning endangered cultural traditions. The policy of digital preservation should include explicit recognition of indigenous intellectual property rights, community ownership of traditional knowledge, and ethical standards of digital documentation and dissemination of cultural information. Another important recommendation is the promotion of responsible use of social media for the purposes of cultural education rather than commercial exploitation. Digital technologies can be applied to the development of educational documentaries, virtual exhibitions, online workshops, podcasts, webinars, interactive websites devoted to heritage, and multilingual educational resources describing the cultural traditions of the Tharu community. The community-run digital platforms can be helpful in providing information about the cultural traditions of the community without spreading stereotypes and misconceptions concerning indigenous communities. Another important recommendation is related to the development of legal protection of indigenous intellectual property. Legal framework should be created in order to regulate issues of ownership, copyright, licensing, informed consent, and ethical use of digital cultural materials. The permission of the community should be obtained before recording sacred rituals, ceremonies, traditional medicinal knowledge, or any other culturally sensitive information. Such measures will prevent the unauthorized exploitation of indigenous knowledge and ensure its respectful representation. Finally, it is important to consider digital preservation as a complementary rather than substitutive strategy of preservation of cultural traditions since technologies can only strengthen cultural continuity if they support living traditions rather than replace them.



10. Conclusion

The preservation of indigenous cultural knowledge is particularly important in the age of globalization, technological changes, and fast social transformations. The present study analyzes the role of digital media in the preservation, documentation, and promotion of the cultural heritage of the Tharu community – one of the oldest indigenous communities inhabiting the Terai region of India and Nepal. Based on the qualitative analysis of the academic literature, government reports, digital archives, and other relevant resources, it is possible to identify how modern technologies contribute to the preservation of the cultural heritage of the Tharu community and at the same time what opportunities and challenges are associated with the process of digital heritage preservation. According to the findings of the current study, the cultural heritage of the Tharu community is much more than the artistic expression and includes a complex system of traditional knowledge that includes oral narratives, folk songs, ceremonial dances, festivals, indigenous knowledge of ecology, agriculture, traditional medicine, handicrafts, indigenous beliefs, social customs, and environmental wisdom.

All these cultural traditions have been traditionally transferred orally, observationally, and actively which helped to preserve cultural identity and maintain the connection with nature. However, the current study identifies transformations in the process of knowledge transfer caused by such factors as modernization, urbanization, migration, changing occupations, formal education, and growing exposure to the global digital culture. The changes in the lifestyle of the younger generation reduce their participation in traditional cultural practices. As a result, it creates the risk of disappearance of many oral traditions, indigenous dialects, ritual practices, and artistic skills. The identified transformations prove the necessity of the systematic documentation and preservation of the endangered cultural knowledge before it disappears forever. The process of digital preservation has become one of the effective tools in this regard. Technologies such as digital storytelling, online archives, social media, documentary filmmaking, digital photography, virtual museums, podcasts, cloud repositories, and multimedia educational resources have provided new opportunities for the documentation and dissemination of indigenous cultural heritage. Although being different from the traditional methods of documentation, these technologies not only help to preserve written information but also record visual, auditive, linguistic, and performative elements of cultural traditions. Therefore, they provide a rich and diverse representation of indigenous cultural knowledge and increase its accessibility for researchers, educators, students, policymakers, and the general public. In addition, the current study highlights that digital storytelling remains the most effective tool for the preservation of the oral traditions. Combining local stories with multimedia technologies, digital storytelling ensures preservation of the voices, emotions, language, gestures, music, and context in which these elements occur and that cannot be represented with sufficient clarity in written form.

Similarly, social media allows young people to become actively engaged in the promotion of dances, folk music, festivals, handicrafts, and local stories and increase awareness of the Tharu culture on regional, national, and even international levels. At the same time, there are several challenges that should be taken into consideration. These include poor development of digital infrastructure, poor access to the Internet, poor level of digital literacy, lack of financial resources, problems with authenticity of the recorded data, commercial exploitation of the traditional culture, intellectual property



rights, ethically correct documentation practices, and sustainability. Overcoming such challenges requires cooperation of indigenous communities, schools, government bodies, researchers, organizations devoted to the cultural heritage, and technology specialists. Therefore, it can be stated that the current research proves that digital media can never serve as the alternative for traditional cultural practices but only as the supporting tool that makes these practices more effective. Sustainable preservation can be achieved by merging innovations in technology and active participation of the community in the process along with ethically correct documentation, cooperation of institutions, and respect to the indigenous knowledge systems. Active involvement of the indigenous community in each stage of the digital documentation is necessary in order to preserve cultural meaning, context and values of the traditions. Overall, the combination of traditional knowledge and modern technology provides promising prospects for the preservation of the cultural heritage of the Tharu community and contributes to the discussion of indigenous knowledge systems, cultural sustainability, heritage management, and digital humanities.

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