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## DIGITAL LIBRARIES AS AN OPEN WINDOW FOR PRESERVING AND DISSEMINATING INDIGENOUS KNOWLEDGE: A STRATEGIC APPROACH

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### Abstract

Knowledge is the most valuable resource in the world. The knowledge disseminated by our ancestors paved the foundation for this contemporary technological world. Indigenous knowledge is the knowledge that people in a particular community have accrued over time and has benefited the growth of our nation. In the past, knowledge was transferred orally from generation to generation. But as Manning (2001) said, "When a knowledgeable or old person dies, a whole library disappears." Due to its impending extinction, it is vital that we manage and transmit our indigenous knowledge resources. Nowadays, it is crucial to use traditional methods of knowledge preservation and dissemination. As we live in a technological age, digital libraries are one of the blessings we have to save this knowledge system. The swift adoption of digital media in today's fast-paced world presents excellent opportunities to speed up the process of preserving, managing, and disseminating knowledge that is particular to our communities. By utilizing technology to digitize and share traditional materials, digital libraries help to ensure that indigenous knowledge systems are not lost and that they are transmitted to future generations. As indigenous knowledge is on the verge of extinction, the paper discusses the wonderful role that digital libraries can play in its preservation and dissemination. A few research questions have also been formulated to address this issue. In order to analyze the aforementioned research questions strategically, this paper suggests using a qualitative approach. The scope of digital libraries in resource management, the various methods for conserving them, and information regarding indigenous knowledge were all critically analyzed for this paper.

**Key Words:** Digital Library, Preservation, Dissemination. Indigenous Knowledge, Strategic Approach

## THE PRELUDE

Imagine a world where the knowledge of the natural environment is not confined to scientific laboratories but instead within the hearts and minds of communities who have lived in harmony with the land for centuries. A world where solutions to complex environmental challenges are not found solely in textbooks but are derived from a deep understanding of the interconnectedness of all things! This world is not a figment of our imagination- it exists in the form of Indigenous Knowledge.

Indigenous Knowledge is a vast and rich tapestry of knowledge systems and practices developed by Indigenous people over many generations. It encompasses everything from traditional medicines and agriculture to storytelling and spirituality. This knowledge is deeply rooted in the local environment and cultural traditions of a community and is often passed down orally from generation to generation. According to Hunter (2013), Indigenous Knowledge comes in a variety of formats. It includes traditional tales, songs, dances, and ceremonies that reflect beliefs about social justice, spirituality, family, and the natural world. It includes information that could be subject to patent protection related to folk music, handicrafts, traditional foods, farming techniques, and traditional medicines. It entails information on the people, places, animals, plants, and historical occurrences connected to a specific community.

What makes Indigenous Knowledge truly remarkable is its holistic approach to understanding the world. It recognizes that everything is interconnected and that human activities must be in harmony with nature. Indigenous Knowledge is used to describe both the knowledge of indigenous people and the culturally-derived knowledge of other communities. Ntui and Ottong (2008) emphasized that because Indigenous Knowledge develops over centuries, it embodies the collective wisdom and resourcefulness of a community and it represents all of a person's abilities and innovations. However, it is vitally important to document and disseminate Indigenous Knowledge. Documentation is concerned with preserving such knowledge in its entirety for posterity, whereas dissemination promotes access to the documented knowledge for planning and decision making (Adebayo & Adeyemo, 2019).

Preserving and disseminating indigenous Knowledge is crucial for various reasons. It includes Cultural Preservations, Environmental Sustainability, Health and Well-being, Education and Cross-cultural Understanding, and Social Justice:

- **Cultural Preservation:** Indigenous knowledge is inextricably linked to indigenous communities' cultural heritage. Preserving and disseminating this knowledge aids in the preservation of cultural diversity and the preservation of valuable cultural practices and traditions.
- **Environmental sustainability:** Indigenous knowledge systems often contain a wealth of knowledge about local ecosystems and how to sustainably manage them. Preserving and

disseminating this knowledge can help us better understand the natural world and develop sustainable practices that promote long-term environmental health.

- **Health and well-being:** Indigenous knowledge systems frequently include traditional medicinal practices that have been used for centuries to treat a variety of health conditions. By preserving and disseminating this knowledge, we can learn from indigenous communities and develop new approaches to healthcare that prioritize holistic approaches to well-being.
- **Education and cross-cultural understanding:** Indigenous knowledge can provide important insights into various ways of knowing and understanding the world. We can broaden our perspectives and develop cross-cultural understanding by incorporating indigenous knowledge into education.
- **Social Justice:** Indigenous knowledge has frequently been marginalized and underappreciated. Preserving and disseminating this knowledge can help to recognize and respect indigenous communities' knowledge and expertise, as well as promote social justice. It can also help indigenous communities keep control of their own knowledge and cultural practices.

By considering each of these aspects, the authors have considered how Indigenous Knowledge can be preserved and shared and how digital libraries can contribute to this. A variety of Indigenous Knowledge can be recorded as a source of useful knowledge for the community, so that generations to come can use such information, as well as for the country at large, and for that digital libraries can play a crucial role.

Digital libraries help ensure that indigenous knowledge systems are not lost and passed down to future generations by leveraging technology to digitize and share traditional materials. By digitalizing and archiving traditional materials such as manuscripts, audio and video recordings, and photographs, digital libraries can effectively preserve indigenous knowledge. Members of the indigenous community, as well as researchers and scholars interested in studying these knowledge systems, can then access these materials. Digital libraries also allow for the formation of online communities in which indigenous peoples can share and exchange knowledge.

Furthermore, digital libraries can help to disseminate indigenous knowledge to a wider audience. Indigenous knowledge can be shared with people from all over the world by making these materials available online. This can aid in promoting greater understanding and appreciation for various cultures and ways of life. Indigenous communities can also use digital libraries to communicate with policymakers and other stakeholders, ensuring their voices are heard, and their perspectives are considered in decision-making processes.

So, the paper addresses the glorious role of digital libraries in preserving and disseminating indigenous knowledge, as it is on the verge of threatening extinction. We have numerous evidences in front of us to refute this statement. We have already seen in 1995 two researchers from the United States were granted a patent for

the discovery of the healing properties of turmeric, which we have known for years. So, there is a need to save and transmit this indigenous knowledge and exhibit it globally. It is not only beneficial for our community but also for the whole world.

Thus, this paper addresses to answer the following research questions:

- 1) What are the roles of digital libraries in the preservation and dissemination of indigenous knowledge?
- 2) The role of librarians in documenting and storing indigenous knowledge using their professional skills?
- 3) What are the possible ways to strengthen digital archives?
- 4) What contributions can governmental and non-governmental organizations make to digital libraries by collaborating with indigenous people?

By considering these research questions, the authors tried to examine their concerns strategically.

## **APPROACH**

This paper proposes a strategic approach for addressing the above-mentioned research questions by employing a qualitative method. In this paper, a critical analysis was made in collecting information regarding indigenous knowledge, the scope of digital libraries in resource management, and various ways for conserving them.

## **INDIGENOUS KNOWLEDGE: A DEEPLY ROOTED INDIAN KNOWLEDGE SYSTEM**

Indians are fortunate to have a system of traditional knowledge that has been passed down for many years. The Vedas and Upanishads are rich sources of knowledge. Most of this knowledge is transmitted orally from generation to generation in the form of stories, poems, customs, proverbs, etc. This indigenous knowledge paved many opportunities for humans to develop in all spheres of their lives and the present development of the world. One of the main examples of this is 'Ayurveda.' The Indian knowledge system in medicine is culminated from our traditional knowledge about herbs and their medicinal values. Indigenous people who live in such close proximity to forests are heavily dependent on nature. They have an innate knowledge of the environment and its conservation.

They gained knowledge of their surroundings through observation and experience. Being inmates of nature, they believed nature had the solutions to all their problems. That curiosity to understand the nature of the world for their survival reveals the hidden knowledge in the surrounding environment. Indigenous knowledge is valuable for a number of reasons:

- **Cultural heritage:** Indigenous knowledge represents the cultural heritage and history of indigenous communities. It is passed down from generation to generation and reflects the unique knowledge, values, beliefs, and practices of these communities.
- **Sustainable resource management:** Indigenous knowledge is often based on a deep understanding of the natural environment and can provide valuable insights into sustainable resource management practices. This knowledge can be used to support sustainable agriculture, forestry, and other resource management practices.
- **Traditional medicine:** Indigenous knowledge is often associated with traditional medicine practices, which are based on the use of natural resources and the prevention of illness. This knowledge can provide insights into the development of new medicines and the treatment of diseases.
- **Biodiversity conservation:** Indigenous knowledge can help to protect and conserve biodiversity by promoting sustainable resource management practices and recognizing the importance of biodiversity to the overall health of ecosystems.
- **Adaptation to climate change:** Indigenous knowledge can provide insights into how communities have adapted to climate change and can help to develop strategies for climate change adaptation and mitigation.

## WHY DIGITAL LIBRARIES?

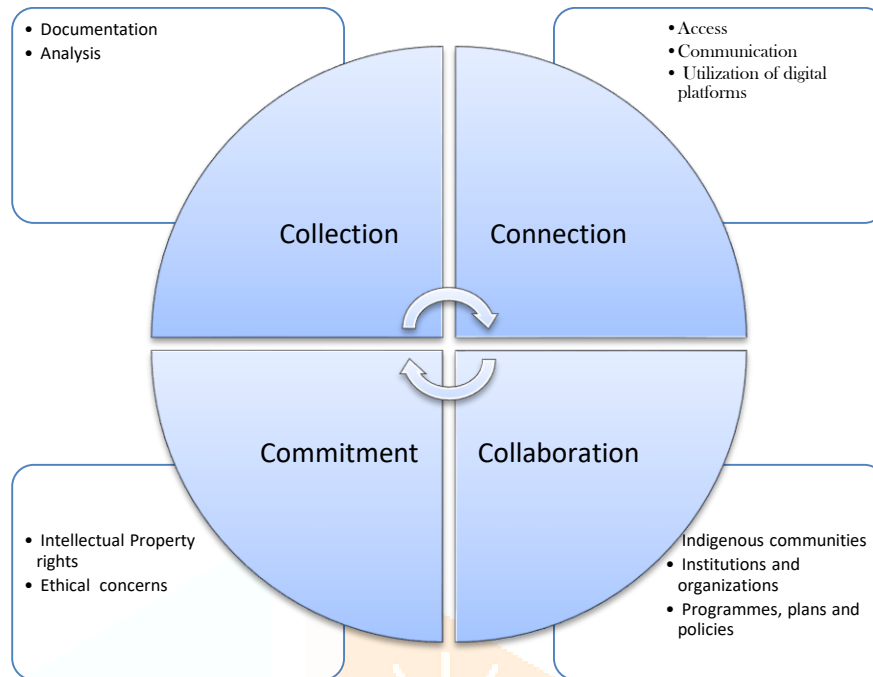
Our valuable indigenous knowledge is in danger of disappearing in the absence of adequate recognition and documentation. In the absence of written records, our history of the tribe and their culture is shrouded in mystery. Digital libraries can help preserve indigenous knowledge by providing a platform for sharing and accessing materials, collaborating with indigenous communities, preserving languages, and integrating traditional knowledge with modern science and technology.

## STRATEGIES FOR PRESERVING AND DISSEMINATING INDIGENOUS KNOWLEDGE

The process of conserving and disseminating indigenous knowledge can be broadly described here as 4 C's: Collection, Connection, Collaboration and Commitment.

**Figure- 1**

*Represents Four C's as the process of preserving indigenous knowledge via digital library*



- **COLLECTION AND DIGITALIZATION**

Digitalization of materials in libraries is essential to preserve physical materials that may be at risk of damage or deterioration. In the case of indigenous knowledge, the records available may be very old and damaged. By creating digital copies of these materials, they can be stored and accessed without the need for physical handling, reducing the risk of damage and wear and tear. So the first thing we need to do for preserving indigenous knowledge systems is collect the data available in all the libraries and digitalize it. The resources can be gathered from a variety of places, such as libraries, community partnerships, governmental and non-governmental organizations, etc. Here we suggest that special persons should be appointed to digitalize the materials in the archives of the library, and librarians in each library should be entrusted to monitor the process and verify the data.

- **CONNECTION**

Digitalization makes it possible to provide wider access to materials that may be physically limited. A digital copy of a rare book can be made available to researchers worldwide without the need for them to travel to a specific library or location to view it. Digitalization makes it easier to search for and find specific materials. Users can quickly locate relevant materials in a digital library, saving time and effort. So a digital copy of the rare indigenous knowledge document can be made available to everyone worldwide, without the need for them to travel to a specific library or location to view it.

Once the materials are digitalized, the next stage is to make them available to a large audience around the world. Here we suggest that to make this knowledge accessible to everyone, we create an 'open access

platform' where all libraries in India can share and store all their digitalized materials related to indigenous knowledge. This platform functions as a single repository to store the data on indigenous knowledge. Here are some of the key roles that such a platform could play:

- **Centralizing Indigenous knowledge resources:** A single platform could serve as a centralized repository for Indigenous knowledge resources.
- **Enabling Collaboration:** This platform makes it easier to share expertise. Anyone with accurate information or records about indigenous knowledge should have access to this platform. Using this platform, they can exchange their data in any format. Universities, governmental and nonprofit organizations, researchers, and perhaps a larger community that can share authentic information will be a part of it. Prior to releasing the data on the site, the monitoring team will confirm the accuracy of the data.

Getting information and knowledge from several sources enables one to learn a great deal from a single platform. Additionally, it will support the global promotion of our indigenous cultures and traditional knowledge.

- **COLLABORATION**

To overcome the challenges of collecting and transmitting indigenous knowledge to a wider audience, working collaboratively with indigenous communities is essential. Preserving and disseminating indigenous knowledge requires a collaborative effort between indigenous communities, governments, researchers, and other stakeholders. By working together, we can ensure the continuation and growth of indigenous cultures and traditions.

Collaboration among experts in different fields, including indigenous people, academicians, librarians, and people from different organizations, can facilitate collecting and curating indigenous knowledge. By working together, they can identify relevant sources of information, select appropriate digital tools for organizing and managing the information, and ensure that the knowledge is presented in a culturally sensitive and respectful manner. Collaboration is also essential in building the digital infrastructure needed to support disseminating indigenous knowledge. By working together to document and preserve indigenous knowledge in digital libraries, collaboration can help ensure that the knowledge is available to future generations.

- **COMMITMENT**

Commitment is essential in ensuring indigenous knowledge is preserved, disseminated, and accessible through libraries. By prioritizing indigenous knowledge, libraries can contribute to the broader goal of promoting cultural diversity, social inclusion, and the empowerment of indigenous communities.

## SUGGESTIONS AND RECOMMENDATIONS

Preserving and disseminating indigenous knowledge through digital libraries is important for ensuring this valuable knowledge is accessible to future generations. Here are some suggestions and recommendations for doing so:

- **Involve indigenous communities:** Before starting any digital library project, it is important to involve the indigenous communities whose knowledge is being preserved. This ensures that their needs and concerns are taken into consideration and that the project is culturally sensitive.
- **Use open access platforms:** Digital libraries should use open access platforms so that the information is available to everyone, regardless of their financial means. This can include platforms like Open Knowledge Repository, DSpace, or Islandora.
- **Implement metadata standards:** Metadata standards are important for ensuring that the information in the digital library is organized and searchable. Standards like Dublin Core or METS (Metadata Encoding and Transmission Standard) should be implemented to ensure consistency and interoperability.
- **Consider intellectual property issues:** Indigenous knowledge may be protected by intellectual property laws, such as traditional knowledge labels or copyright laws. It is important to respect these laws and ensure that the knowledge is used and shared appropriately.
- **Prioritize language and cultural diversity:** Indigenous knowledge is often expressed in unique languages and cultural contexts. It is important to prioritize language and cultural diversity in the digital library by including metadata in indigenous languages, using multimedia formats to convey knowledge, and providing translations.
- **Incorporate traditional knowledge holders:** Traditional knowledge holders, such as elders or community leaders, should be involved in the project to ensure the knowledge is accurately represented and contextualized.
- **Ensure long-term preservation:** Digital libraries should have a plan for long-term preservation, including backup systems, disaster recovery plans, and regular maintenance and updates.
- **Promote the digital library:** Finally, it is important to promote the digital library to ensure that the knowledge is disseminated widely. This can include outreach to schools, libraries, community organizations, social media, and other online platforms.



## CONCLUSION

Indigenous knowledge is a vast and irreplaceable resource, offering solutions to environmental challenges, healthcare practices, and cultural understanding. Unfortunately, this knowledge is at risk of disappearing. Digital libraries can be a powerful opportunity to preserve and disseminate this knowledge for future generations.

Through digitalizing traditional materials, creating open access platforms, implementing metadata standards, and incorporating traditional knowledge holders, these libraries can ensure that indigenous knowledge is preserved for future generations and made accessible to a global audience.

Moreover, the involvement of indigenous communities, the consideration of intellectual property issues, the prioritization of language and cultural diversity, and the establishment of long-term preservation plans are essential components of any successful initiative to preserve and disseminate indigenous knowledge through digital libraries.

This paper has explored the four key strategies for achieving this goal: Collection and Digitization, Connection, Collaboration, and Commitment. By collecting and digitizing existing materials, creating open-access platforms for knowledge sharing, collaborating with indigenous communities, and prioritizing the long-term viability of these projects, digital libraries can ensure that indigenous knowledge is accessible and valued.

Following these recommendations, digital libraries can be crucial in safeguarding irreplaceable cultural heritage and fostering a more inclusive and sustainable future. By working together with indigenous communities, governmental and non-governmental organizations, researchers, and other stakeholders, we can honor and celebrate the rich tapestry of indigenous knowledge, contributing to a more inclusive, sustainable, and equitable world for all. Through collaboration and commitment, indigenous knowledge can continue to enrich and guide us for future generations.

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