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Preserving Ephemeral Traditions: Digital Imperatives in Kerala's Performing Arts Heritage

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Abstract*—Kerala, renowned for its rich cultural heritage, has nurtured a diverse range of traditional art forms over the centuries. Among these, performing arts, particularly folk and classical traditions, serve as significant expressions of the lifestyle, beliefs, social practices, and cultural identity of its people. Kathakali, one of Kerala's most celebrated classical art forms, is internationally acclaimed for its synthesis of dance, drama, music, and elaborate visual expressions. In addition to Kathakali, the state is home to several other traditional performing arts, including Koothu, Kutiyattam, Theyyam, Ottan Thullal, and numerous lesser-known regional art forms that possess considerable historical and cultural significance. The preservation of cultural heritage is essential for understanding a society's history, identity, and collective memory. These cultural resources, which constitute invaluable assets for future generations, encompass both tangible and intangible elements. While tangible heritage includes manuscripts, paintings, textiles, musical instruments, and other material objects, intangible heritage comprises performing traditions, artistic knowledge, oral narratives, skills, and practices transmitted across generations. However, many traditional performing arts remain vulnerable to gradual disappearance due to their ephemeral nature, changing social conditions, and the absence of systematic documentation and preservation mechanisms. Against this background, the present study aims to identify and examine digital preservation strategies for the conservation, documentation, and dissemination of Kerala's performing arts heritage. The study adopts a qualitative approach, drawing upon a review of relevant literature and personal interviews with senior artists and academics. As part of the investigation, the researcher collected and examined various analogue materials, including videocassettes, audiocassettes, and transparency slides. These materials were digitized, and their contents were retrieved and restored using appropriate digital conversion and restoration. equipment. The study highlights the significance of digitization and digital archiving as essential strategies for safeguarding vulnerable cultural resources, facilitating wider access to artistic knowledge, and ensuring the sustainable

preservation and transmission of Kerala's rich performing arts heritage to future generations.

***Index Terms*—digital preservation, archiving, performing arts, cultural heritage**

I. INTRODUCTION

Art encompasses everything that delights the human mind. It exists in many forms, including those associated with sensory pleasure, physical well-being, mental satisfaction, the pursuit of wealth, expressions of love, personal adornment, occupational skills, eloquence, public speaking, and entertainment. India's performing arts are among the world's richest cultural treasures, reflecting thousands of years of tradition, evolution, and innovation. From sacred temple courtyards to grand international stages, they have grown into a powerful expression of India's cultural identity. Their origins can be traced back to the Vedic age, when music, dance, and drama played important roles in religious and social life. The Natya Shastra, written by Bharata Muni between 200 BCE and 200 CE, laid the foundation for Indian theatre, dance, and classical music, viewing the performing arts as a spiritual path that connects human beings with the divine rather than mere entertainment. Over the centuries, India developed diverse classical traditions, including Bharatanatyam, Kathak, Odissi, Kuchipudi, Manipuri, Kathakali, and Mohiniyattam, each distinguished by its unique techniques, costumes, and storytelling styles. Indian classical music also evolved into two major traditions: Hindustani in the North and Carnatic in the South, both of which produced legendary musicians and enriched the nation's musical heritage. These art forms were preserved and nurtured by temples, royal courts, and dedicated practitioners who passed their knowledge from one generation to the next. Festivals, cultural organizations, and educational institutions provided artists with platforms for performance and formal training, encouraging both the revival of traditional arts and the development of experimental forms. In contemporary India, performing arts continue to thrive through a dynamic blend of tradition and innovation. Classical dance and music are celebrated on global stages, while theatre, television, Bollywood, digital platforms, reality shows, cultural festivals, and web series have expanded their reach and created new opportunities for emerging artists. Collaborations with international performers have further strengthened the global presence of Indian performing arts. The journey of India's performing arts stands as a testament to the nation's resilience, creativity, and cultural richness, demonstrating its ability to preserve ancient traditions while embracing modern influences and continuing to inspire generations through storytelling, cultural exchange, and artistic expression.

1.1. Kerala's performing arts tradition

Kerala, known for its rich cultural traditions, has evolved many unique art forms over the centuries. Among these, folk dances stand out as vivid expressions of the lifestyle, beliefs, and outlook of its people. One of the most celebrated art forms is Kathakali, which is admired worldwide for its exceptional blend of drama, dance, and music, representing the highest level of artistic excellence. Besides the famous Kathakali, Kerala is also renowned for several other traditional performance

arts such as Koothu, Kutiyattam, Theyyam, and Thullal, along with many lesser-known regional art forms that hold local significance.

The feudal period served as the cradle for the development of many art forms. Several arts that are now regarded as classical reached their highest level of perfection because the feudal social system provided the aristocratic minority with ample leisure time to pursue and refine them. These art forms required years of rigorous practice, discipline, and dedication to master. Even appreciating and enjoying them demanded a certain level of training and understanding. Consequently, classical arts were primarily created for the aristocracy, who served as both their practitioners and their appreciators. Since these art forms were deeply rooted in aristocratic culture and traditions, extending them to a wider popular audience often resulted in a transformation or loss of their original identity.

1.2. Background of the Study

Kerala Kalamandalam, established in 1930 by Mahakavi Vallathol Narayana Menon and Manakkulam Mukunda Raja, stands as the premier institution dedicated to the preservation and promotion of Kerala's traditional performing arts. Over the decades, it has played a vital role in institutionalizing and revitalizing classical art forms such as Kathakali, Koodiyattam, Mohiniyattam, Thullal, and Chakyarkoothu. The period between 1930 and 1990 marked a significant era in the evolution of these art forms, during which many eminent artists and gurus emerged, contributing immensely to their aesthetic refinement and pedagogical systems. Their efforts not only preserved ancient traditions but also inspired new generations to embrace Kerala's cultural heritage. However, despite the immense contributions of these traditional art exponents, systematic documentation and preservation of their works remain limited. During the early decades, the focus was largely on training and performance rather than on record-keeping or archival maintenance. Many manuscripts, photographs, and recordings of performances were lost due to neglect, poor preservation methods, and environmental factors. As a result, a considerable portion of Kerala's cultural history now exists only in fragmented form or in the memories of surviving disciples. This gap underscores an urgent need for an organized initiative to digitally preserve the cultural legacy of Kerala Kalamandalam and its artists. The advent of digital technology offers a transformative opportunity to safeguard and revive this heritage. Digitalisation enables the conversion of fragile physical materials, such as manuscripts, photographs, and audio-visual recordings, into accessible and long-lasting digital formats. It facilitates global access, enhances research possibilities, and prevents the irreversible loss of cultural artifacts. In the context of performing arts, digital preservation ensures that both tangible (texts, visuals) and intangible (gestures, rhythms, expressions) aspects of artistic traditions are maintained with authenticity and accuracy. Despite this potential, there is still a lack of a comprehensive digitalisation model tailored to the preservation of traditional performing arts in Kerala. While isolated attempts have been made to archive performances, these efforts often lack standardization in metadata, storage, and accessibility. This study aims to develop a structured approach for documentation, digitisation, and archiving that can serve as a sustainable model for cultural preservation. By undertaking this

initiative, the study contributes to the larger mission of safeguarding Kerala's intangible cultural heritage and ensuring that the contributions of its legendary artists continue to inspire future generations. It also aligns with global cultural preservation goals advocated by institutions like UNESCO, emphasizing the importance of integrating traditional art and modern technology for the benefit of society.

1.3. Objectives of the study

1. To identify the potential of digital preservation in safeguarding the traditional performing arts of Kerala.
2. To examine the strategies adopted for the digital archiving of Kerala's traditional art forms.
3. To analyze the role of Kerala Kalamandalam in preserving and promoting the cultural heritage of Kerala.

1.4. Significance of the study

The digitalization project holds immense societal value as it addresses the preservation and dissemination of Kerala's cultural heritage. Kerala Kalamandalam, being a global centre for traditional performing arts, attracts a wide array of tourists and scholars, many of whom are fascinated by Kerala's unique artistic expressions. By creating a comprehensive digital repository, this initiative will provide the public and art enthusiasts with unprecedented access to the contributions of renowned art exponents. This access will be available both physically at the institution's art gallery and library, which serves as an educational and cultural space, and potentially online, with strict protection measures to safeguard intellectual property rights. Furthermore, the project aims to raise awareness about Kerala's performing arts heritage among the local population and global audiences. Additionally, making these resources available in a controlled online environment can facilitate research and educational activities while ensuring that the authenticity and integrity of the cultural expressions are maintained.

1.5. Review of related literature

Nonaka et al. (2000), in their study on knowledge creation, explained that knowledge develops through a spiral process involving four modes: socialization, externalization, combination, and internalization. The authors emphasized that knowledge creation is not merely a cyclical process but a continuous and progressive one that takes place across different ontological levels. This process begins at the individual level and gradually expands through group interactions and organizational activities. Their study highlights the dynamic relationship between tacit and explicit knowledge in the creation, sharing and transmission of knowledge. This perspective is particularly relevant to the preservation of traditional performing arts, where knowledge is often transmitted through practical training, observation and interaction between gurus and disciples.

Hachet et al. (2014) emphasized the significance of documenting and preserving historical artefacts as valuable components of cultural heritage. The authors viewed cultural heritage as a legacy inherited from the past that must be safeguarded and transmitted to the present and future

generations. Their discussion highlights the importance of appropriate documentation and preservation practices in maintaining the historical and cultural value of heritage resources.

Ocón, D. (2021) explained that digitalization developments over the past decade, such as virtual reality, three-dimensional laser scanning, modelling, printing, and digital archiving, significantly influence how cultural heritage is consumed, managed, and preserved. Detailed virtual records of endangered urban heritage help preserve memories and extend the conceptual life of assets, particularly after decision-makers decide to terminate their physical tangibility. However, practical applications of digitalization face several ongoing challenges, including high costs, a shortage of technical skills and resources, sustainability concerns, and intellectual property limitations. Rapidly growing and land-deprived Southeast Asian cities face complex dilemmas when trying to amalgamate urban cultural heritage preservation with urgent urban development needs. Introducing digital technologies into heritage preservation debates carries broader consequences that require careful examination regarding the interplay between preservation and modern urban replacement.

Isa, Wan Malini, and et al. (2026), in the study "Digital preservation of intangible cultural heritage," emphasize the significance of digital preservation in safeguarding cultural heritage for future generations. The authors highlight that cultural heritage represents the identity of a society and therefore requires appropriate preservation measures to ensure its continuity. They point out that, despite the availability of digital technologies, there is a lack of effective digital preservation methods, particularly for intangible cultural heritage. Based on interviews conducted with five experts in the field, the study reveals that awareness of the importance of preserving intangible cultural heritage remains relatively low. It further observes that traditional artisans and craftsmen largely preserve their knowledge and skills through memory and practical experience, making the transmission of such knowledge dependent on individual practitioners. The absence of systematic documentation poses a significant challenge to the long-term preservation of these traditions. The study also highlights that heritage practitioners recognise the importance of digitalisation as an effective means of documenting, preserving, and safeguarding intangible cultural heritage. Thus, the study establishes the need for greater awareness and the adoption of digital preservation strategies to ensure the continuity of traditional knowledge and cultural practices.

1.5. Methodology used for the study

This study employed a qualitative research approach, focusing on in-depth data collection methods to capture the experiences, expertise, and contributions of the traditional art exponents to their respective fields. A simple random sampling technique was used to identify and select participants who had made significant contributions to the traditional art forms of Kerala Kalamandalam. The selection criteria included the artists' years of expertise, their relevance within Kerala's cultural context, and the historical importance of their artistic work.

The data collection phase included high-quality audio and video recordings of performances and interviews, as well as the digitization of publications authored by the artists and scholarly works about them. This approach ensured that both the tangible and intangible aspects of their contributions were preserved. Specialized equipment, such as high-definition cameras and audio recording tools, was employed to maintain the quality of the digital artifacts. Metadata standards were established to ensure the proper organization and retrieval of digital assets.

II. DIGITAL ARCHIVING IN KERALA KALAMANDALAM

Kerala Kalamandalam has significant potential to serve as an ideal institution for the digital preservation and archiving of India's intangible cultural heritage, especially the traditional performing arts of Kerala. As one of the most esteemed institutions in the country functioning for the preservation, teaching, and dissemination of classical art forms like Kathakali, Mohiniyattam, Kutiyattam, Thullal, and Percussion. Kerala Kalamandalam has an immense collection of cultural resources procured over decades. It includes manuscripts, performance texts, photographs, costumes, audiovisual recordings of performances, and archival documents that reflect the historical transformation of Kerala's artistic tradition. Besides these tangible resources, the institution also has a repository of intangible knowledge embodied in the expertise of versatile teachers, eminent artists, and scholars whose teaching methods, performance techniques, interpretations, and lectures form an essential part of Kerala’s cultural legacy.

Digitalisation provides Kerala Kalamandalam with an opportunity for systematic documentation, organisation, and preservation of these diverse resources from physical deterioration, environmental degradation, and gradual loss of traditional knowledge. High-resolution digitisation of manuscripts and photographs, high-quality audio and video recordings of performances, digital documentation of workshops and lecture demonstrations, and the recordings of oral narrations and interviews with master artists can ensure that these invaluable resources are preserved for future generations. The creation of a comprehensive digital repository with standard metadata and cataloguing systems would facilitate efficient storage, retrieval, and long-term management of archival materials while supporting international standards for digital preservation.

Additionally, digital archiving can significantly expand the accessibility and visibility of Kerala Kalamandalam’s collections by making them available through online repositories and digital libraries. Students, researchers, artists, scholars, and cultural enthusiasts from all over the world would be able to access authentic learning materials without geographical limitations, thereby promoting interdisciplinary research, comparative studies, and international academic collaborations. The integration of emerging technologies such as artificial intelligence for automated metadata generation and cloud-based storage for secure preservation of artifacts and musical instruments can further enhance the effectiveness of digital preservation initiatives, and 3D documentation of artifacts and musical instruments can further enhance the effectiveness of digital preservation initiatives. Such technological advancements would not only enhance

educational opportunities through online courses and virtual exhibitions but also contribute to cultural tourism and global appreciation of Kerala's performing arts.

A well-developed digital archive would strengthen Kerala Kalamandalam's role as a center for cultural research, documentation, and dissemination by supporting scholarly publications and collaborative initiatives with museums, libraries, archives, universities, and cultural organisations. Although challenges such as funding constraints, technological infrastructure, copyright management, digital preservation expertise, and long -term maintenance of digital collections need to be addressed, strategic planning and institutional commitment can overcome these barriers. By adopting comprehensive digital preservation policies and investing in modern archival technologies, Kerala Kalamandalam can ensure the sustainability of its cultural resources while preserving the authenticity and continuity of Kerala's rich performing arts traditions. Ultimately, digital preservation and archiving will enable the institution to protect its invaluable heritage, enhance global cultural exchange, and fulfill its mission of transmitting traditional artistic knowledge to future generations in an increasingly digital world.

2.1. Conservation and preservation of cultural properties

For any nation in the world, it is very much essential to conserve cultural properties for a good understanding of the history and culture. Because the cultural properties are priceless national assets and form the foundation of future progress. Therefore, every individual must conserve and preserve such properties and pass them on to future generations. The materials for the conservation of cultural properties are all types of materials: paper, paintings, manuscripts, textiles, metal objects, wooden objects, etc. Cultural properties can be broadly divided into two groups, tangible and intangible.

2.1.1. Tangible and Intangible cultural properties:

Tangible: a property or thing that is perceptible by touch, such as

1) Buildings, pictures, sculpture, applied art, calligraphic works, and other items of great historical or artistic value to our nation.

2) Archeological specimens and other historical materials of great scientific or academic value.

Intangible: Property that does not have any physical presence, such as dramatic arts, music, folk performing art, textiles, costumes, applied arts technology, and other cultural assets of an intangible nature that are of great historical or artistic value.

There are varied tasks involved in the conservation of all objects, for which a good understanding of perspectives and techniques of preservation is essential for the conservator/curator/archivist/librarian and the concerned staff. Some of the common conservation procedures of such properties include removing dirt from the objects, which can cause damage, in the case of acid paper, removing chemical products or agents of decay, etc.; preserving the environment's temperature, humidity, and light control etc. Conservation of all kinds of material/art objects/sound recordings is done under three main headings: (1) Conservation of museum objects (2) Conservation of library materials (3) Conservation of archival materials.

Although they have a separate identity, basically they are one institution divided into three divisions. The museum, library, and archives play an important role in our society to provide comprehensive and need based information to their clientele with special reference to information management, information retrieval, networking, and relating one another with their collection.

2.1.2. Transition from Physical Archives to Digital Repositories

People have been trying to find methods to preserve knowledge and history for future generations in different forms since prehistoric times. From clay tablets and papyrus rolls to illuminated manuscripts and printed texts, the method of knowledge preservation has evolved to its present form, i.e., digital format. New possibilities for the secure storage and retrieval of data have emerged as a result of technological advancements and globalization. There is no longer any need to store print files for documents thanks to the digital revolution, and record-keeping has become accessible in this electronic era.

In recent years, digital methods have increasingly been used to support the documentation and preservation of Intangible Cultural Heritage. Approaches developed within the field of digital humanities, including digital mapping, data visualization, and network analysis, enable researchers to document cultural practices, trace the circulation of traditional knowledge, and analyze the transformation of heritage in digital environments. Such methods have also been applied to study processes of appropriation or biopiracy of traditional medicinal knowledge through the analysis of web data and patent databases, contributing to new forms of digital monitoring and documentation of intangible cultural heritage.

The materials collected for the archives are unique in nature. Archives are an outcome of a process and they are a body of functionally and organizationally related material that has grown originally out of some activity. Archives are maintained by national governments, universities, cultural institutions, museums, hospitals, etc., wherever it is important to preserve non-current records indefinitely. These records have great historical and great potential use to their creators and other researchers in documenting and understanding the past, dealing with the present, and preparing for the future.

2.2. Conservation of Museum Objects

Museums are permanent institutions in the service of society. They acquire, conserve, research, communicate and exhibit the tangible and intangible heritage of humanity and hold themes for the purpose of education, study, and enjoyment, as defined by the International Council of Museums. According to the UK Museums Association, “museums enable people to explore collections for inspiration, learning and enjoyment. They are institutions that collect, safeguard and make accessible artifacts and specimens, which they hold in trust for society.”

Museums acquire and safeguard objects of scientific, artistic, or historical significance, and they make these items available to the public through exhibitions that may be permanent or temporary. Museums have an important place in society, both socially and economically. By attracting tourism through the display of art objects for exhibition, museums also create a marketplace for creative

arts through their retail activities. Some specialized museums go further by permitting physical contact with the related artifacts and by promoting an experiential approach. In addition, museums undertake academic programmes and activities for a range of audiences, including lectures or tutorials delivered by museum faculty or subject specialists, as well as films, musical or dance performances, and technology demonstrations. Conservation in museums encompasses all forms of processes for caring for a site where art or material objects or recordings of cultural significance are preserved. It involves ongoing, protective care of the objects, the setting and management of a suitable environment, and maintenance activities such as preservation, restoration, reconstruction, and related practices. A well set-up library is an important feature of a museum; it's meant to contain books, magazines, guide books, and catalogues. The value of archives goes beyond studying bygone days; it also helps determine how our understanding of the past shapes what comes next. Variations in social trends, different levels of government policy, organizational or institutional regulation, and similar factors represent effective ways in which archives are utilized. Everyone benefits from archives, which function as an institutional memory system. Archives back continuity, encourage consistency, and maintain accountability for the public. They give citizens a sense of national identity and are highly valuable to them for establishing and protecting individual and property rights and privileges. By providing a compelling and tangible heritage of society, archives educate, entertain, and enrich our lives. In summary, archives supply the foundations for understanding the past, help us position ourselves in the present, and offer guidance for our progress in the future.

III. EMERGENCE OF DIGITAL PRESERVATION

Today in a world of digital and virtual spaces we must keep the treasure of information and knowledge safe for future use. We have records, archives, books and other library items that are important documentary sources. Because they are so important and useful we must keep them in a format that will last a long time. That need has created the idea of Digital Preservation. The first step in Digital Preservation is to digitize the documents. Digital Preservation gives us a way to store and access objects and documents for a very long time no matter when or where we are. Digital Preservation means storing information without errors for a long time. The process is complicated because it needs skills and practical knowledge of ICT, Computer Science and the use of many digitization tools.

The main goal of Digital Preservation is to keep content accessible not to protect the physical object or its medium. The other goals of Digital Preservation are listed below:

1. Preserving and providing persistent access to digital information contained in both born-digital and digitized materials.
2. Ensuring the authenticity of the preserved digital materials.
3. Preserving the integrity of digital objects.
4. Converting or changing, when necessary, the format of digital materials to preserve their scholarly content.

5. Preventing harm and corrosion of physical media by maintaining environmental control.
6. If possible, reversing the damage that has been done to the materials.

3.1. Strategies of Digital Preservation

Developing a digital preservation policy at the outset is advisable to ensure the digital preservation of documents and other objects. Such a policy is highly valuable for delivering many benefits at each institutional level, including ensuring that digital materials remain available for current and future use, providing an all-inclusive statement on the topic, and enabling the planning of logical digital preservation programs. In addition, drafting a policy makes it possible to address challenging issues such as the short lifespan and limited capacity of digital materials, the obsolescence of the hardware needed to access them, the obsolescence of software used to read the data and file formats, and, ultimately, the structural and technical diversity across different types of digital content and digital materials.

The digital preservation policy should be organized into several specific and distinct areas, including authority and responsibility; conversion and reformatting; appraisal, selection, and acquisition; storage and maintenance; access and dissemination; implementation; standards; procedures; quality control, auditing, and benchmarking; cooperation; and technical infrastructure. The policy should clearly state and explain, in detail, the program's purpose and scope, while strictly taking into account the repository directives, possible and anticipated legal pressures, the value of the digital object or material, and its expected future use. A dedicated section should be provided for institutional cooperation within the policy process; typically, cooperation related to archives, libraries, museums, or other repositories may be local, national, or even international, provided that the work and engagement can be distributed equally—or in another arrangement—among participating members. Furthermore, preservation-related standards are crucial because they support cooperation and help in understanding the knowledge and experience gained from other initiatives. For that reason, the policy must include the objective of adhering to appropriate standards. Another essential section concerns the responsibilities involved, especially regarding implementation and the associated human resources and tools such as management, employees, special task forces, external advice, resources, or models and, in some cases, the outcomes of internal analyses and risk analysis, which are key contributors to drafting the policy.

A concrete inventory of the threats built into systems that store digital materials can enable a more complete policy focused on these topics. Accordingly, you should make clear that a digital preservation policy needs to limit threats related to technological evolution and still support additional categories of change. This will significantly support the long-term preservation of various digital objects and materials so that they can be used and accessed for a very long period of time.

3.2. Digitalisation of cultural heritage

Technology has changed everything in our lives. What used to be seen as separate from the world—the digital side—now blends completely into how we see, talk and connect with each

other. This shift affects heritage too. Tools that seemed like science fiction a few decades ago are now part of how we protect and share both tangible and intangible aspects of our history. Because of this people working in heritage are coming up with new and creative ways to use technology. They are finding solutions to keep our past alive and accessible.

Digital Cultural Heritage means any material that is either made digitally or turned into digital form because it holds historical, artistic or cultural value. It also includes the methods, tools and rules needed to keep these materials available for a time.

Digitization of heritage is more than just scanning or copying items. It's a growing changing field. It brings together ideas from philosophy, society, culture, economics and management. It deals with how cultural heritage's handled and preserved when technology is a big part of the picture.

India holds a collection of physical heritage with monuments, sites and ancient objects that stretch from the earliest times to the era of colonial rule. The act of turning India's heritage into form and recording it is essential for protecting India's heritage and for making India's heritage accessible to all. A unified and comprehensive database will not only aid in conservation but also strengthen cultural identity for future generations.

3.3. Transition from Physical Archives to Digital Repositories

Acquisition is the job that the archive must do. Acquisition means that the archive takes an item and puts that item into the archive. The item can be put into the archive as an object or as a digital file. When the archive takes information, acquisition means that the archive must set up collection rules and a way to collect that information.

Ingest: Acquisition and collection development: The first function that the archive does is called acquisition or ingest. This is the part where the created item is added physically or online into the archive. When it comes to information, the archive needs to create rules about what to collect and how to get it.

Production and creation of electronic information: Digital information can disappear if the person who created it doesn't understand how important it is to keep it safe. The ways people work with files will make it easier or harder to store and protect those files later. It is easier to store and protect files when people think about things like making sure everything is the same using the right file types following rules and adding details about the files before they are put into an archive.

Metadata for preservation: Archiving and preservation need metadata elements to keep track of a digital objects lineage (where it came from and how it has changed over time). Archiving and preservation also need a record of the digital objects physical characteristics. Archiving and preservation must also document the object's behavior so that it can be reproduced on future technologies.

Formats for preservation: Without an understanding of how digital objects are encoded, keeping them safe for a long time is not possible. The objects must be readable so that their important features can be recovered. Many electronic journals, reference books, and reports use file formats like TIFF images, PDF, or HTML.

Preservation planning: Migration and emulation: Two strategies for preservation are migration and emulation. Migration means copying the object that needs to be kept safe and moving it to machines and new programs as technology changes. It is the process of moving data from a system that might become outdated to a system that is used today. Migration is, of course, a choice if the company is working with popular programs like Oracle or Microsoft Word. Emulation involves creating software that can copy the experience using the original file type but with new technology. The main idea behind emulation is to be able to use or run the data or programs on a new system by using software on the new system that acts like the old system.

Access: Current and Future: The way people look at access depends on why the archive exists, who will use it and what those users might need in the future. For instance national and institutional archives have to make sure they can keep providing access to information in a way that looks and works just like it does now. This is important because these archives have responsibilities and are considered official records.

3.4. The Archive as Cultural Infrastructure

Up to this point, digital archiving has been addressed as a technical, organizational, and institutional process. However, beyond the operational dimension, it represents a deeper transformation: the transition from the archive as a document repository to the archive as cultural infrastructure. Conceptualizing the archive as cultural infrastructure implies that it is not treated as a peripheral function, but as a central component of the university mission. In this sense, digital infrastructure becomes a means for articulating academic identity and ensuring its continuity over time. This dimension is particularly significant in contexts where institutional history has been interrupted by political, administrative, or structural transitions. The digital archive creates structural stability of institutional memory that transcends cyclical changes in leadership or development policies. Moreover, the archive as cultural infrastructure strengthens the relationship between the university and the public. By making scientific and artistic production accessible, the institution affirms its role as an active contributor to the cultural and academic life of society.

Within this framework, technology functions as an instrument for the systematic structuring of institutional memory. The value of the digital archive is not measured solely by the number of 8 deposited documents, but by its ability to structure, make searchable, and sustainably preserve academic and creative production (Borgman, 2007; Smith, 2007). An archive conceptualized in this way creates conditions for interdisciplinary interaction, comparative studies, and critical return to its own institutional history. It becomes a platform for new research and not merely a repository of the past. In the context of developments in artificial intelligence, a structured archive creates a foundation for advanced research and semantic analysis. However, these capacities depend on metadata standardization and systematic organization of content, making prior institutionalization a prerequisite for sustainable technological integration. The digital archive as cultural infrastructure represents a strategic choice for public universities, placing technology in the service of the academic mission and institutional continuity.

IV. MAJOR FINDINGS OF THE STUDY

the preservation of renowned dancers from other institutions within and outside the country, which always added to the wealth of knowledge disseminated through this institution. But it is commendable that such a centre has been established and the basic framework, including infrastructure, has been designed through recent projects. It is important to note here that the conservation methods (conservation efforts to preserve the records in their original formats) are not in the right way. This is not enough to preserve the entire data reflecting the richness of Kerala Kalamandalam's interventions in the cultural history of Kerala. Moreover, in the past, archives and documentation did not have an academic place due to the lack of a historical approach to studying and researching the performing arts. This calls for the development of such an archiving centre.

Conservators had recommended remedial treatments to prevent deterioration and improve the physical conditions. But the result was the same; its information content and excellent performance were lost forever. Currently, Kerala Kalamandalam, after becoming a virtual university, has adopted a completely research-based vision in renovating the old documentation and archives. It is in this context that the work of developing an archiving model in conjunction with the digitization of Kerala Kalamandalam will be initiated. In the digitization model developed as part of the study, metadata of the collected documents is prepared, and the digital library software platform Dspace is utilized to access the collected data.

The final and major outcome of the project is the creation of a comprehensive and well-organised metadata repository documenting the artistic contributions of traditional art exponents of Kerala Kalamandalm. The metadata is exclusively limited to the period from 1930-1990, providing a structured and reliable record of artists, their performances, training, achievements, and contributions to Kerala's traditional performing arts during this historical period.

A complete database and directory of the students identified during the period 1930-1990 has been prepared; it includes approximately 600 students from various departments of Kalmandalam. This database constitutes an important historical document, preserving valuable information on the institution's students and making a significant contribution to the documentation of Kerala Kalamandalam’s educational and artistic heritage.

V. CONCLUSION

Digital preservation and archiving offer significant opportunities for Kerala Kalamandalam in safeguarding, managing, and promoting Kerala's rich performing arts heritage. As a premier institution dedicated to preserving and teaching traditional art forms such as Kathakali, Mohiniyattam, Kutiyattam, thullal, music, and percussion, Kerala Kalamandalam can greatly benefit from comprehensive digital preservation initiatives. The digitization of manuscripts, photographs, audiovisual recordings, costumes, and institutional records helps protect these valuable resources from physical deterioration, environmental damage, accidental loss, and natural disasters while ensuring their long-term preservation and accessibility. Digital archives enable

students, researchers, artists, and the general public to access collections remotely, thereby removing geographical barriers and expanding the reach of Kerala's cultural heritage to national and international audiences. These digital resources also support research and education by providing authentic primary source materials for the study of performing arts, folklore, theater, music, dance, and cultural history while preserving oral traditions through high-quality recordings of performances, classroom demonstrations, lectures, and interviews with master artists. Furthermore, digital platforms enhance the global visibility of Kerala Kalamandalam by facilitating online exhibitions, virtual performances, and digital repositories that promote cultural exchange and increase awareness of Kerala's artistic traditions.

Digital preservation also contributes to disaster preparedness by creating secure backup copies of rare archival materials and storing them in reliable digital repositories and cloud-based systems. In addition, digital archiving strengthens institutional memory by systematically documenting administrative records, academic activities, festivals, workshops, performances, awards, and the contributions of distinguished artists. It also encourages collaboration among libraries, museums, archives, universities, and cultural institutions, promoting resource sharing and interdisciplinary research. The integration of metadata standards and digital humanities tools further enhances the organization, discovery, interpretation, and presentation of archival collections through digital exhibitions, multimedia storytelling, and data visualization. Overall, digital preservation and archiving provide Kerala Kalamandalam with a sustainable framework for managing its cultural resources by ensuring long-term preservation, improving accessibility, supporting education and research, promoting cultural heritage on a global scale, and protecting Kerala's invaluable tangible and intangible cultural heritage for future generations.

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