



Theoretical and Practical Issues in Enhancing the Effectiveness of Digital Transformation Policy Implementation in the Cultural Sector to Expand the Public's Access to Cultural Services

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ARTICLE INFO	ABSTRACT
Published Online: 20 July 2026	This article analyzes several theoretical and practical issues involved in enhancing the effectiveness of digital transformation policy implementation in the cultural sector in order to expand the public's access to cultural services. Drawing on approaches from public policy, digital transformation, cultural services, and the right of access to culture, the article argues that digital transformation in the cultural sector is not merely a matter of digitizing resources or building technical platforms, but a process of renewing governance methods, service provision, and interaction with the public. The article identifies major practical issues, including a predominantly technology-centred understanding of digital transformation, fragmented cultural data, insufficiently user-friendly platforms, uneven implementation capacity, the digital divide, copyright concerns, data ethics, and the absence of citizen-centred evaluation mechanisms. On this basis, the article proposes several policy implications for improving institutions, developing digital cultural data and platforms, strengthening implementation capacity, narrowing the digital divide, and ensuring fair, convenient, and inclusive access to cultural services.
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1. INTRODUCTION

Digital transformation has become one of the dominant development trends, exerting wide-ranging effects on almost all domains of socio-economic life, including the cultural sector. According to Mergel et al. (2019), digital transformation is not only the application of technology but also a process of changing organizational arrangements, modes of operation, and value creation. Whereas cultural management, preservation, dissemination, and service provision previously relied largely on physical institutions, traditional administrative methods, and the direct participation of the public, the development of digital technologies, digital data, digital platforms, and digital communication is now fundamentally reshaping the ways in which cultural values are organized, managed, and accessed. In this context, digital transformation in the cultural sector is not merely the digitization of documents, artefacts, heritage, libraries, museums, or administrative procedures. It is also a process of renewing cultural governance, improving the quality of service provision, expanding spaces for cultural access, and promoting citizens' participation in cultural life.

Culture occupies a special position in sustainable development: it is both the spiritual foundation of society and a goal, driver, and endogenous resource of development. Throsby (2001) argues that cultural goods and services are distinctive because they carry not only economic value but also cultural, social, and symbolic value. In the context of the market economy, international integration, and the Fourth Industrial Revolution, people's needs for accessing, enjoying, and participating in cultural creation have become increasingly diverse. People not only wish to participate in cultural activities in person at libraries, museums, heritage sites, community cultural houses, cultural centres, cinemas, and spaces for artistic performance, but also seek access to cultural information, heritage, festivals, digital libraries, digital museums, digital exhibitions, online public services, and cultural products in the digital environment. Therefore, digital transformation in the cultural sector is meaningful not only for modernizing state management but also for expanding opportunities for cultural access, improving spiritual life, and safeguarding the public's right to enjoy culture.

At the global level, many countries and international organizations have promoted digital transformation programmes to modernize public governance, develop digital societies, and improve the quality of services delivered to citizens. In the cultural sector, international policy orientations increasingly emphasize the need to digitize heritage, develop cultural data, modernize cultural institutions, build digital platforms, develop cultural industries, and expand public access to cultural values. UNESCO (2022) indicates that culture in the digital environment opens up new opportunities for creativity, distribution, and access, while also raising requirements for inclusiveness, equity, and sustainability. However, the current issue is not simply whether digital transformation policies in the cultural sector have been promulgated, but, more importantly, how such policies are implemented, what results they generate, and how they affect citizens as the final beneficiaries. In practice, a considerable gap remains between policy promulgation and substantive change in people’s cultural life. Even a digital transformation policy with sound objectives may fail to realize its full effects if it lacks resources, infrastructure, data, inter-actor coordination, implementation capacity, or effective communication to the public. Accordingly, the effectiveness of digital transformation policy implementation in the cultural sector should be treated as a central issue, rather than being assessed only by the number of legal documents, programmes, schemes, or digital platforms created.

The implementation of digital transformation in the cultural sector across different cultural systems has raised several notable practical issues. The degree of digitization of cultural resources remains uneven across regions, institutional groups, and types of services; cultural databases are still fragmented; technological infrastructure and platforms for providing digital cultural services are not yet fully synchronized; data interoperability, sharing, and exploitation remain limited; the quality of digital content is inconsistent; and some platforms are difficult to use or insufficiently friendly to the public. Europeana (2020) is a typical example showing that cultural digital transformation must be organized on the basis of data, standards, connectivity, and public-service orientation, rather than through the fragmented digitization of separate collections. In addition, the digital capacity of some cultural officers and citizens has not yet met practical requirements; communication, guidance, and support for the public in using digital cultural services remain insufficiently effective. These limitations may reduce the impact of digital transformation policies, resulting in digital cultural services that exist technically but do not create substantive access for the public.

Another issue requiring attention is the risk of widening the digital divide in access to cultural services. Norris (2001) points out that the digital divide is not only a

matter of access to devices or the Internet but is also associated with the capacity to participate in information flows and public life. Digital transformation can enable people to access cultural services more conveniently and reduce barriers of space, time, and cost. However, these benefits are not distributed evenly across all population groups. Young people, those with higher levels of education, urban residents, and individuals with adequate devices and digital skills usually have more favourable conditions for access. Conversely, older persons, people living in rural, mountainous, remote, or disadvantaged areas, low-income groups, persons with disabilities, and groups with limited digital skills may face greater difficulties in using digital cultural services. Thus, without appropriate support policies, digital transformation in the cultural sector may unintentionally create new barriers and deepen disparities in cultural access and enjoyment across social groups, localities, and regions.

From a theoretical perspective, improving the effectiveness of digital transformation policy implementation in the cultural sector requires an interdisciplinary approach that combines public policy implementation theory, digital transformation theory, public service theory, service-access theory, and studies on cultural rights. Penchansky and Thomas (1981) conceptualize service access as the fit between users and the service delivery system, thereby suggesting a multidimensional view of access to cultural services. This approach makes it possible to identify cultural digital transformation not simply as a technical process but as a policy process in which effectiveness depends on objectives, instruments, resources, organizational capacity, coordination mechanisms, data quality, service design, digital trust, and citizens’ ability to use services. At the same time, access to cultural services should be understood as a multidimensional concept encompassing access to information, spatial access, technological access, cost-related access, temporal access, convenience, the appropriateness of content, and the practical ability to benefit from services.

From a practical perspective, research on this topic is significant in a context where digital transformation has become a common orientation of many countries, international organizations, and cultural institutions. Enhancing the effectiveness of digital transformation policy implementation in the cultural sector not only helps modernize state management but also contributes to ensuring equity in cultural access, improving the quality of spiritual life, promoting heritage values, stimulating creativity, and strengthening citizens’ participation in cultural life. OECD (2020) stresses that digital government should be designed in a user-centred and data-driven manner, which is also an important suggestion for the cultural sector. It is therefore necessary to shift the focus of evaluation from “whether a policy exists” to “how the policy is implemented,” from

“whether a digital platform exists” to “whether citizens use and benefit from it,” and from “digitizing cultural resources” to “expanding access to, enjoyment of, and participation in culture.”

Stemming from the issues above, this article focuses on the topic “Theoretical and Practical Issues in Enhancing the Effectiveness of Digital Transformation Policy Implementation in the Cultural Sector to Expand the Public’s Access to Cultural Services.” The objective of the article is to clarify selected theoretical foundations of digital transformation policy implementation in the cultural sector, analyze practical issues arising during policy implementation, and suggest orientations for improving implementation effectiveness so that cultural digital transformation truly serves citizens, is oriented towards citizens, and expands opportunities for access to cultural services in a fairer, more convenient, and more inclusive manner. The article employs methods of documentary analysis, synthesis, and policy analysis, based on an interdisciplinary approach connecting public policy, digital transformation, cultural studies, and service-access theory.

2. THEORETICAL FOUNDATIONS OF DIGITAL TRANSFORMATION POLICY IMPLEMENTATION IN THE CULTURAL SECTOR AND THE PUBLIC’S ACCESS TO CULTURAL SERVICES

Digital transformation in the cultural sector refers to the process of applying digital technologies, digital data, and digital platforms to renew the methods of managing, preserving, disseminating, providing, and receiving cultural values. Unlike digitization in the narrow sense, which mainly focuses on converting documents, images, artefacts, records, archival materials, or cultural data into digital form, digital transformation implies a more comprehensive change in managerial thinking, organizational models, operational processes, service delivery methods, and the relationship between cultural institutions and the public. Cameron and Kenderdine (2007) argue that digital cultural heritage is not merely the outcome of technology but also opens up new ways of interpretation, interaction, and cultural meaning-making. In the cultural sector, digital transformation may be reflected in heritage digitization, the development of cultural databases, digital libraries, digital museums, digital exhibitions, cultural information platforms, online public services, cultural communication in the digital environment, and new forms of interaction between citizens and cultural values.

From the perspective of public policy, digital transformation policy in the cultural sector can be understood as a system of orientations, objectives, instruments, programmes, and measures adopted by public authorities to promote the application of digital technologies in cultural management, preservation, value promotion, and the

provision of cultural services to the public. Such policy is directed not only at modernizing state management of culture but also at expanding opportunities for access to, enjoyment of, and participation in culture among different population groups. According to Van Meter and Van Horn (1975), policy implementation is influenced by policy objectives, resources, implementing organizations, communication, and socio-economic conditions. Therefore, the ultimate objective of cultural digital transformation policy should not stop at building digital platforms, digitizing data, or moving services online, but should be oriented towards improving service quality and creating practical value for citizens.

The implementation of digital transformation policy in the cultural sector is the process of translating policy objectives and contents into practice through concrete activities such as preparing implementation plans, allocating resources, developing digital infrastructure, building cultural databases, operating digital platforms, training personnel, communicating policy, supporting citizens, and monitoring implementation outcomes. Pressman and Wildavsky (1973) demonstrate that the gap between policy design and implementation is often an important reason why policies fail to achieve expected outcomes. Thus, even a policy with appropriate objectives will find it difficult to generate substantive results if it lacks resources, coordination, competent staff, monitoring mechanisms, or alignment with citizens’ needs.

The effectiveness of digital transformation policy implementation in the cultural sector can be understood as the extent to which policy is implemented clearly, coherently, with secured resources, appropriate infrastructure and data, competent implementing personnel, effective coordination mechanisms, and positive impacts on the public’s access to cultural services. OECD (2020) emphasizes that digital government should be user-centred, data-driven, and oriented towards the creation of public value. Accordingly, implementation effectiveness should not be measured only by input indicators such as funding, the number of platforms, the volume of digitized data, or the number of policy documents issued; it should also be assessed through outputs and social impacts. In the cultural sector, the most important measure is whether citizens are aware of, use, trust, are satisfied with, and benefit from digital cultural services.

Several components of the effectiveness of digital transformation policy implementation in the cultural sector can be identified. First is the clarity and feasibility of policy objectives. Policy must clearly define whom cultural digital transformation serves, what needs it addresses, and what outcomes it seeks to generate. Second are implementation resources, including finance, human resources, technology, physical facilities, and implementation time. Third are digital infrastructure and service platforms, reflected in accessibility, stability, user-friendliness, interoperability, and convenience

for users. Fourth is the quality of cultural data, including completeness, accuracy, timeliness, searchability, usability, and relevance to citizens’ needs. Fifth is the capacity of implementing personnel, especially cultural officers and staff working at libraries, museums, cultural centres, heritage-management boards, and local authorities. Sixth are policy communication and citizen support, because digital cultural services are meaningful only when citizens know about them, understand them, trust them, and are able to use them. Seventh are information security, personal data protection, and the building of digital trust in the process of service use. The OECD digital government framework (2020) provides an important reference for identifying these elements from the perspective of data, platforms, users, and public-sector proactiveness.

Cultural services are activities, products, and utilities that meet citizens’ needs for cultural enjoyment, learning, creativity, participation, preservation, and the promotion of cultural values. Such services may be provided by the state, public cultural institutions, social organizations, communities, or enterprises. Throsby (2001) emphasizes that cultural products and services carry both economic and cultural value; therefore, access to cultural services cannot be viewed merely as an ordinary consumer relationship. In the context of digital transformation, cultural services no longer exist only in direct forms at physical institutions such as libraries, museums, cultural houses, cinemas, theatres, heritage sites, and festivals; they are also provided through digital platforms such as digital libraries, digital museums, online exhibitions, heritage databases, cultural information portals, mobile applications, and social media.

The public’s access to cultural services refers to the extent to which citizens are able to know about, search for, use, participate in, and benefit from cultural services. This is a multidimensional concept that reflects not only whether a service exists, but also whether that service can actually reach people. According to Penchansky and Thomas (1981), access to services should be understood through the fit between the service delivery system and users, including dimensions such as availability, accessibility, accommodation, affordability, and acceptability. When applied to the cultural sector, access to cultural services may include access to information, spatial access, temporal access, cost-related access, technological access, convenience, the relevance of service content, the ability to use services, and citizens’ perceived benefits. In the digital environment, access also depends on devices, Internet connectivity, digital skills, digital trust, and the user-friendliness of platforms.

The relationship between digital transformation policy implementation in the cultural sector and the public’s access to cultural services can be explained through several key mechanisms. First, effectively implemented policy expands access to cultural information, enabling citizens to obtain

information more easily about cultural activities, events, heritage, libraries, museums, and public services in the cultural sector. Second, digital platforms and digital data reduce barriers of space and time, allowing citizens to access services remotely, at any time and from any place. Third, digital cultural services can partly reduce travel costs, information-search costs, and participation costs. More importantly, digital transformation expands modes of cultural participation, shifting citizens from passive recipients to interactive participants who provide feedback, share content, and co-create cultural value. Giaccardi’s (2012) approach to participatory culture provides an important lens for explaining this mechanism.

However, the impact of digital transformation on access to cultural services does not occur automatically. If policy implementation is ineffective, data are not updated, platforms are difficult to use, staff lack the capacity to support users, policy communication is weak, or citizens lack digital skills, digital cultural services may fail to produce their intended effects. Digital transformation may even create new barriers for older persons, rural residents, low-income groups, persons with disabilities, or groups with limited access to technology. Norris (2001) shows that the digital divide may reproduce inequalities in access to information and social participation. Therefore, in both research and policy-making, the effectiveness of cultural digital transformation policy implementation and the public’s access to cultural services should be viewed as closely interconnected. Only when policy is implemented effectively, centred on citizens, and attentive to inclusiveness can digital transformation genuinely contribute to expanding opportunities for access to, enjoyment of, and participation in cultural life.

3. PRACTICAL ISSUES IN IMPLEMENTING DIGITAL TRANSFORMATION POLICIES IN THE CULTURAL SECTOR

The global implementation of digital transformation in the cultural sector shows that this is a complex process that involves not only technology, but also institutions, resources, governance capacity, data quality, public participation, and equity in cultural access. Many countries, especially those with well-developed cultural institutional systems, have achieved notable results in heritage digitization, digital libraries, digital museums, cultural databases, online exhibitions, cultural education platforms, and models of digital interaction with the public. Europeana (2020) is a representative case of the trend towards organizing, connecting, and expanding access to digital cultural heritage on a transnational scale. Nevertheless, this process has also revealed several practical issues that must be fully identified in order to enhance the effectiveness of digital transformation policy implementation in the cultural sector.

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First, a prominent issue is the difference in awareness and approaches to cultural digital transformation. In many contexts, digital transformation is still easily understood in a narrow sense as the digitization of documents, artefacts, images, archival materials, or the development of several online platforms. This approach is necessary but insufficient, because digitization is only the first step of digital transformation. Vial (2019) argues that digital transformation produces results only when organizations develop strategic responses, change their operational structures, and overcome organizational barriers. Genuine digital transformation therefore requires deeper changes in governance models, operational processes, service delivery methods, interaction with the public, and the capacity to create new cultural value in the digital environment. If efforts merely place cultural resources online without changing the ways in which they are organized, exploited, communicated, and delivered to citizens, digital transformation will find it difficult to create substantive impacts on access to cultural services.

Second, international practice shows that building and operating digital cultural data is one of the greatest challenges. Culture is a domain with highly rich, diverse, and complex data, including tangible heritage, intangible heritage, historical materials, museum artefacts, books, archival records, festivals, performing arts, folk knowledge, cultural spaces, and contemporary creative products. Edmond and Folan (2017) emphasize that cultural data are complex and strongly dependent on interpretive contexts; therefore, datafication must avoid simplifying cultural meaning. The digitization of these resources requires not only technology, funding, and human resources, but also data standards, metadata, verification procedures, updating mechanisms, interoperability, and appropriate exploitation methods. If cultural data are fragmented, insufficiently standardized, difficult to search, or not regularly updated, digital cultural platforms will be unable to serve citizens, researchers, schools, creative enterprises, and communities effectively.

Third, another important issue concerns platform quality and user experience. Many cultural institutions around the world have developed online museums, digital libraries, virtual exhibitions, heritage databases, and digital communication channels. However, not every platform is easy to use, attractive, or suitable for public needs. Kamariotou et al. (2021) argue that virtual exhibitions and digital museums are effective only when they are embedded in a comprehensive strategy of technology, content, governance, and user experience. A platform may contain a large volume of data, yet if its interface is complicated, its speed is slow, its search tools are inadequate, its language is difficult to understand, its interactivity is limited, or it is not compatible with mobile devices, it may still restrict public access. This suggests that cultural digital transformation should not focus only on “having a platform,” but should pay

attention to “how citizens use the platform” and “what value the platform creates for users.”

Fourth, the implementation of digital transformation policies in the cultural sector depends heavily on the capacity of cultural institutions and implementing personnel. Museums, libraries, cultural centres, archives, theatres, heritage-management boards, and cultural-management agencies need not only cultural expertise but also capacities in data governance, digital communication, digital service design, information security, user-behaviour analysis, and public support. From a policy-implementation perspective, Lipsky (1980) shows that front-line personnel play a decisive role in translating policy into users’ real service experiences. In practice, many cultural institutions, especially in localities or countries with limited resources, face difficulties in funding, technological human resources, digital project management capacity, and the ability to maintain platforms after they are built. This leads to cases in which some digitization projects are implemented in a campaign-like manner, lack sustainability, or are not updated regularly.

Fifth, the digital divide is a global practical issue in access to digital cultural services. Digital transformation has the potential to expand opportunities for cultural access by overcoming barriers of space, time, and part of the cost of participation. However, these benefits are not distributed evenly across all groups. Norris (2001) shows that the digital divide is associated with socio-economic conditions, access to information, and the level of civic participation. People living in large cities, with higher incomes, better education, modern digital devices, and proficient digital skills often access digital cultural services more easily. By contrast, older persons, residents of rural, remote, and disadvantaged areas, low-income groups, persons with disabilities, migrants, and groups with limited digital skills may face more barriers. Thus, if cultural digital transformation policy is not accompanied by digital inclusion policies, it may create an additional layer of inequality in cultural enjoyment.

Sixth, ensuring copyright, data ethics, and privacy has become increasingly important. When cultural resources are digitized and shared online, new questions arise: who has the right to exploit cultural data; whether heritage-owning communities participate in decisions about how heritage is digitized and disseminated; how personal data of users of digital cultural services are protected; and whether digital content may be over-commercialized or used for inappropriate purposes. UNESCO (2022) emphasizes that culture should be regarded as a global public good; therefore, cultural digital transformation must be accompanied by requirements to protect rights, cultural diversity, and equitable access. For cultural heritage, especially the heritage of Indigenous communities, ethnic minorities, or vulnerable groups, the ethics of digitization require particular attention. Digital transformation cannot be guided solely by technical

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logic; it must respect cultural contexts, community rights, authenticity, and the symbolic depth of heritage.

Seventh, international practice also raises the issue of balancing digital access with direct cultural experience. Digital cultural services can help citizens access heritage, museums, libraries, exhibitions, or cultural events remotely, especially in contexts of pandemics, natural disasters, or restrictions on mobility. Hughes-Noehrer et al. (2021) show that during the COVID-19 pandemic, museums and galleries increased their use of data and digital channels to maintain connections with the public. Nevertheless, digital experience cannot always replace direct experience in physical cultural spaces. Culture is not only information, images, or data; it is also associated with space, emotion, community, rituals, social interaction, and embodied presence. Therefore, an important practical orientation is to develop hybrid models that combine in-person cultural services with digital cultural services, in which the digital environment supplements, expands, and enriches cultural experience rather than diminishing the role of physical cultural institutions.

Eighth, another issue is the absence of mechanisms for evaluating implementation effectiveness in a citizen-centred manner. Many cultural digital transformation programmes still tend to assess results through the number of digitized documents, the number of artefacts posted online, the number of platforms built, or the number of visits. These indicators are necessary but insufficient to reflect substantive effectiveness. OECD (2020) emphasizes the user-centred orientation of digital government, implying that policy evaluation should pay attention to user experience and value creation. More important questions include whether citizens know about the service, find it easy to use, trust it, are satisfied with it, save time and cost, and have more opportunities for learning, entertainment, creativity, and participation in cultural life. Therefore, it is necessary to move from evaluation based on inputs and technical outputs towards evaluation based on use outcomes and social impacts.

Finally, practice shows that cultural digital transformation is an interdisciplinary process requiring coordination among public authorities, cultural institutions, technology enterprises, schools, creative communities, and citizens. No single actor can successfully carry out cultural digital transformation without coordination in data, platforms, resources, standards, copyright, communication, and user support. Giaccardi (2012) shows that the digital

environment expands opportunities for community participation and co-creation in the heritage sector. The issue, therefore, is not only technological investment but also the development of a cultural digital transformation ecosystem in which actors jointly participate in creating, operating, exploiting, and disseminating cultural values in the digital environment.

Overall, international practice demonstrates that digital transformation in the cultural sector creates many opportunities to expand access to cultural services, foster creativity, develop cultural data, and strengthen public participation. However, it also raises numerous challenges relating to awareness, institutions, data, platforms, implementation capacity, the digital divide, privacy, copyright, digitization ethics, and mechanisms for evaluating effectiveness. ITU (2024) shows that gaps in Internet access and use remain a global issue, while UNESCO (2022) emphasizes the need to secure culture as a public good and reduce inequalities in access to creativity. Therefore, enhancing the effectiveness of digital transformation policy implementation in the cultural sector should be approached as an integrated governance task, in which technology is only a tool, while the core objective is to expand access to, enjoyment of, and participation in culture in a fair, convenient, and inclusive manner.

4. POLICY IMPLICATIONS FOR ENHANCING THE EFFECTIVENESS OF DIGITAL TRANSFORMATION POLICY IMPLEMENTATION IN THE CULTURAL SECTOR

On the basis of the theoretical foundations and practical issues arising in the process of digital transformation in the cultural sector, it can be seen that policy implementation effectiveness does not depend solely on technology. Rather, it is the combined result of institutions, resources, data, platforms, organizational capacity, public participation, and the ability to ensure equity in access to cultural services. According to OECD (2020), digital government should be guided by data, platforms, openness, proactiveness, and user-centredness. Accordingly, enhancing the effectiveness of digital transformation policy implementation in the cultural sector requires a comprehensive approach that places citizens at the centre, treats technology as a tool, regards data as a foundation, views cultural institutions as key implementing actors, and uses the public’s access to culture as the ultimate measure.

Table 1. Practical issues and corresponding policy implications in implementing digital transformation in the cultural sector

Practical issues	Corresponding policy implications
A technology-oriented understanding that remains overly focused on digitization	Shift from the digitization of resources to renewed governance and citizen-oriented service delivery
Fragmented and insufficiently standardized cultural data	Build, standardize, and interconnect digital cultural databases

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Service platforms that are not sufficiently user-friendly	Design platforms based on a user-centred approach
Uneven implementation capacity	Strengthen digital capacity, data governance, and public-support skills among implementing personnel
Digital divides across population groups	Link cultural digital transformation with digital inclusion and support for vulnerable groups
Risks related to copyright, privacy, and data ethics	Improve mechanisms for data protection, copyright protection, and accountability
Lack of evaluation based on social impacts	Assess policy effectiveness based on citizens’ level of access, use, and benefit

Source: *Compiled by the author*

First, it is necessary to improve the policy framework for digital transformation in the cultural sector in a manner that clearly defines objectives, responsibilities, resources, and evaluation criteria. Cultural digital transformation policy should not stop at general orientations such as heritage digitization, database development, or digital platform construction, but should be concretized into programmes, tasks, and implementation instruments appropriate to each type of cultural service. Drawing on the suggestions of Van Meter and Van Horn (1975), policy should be designed together with clear implementation standards, resources, and communication mechanisms. Libraries, museums, heritage, performing arts, cinema, festivals, cultural industries, and public services in the cultural sector require different objectives and methods of digital transformation. This approach helps avoid the application of a single model to all cultural institutions while ensuring that policy can be effectively translated into practice.

Second, it is necessary to shift policy evaluation from technical inputs to results in serving citizens. In many cases, digital transformation effectiveness is still measured by the number of digitized documents, the number of platforms built, the number of services provided online, or the number of visits. These indicators are necessary but insufficient to reflect the substantive impact of policy. OECD (2020) suggests that digital government evaluation should be linked to public value and user experience. A digital transformation policy in the cultural sector can be considered effective only when citizens know about the service, can access it easily, are able to use it, find it convenient, save time and cost, trust the platform, are satisfied with the experience, and gain expanded opportunities for cultural enjoyment. Therefore, it is necessary to develop a set of criteria for evaluating implementation effectiveness that combines technical, governance, and social indicators, with an emphasis on the public’s access to cultural services.

Third, digital cultural data should be developed in a standardized, interoperable, up-to-date, and exploitable manner. Data are the foundation of cultural digital transformation, but data create value only when they are scientifically organized, standardized, searchable, connected,

and reusable. Candela et al. (2023) show that publishing collections as data in GLAM institutions requires clear procedures, standards, and reusability. Countries and localities should therefore prioritize the development of unified cultural databases or, at a minimum, databases capable of interconnection across agencies, institutions, and levels of governance. Cultural data should include not only information on heritage, artefacts, books, documents, festivals, events, and cultural institutions, but also data on the needs, behaviours, and feedback of service users. However, data exploitation must be accompanied by principles of privacy protection, intellectual property rights, community rights, and digitization ethics, especially for the heritage of Indigenous communities, ethnic minorities, or vulnerable groups.

Fourth, digital cultural service platforms should be developed to be friendly, easy to use, and suitable for diverse public groups. Digital platforms in the cultural sector should not be merely repositories of information; they should become spaces for service provision, interaction, learning, experience, and cultural participation. Kamariotou et al. (2021) emphasize the role of user-experience strategy in virtual exhibitions and digital museums. To achieve this, platforms should have easy-to-use interfaces, accessible language, stable access speed, mobile compatibility, effective search tools, logically organized content, and clear guidance for users. For older persons, persons with disabilities, people with limited digital skills, or residents of disadvantaged areas, platforms should be designed inclusively, with fewer complex operations, multi-channel support, and the assurance of equitable access.

Fifth, the capacity of policy-implementing personnel in management agencies and cultural institutions must be strengthened. Cultural digital transformation cannot succeed if implementers possess only traditional cultural expertise but lack digital skills, data-governance capacity, digital communication skills, and the ability to support citizens in using services. Lipsky (1980) shows that front-line personnel play an important role in shaping the real experience of public-service users. Therefore, regular training programmes should be developed for cultural officers, librarians, museum

staff, cultural-centre personnel, heritage-management staff, and local government officials on data governance, digital platform operation, user-centred service design, information security, and interaction with the public in the digital environment. Implementing personnel should be viewed as the bridge between policy, technology, and citizens’ actual experience.

Sixth, policy communication and citizen support in the use of digital cultural services should be strengthened. Even a well-designed digital cultural service will find it difficult to exert its effects if citizens do not know about it, do not understand its benefits, are not guided, or lack trust when using it. Giaccardi (2012) shows that the digital environment can broaden community participation in the interpretation and dissemination of heritage values. Policy communication should therefore be conducted regularly, clearly, and in ways appropriate to different public groups. In addition to official communication channels, social media, schools, libraries, cultural houses, cultural centres, social organizations, and local communities should be used to introduce, guide, and support citizens. In particular, direct or semi-direct support mechanisms should be established for groups with limited digital skills, helping them gradually access and use digital cultural services with greater confidence.

Seventh, narrowing the digital divide should be placed at the centre of cultural digital transformation policy. Digital transformation can expand cultural access, but it can also create new inequalities if it primarily serves groups that already possess favourable digital conditions. Norris (2001) is an important reference showing that the digital divide can affect the ability to participate in information flows and public life. Accordingly, digital transformation policy in the cultural sector should be linked to digital inclusion policies, with priority given to supporting older persons, rural residents, people in remote and disadvantaged areas, low-income groups, persons with disabilities, people with limited digital skills, and groups at risk of exclusion from digital spaces. Such support may include the dissemination of basic digital skills, the development of public access points at libraries or cultural houses, device support, the preparation of simple user guides, the development of multi-channel services, and the maintenance of a combination of in-person and online services.

Eighth, coordination among public authorities, cultural institutions, technology enterprises, educational institutions, social organizations, and communities should be strengthened. Cultural digital transformation is an interdisciplinary process that requires the participation of multiple actors. Public authorities play the role of policy orientation, standard setting, securing basic resources, and regulating public interests. Cultural institutions organize data, develop content, and provide services. Technology enterprises may support technical solutions, platforms,

security, and data analysis. Schools, social organizations, and communities can participate in communication, digital-skills training, the dissemination of cultural values, and service-quality feedback. Effective coordination mechanisms will help cultural digital transformation avoid fragmentation, duplication, and lack of sustainability. UNESCO (2022) emphasizes the need to approach culture as a public good, thereby suggesting the role of multi-actor coordination in safeguarding the common interest.

Ninth, information security, copyright, and digital trust in the provision of cultural services must be ensured. When citizens use digital cultural platforms, they may provide personal information, search histories, interaction data, or payment information. Without secure and transparent mechanisms, citizens may be reluctant to use services. At the same time, the digitization and dissemination of cultural resources raise issues concerning intellectual property rights, exploitation rights, community rights, and the responsible use of cultural data. Edmond and Folan (2017) warn that the datafication of culture, if insufficiently sensitive to context, may impoverish the complexity of cultural data. Therefore, cultural digital transformation policy should integrate principles of information security, personal data protection, copyright, digitization ethics, and accountability among service providers.

Finally, models of cultural digital transformation should be developed in accordance with the specific conditions of each locality and each group of services. Cultural digital transformation should not be treated as a uniform model that can be applied identically everywhere. Large urban areas, localities with heritage advantages, rural and mountainous areas, areas with ethnic-minority communities, and localities with limited digital infrastructure require different implementation approaches. UNESCO (2019) highlights the role of culture in sustainable development and the need to pay attention to inclusion, participation, and local conditions. In favourable contexts, priority may be given to digital experience platforms, open data, personalized services, and digital cultural industries. In more difficult contexts, priority should be given to basic infrastructure, the digitization of essential cultural resources, community communication, digital-skills support, and the maintenance of direct access points. Such a differentiated approach can help cultural digital transformation policy ensure both effectiveness and equity.

Overall, enhancing the effectiveness of digital transformation policy implementation in the cultural sector requires a shift from a technology-oriented mindset to a governance- and public-service-oriented mindset. The focus of policy should not be only on digitizing more resources or building more platforms, but on making cultural values more accessible, more understandable, more convenient, and more meaningful for citizens. OECD (2020) is an important

reference for this orientation, as it emphasizes that digital government should be user-centred, data-driven, and oriented towards public value. When policies are clearly designed, implemented coherently, supported by well-organized data, user-friendly platforms, competent implementing personnel, citizen support, and a narrowed digital divide, digital transformation in the cultural sector can genuinely contribute to expanding access to, enjoyment of, and participation in cultural life in a fair, inclusive, and sustainable manner.

5. CONCLUSION

Digital transformation in the cultural sector is an inevitable trend. It not only contributes to modernizing the management, preservation, and dissemination of cultural values, but also opens up new opportunities for citizens to access, enjoy, and participate in cultural life more flexibly. However, the effectiveness of cultural digital transformation does not depend solely on technology, platforms, or digital data; it depends mainly on the quality of policy implementation, the capacity of cultural institutions, the degree of citizen-centredness, and the ability to ensure inclusive access. This approach is consistent with Mergel et al. (2019), who view digital transformation as a process of organizational change and value creation rather than merely the application of technology.

The article shows that the implementation of digital transformation policies in the cultural sector should be seen as an integrated governance process encompassing institutional improvement, resource assurance, the development of cultural data, the construction of user-friendly platforms, the strengthening of implementing personnel, policy communication, personal data protection, and the narrowing of the digital divide. Within this process, the public’s access to cultural services should be regarded as an important measure for evaluating policy implementation effectiveness. This perspective follows the understanding of policy implementation as a complex organizational process in which outcomes depend on implementation capacity and coordination among actors (Van Meter & Van Horn, 1975).

For digital transformation to genuinely contribute to expanding access to cultural services, it is necessary to move from a mindset of “digitizing resources” to one of “serving citizens”; from evaluation based on technical inputs to evaluation based on use outcomes and social impacts; and from service provision according to managerial logic to service design based on the needs, capacities, and experiences of citizens. Only then can digital transformation in the cultural sector truly become a tool for promoting cultural equity, improving spiritual life, and enhancing cultural values in the context of digital development. The main contribution of this article is to emphasize an approach to evaluating the effectiveness of cultural digital transformation policy implementation from the perspective of the public’s access to

cultural services, rather than solely from the perspective of technological investment or resource digitization.

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