

# Formation and Development of Cultural Competence by Increasing Access to Material Forms of Historical and Art-History Heritage

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**Abstract:** The formation of the practical competence of the cultural cycle is determined, first of all, by the formation of access to the fund of material and non-material forms of art, which makes it possible to expand the possibilities of an individual to increase his cultural level. The relevance of the study is determined primarily by the fact that each individual must not only carry out his practical activities but also form an understanding of the meaning of cultural studies in his mind. In this regard, and in the context of overcoming crisis phenomena in the economy, turning to non-material forms becomes a priority task for bearers. The novelty of the research is determined by the possibilities of increasing access to cultural products, while the importance of access is determined not only by high culture. The authors show that the ability to access forms of mass culture also matters. It is shown that one of the possibilities of access to popular culture is to increase the level of distribution of library access. Using the example of countries that declare their commitment to raising the cultural level of the population, the necessity for the development of digital educational resources is shown. The practical significance of the study is determined by the possibilities of widely involving the population in the processes of digitalisation of information carriers about art and, on the basis of this, about the formation of general cultural competence in society as a whole.

**Keywords:** Culture, library, information, population, crisis.

## INTRODUCTION

The creation of the EU was accompanied by integration trends in the development of European countries in the field of economic and social policy (Vanclay *et al.* 2004). This process was spearheaded by the European Committee for Standardisation, which has developed a common EU strategy, with the main focus on economic and social issues, in particular, work, growth, investment, digital single market, energy alliances and market, international market, deepening and strengthening of the economy and monetary system, deepening cooperation with the United States, justice and fundamental rights, migration processes, the development of globalisation and democratic change (Gilmore and Rentschler 2002). At the same time, the EU pays tremendous attention to the coordination of activities in the field of preservation of cultural heritage, the organisation of free digital access to the cultural product of European peoples as the main function of cultural policy and the management of cultural processes, consistently including in the strategy for the development of national programs a cultural policy in the field of creating digital resource (Kobayashi and Asai 2007; Akizhanova *et al.* 2014; Tashpulatov *et al.* 2018a).

Over the past thirty years, Europe has formulated several key principles of its general policy of promoting culture and human development in a system of cultural identity, on the one hand, and cultural diversity, on the other, creativity, participation in cultural life and respect for the individual (Huerta and Hernández 2015). Thanks to cooperation with international organisations in the field of culture and, in particular, UNESCO, IFLA, holding a number of international forums, approving conventions and recommendations on the principles of cultural development, a common approach to culture as a factor in the spiritual and economic progress of society was agreed, and cultural heritage was recognised one of the basic values of humanity (Kawashima 1999). The main principles of European policy were the preservation, research and actualisation of the European cultural heritage, its popularisation; development of modern types of cultural and creative activities and favourable conditions for the production of cultural products competitive in the world market; ensuring maximum accessibility of cultural benefits, where a significant place is given to the creation of digital resources of cultural heritage, active support for the development of information and digital technologies and the creation of a digital cultural product (Lopez 2017; Timkina *et al.* 2019; Daurenbekova *et al.* 2020; Tashpulatov *et al.* 2018b; Zykova *et al.* 2021; Knieper and Biryukov 2019; Koban 2019).

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Through a debate initiated by the World Commission for Culture and Development UNESCO (UN/UNESCO) on the role of culture in society, an independent group of policymakers, researchers and cultural policy makers have formulated several key principles of cultural policy, which were incorporated into the 1997 Council of Europe report "In from the Margins" (exit of culture from a marginal state) and distributed in a special document "In from the margins – A contribution to the debate on Culture and Development in Europe" (1998) (In from the margins 1997), where on the basis of the conducted case studies and statistics, the way out of the state of cultural marginalisation and the reduction of the global cultural divide, the way to mobilise human resources through culture, education, life and work in a communication society have been shown (Davies and Shaw 2013). It was noted that most European countries implement their cultural policies in accordance with four key principles of assistance: preserving cultural identity; cultural diversity; creativity; participation in cultural life (Shindell 2016; Frolova *et al.* 2020). These principles of cultural policy are successfully implemented in the era of digital technologies and the Internet, which have brought unprecedented opportunities for access to cultural materials for research, study and work, they are available to a wide audience of users, make it possible to quickly exchange new experiences and reuse scientific and cultural and educational materials (Demb 2008; Akizhanova *et al.* 2018; Galamandjuk *et al.* 2019).

## MATERIALS AND METHODS

The experience of recent years in this area, which is widely available in the open access on the Internet, has demonstrated that almost all EU member states have made significant progress in the digitisation of cultural materials, which is taking place in European cultural heritage institutions, in particular libraries, archives, museums, etc. cultural institutions, as clearly evidenced by the aforementioned "EC Review Report for 2013-2015" (Survey Report on Digitisation... 2015), (Moreno-Mendoza *et al.* 2018). An overview of the most important international and national projects and programs makes it possible to present these activities on a European scale. After the mentioned Mexico City Declaration (Mexico City Declaration... 1982), where the principle of cultural democracy was established, the essence of which is that culture should belong not only to the elite strata of society, but also to the whole society, the path of integrating the efforts of the

European community to develop methodological foundations and practical actions in the field of creating joint approaches, international standards and technologies in the creation of cultural heritage resources (Hatton 2012; Aleksandrova *et al.* 2020; Gavrilova *et al.* 2020; Nurmaganbetova *et al.* 2020; Trusova *et al.* 2019a; Trusova *et al.* 2019b; Hryshchuk 2019).

In Mexico City, it was recommended to promote the establishment of relations of culture with modern media and communication, as well as with the cultural industry, the products of which are popular culture (popular music, cinema, fashion, etc.), because "modern media form the image of the world, in which we live". Only direct access to the culture of the peoples of the world, in the global information space, can provide its multidimensional and truthful image (Moreno-Mendoza *et al.* 2020). After the Declaration in Mexico City, the issues of recognising culture and cultural heritage as a fundamental value that requires protection and development as a cultural industry were discussed at many international conferences and meetings: "Declaration of the Conference of Ministers of Culture of the Non-Aligned Movement" (Non-Aligned Movement 2020), "Conclusion of the Pan-African Consultation on Cultural Policies for Development" (Action Plan... 1998), Charter "On Culture" adopted by a conference held by the Council of Europe in 1999 (International Cultural Tourism... 1999). UNESCO held an intergovernmental conference in Stockholm in 1998, which adopted an "Action Plan for Cultural Policies for Development" (Reussner 2003; Alimbayev *et al.* 2020; Kaimbayeva *et al.* 2020; Trusova 2016).

The "Action Plan" emerged at the end of the 20th century and became a consequence of changes in the situation in the world, in particular a number of civil conflicts in a number of African and Asian states, in the Balkans and the Caucasus, where one of the sources of discord was cultural intolerance, clashes between people based on differences in their religious beliefs, language, ethnic and national accessories (Kraemer and Kanter 2014). At the same time, many cultural monuments were destroyed and cultural values were levelled, therefore these events showed that the urgent necessity for cultural policy was the development and promotion of a culture of peace and intercultural dialogue, a policy of social integration, and within the framework of the structure of national unity – to embody values that can be shared society and give access, space and voice to all its members (Turco *et al.* 2018). In this regard, the "Action Plan", when

pursuing cultural policies aimed at improving social inclusion, recommends paying special attention to ensuring wider access to culture for all segments of the country's population (Thanou *et al.* 2020; Anamova 2013; Konyratbayeva *et al.* 2018; Omarov *et al.* 2020).

## RESULTS AND DISCUSSION

Digitisation projects have emerged since 2001. To create a mechanism for coordinating national digitisation programs within the European Union, representatives and experts of the EU member states met in Lund (Sweden) on April 4, 2001 to determine how to launch these mechanisms, discuss these challenges, as well as identify ways to support coordination that ensures sustainable development (Reussner 2017). At this meeting, participants agreed that digitisation is a key mechanism for harnessing Europe's unique heritage and supporting cultural diversity, education and the development of cultural industries (Siu *et al.* 2013). However, while EU member states have a track record of providing access to their cultural heritage, there are still many obstacles to the success of these initiatives (Sookhanaphibarn and Thawonmas 2009; Krayushkina *et al.* 2019; Kryvonos *et al.* 2017; Pashtetskiy *et al.* 2020; Zinchenko 2019).

Risks associated with the use of certain technologies and standards were recognised as the main obstacle to the development of digitisation and standards; requirements related to long-term preservation and accessibility of digitised objects; lack of consistency in approaches to intellectual property rights; lack of coherence of cultural programs with programs for new technologies (Pencarelli *et al.* 2016). All these considerations contributed to the fact that at this meeting the "Lund Action Plan until 2005" was adopted, the implementation of which was discussed at the next meeting of representatives of the EU member states, which was held in Brussels on July 17, 2001 (UNESCO Digital Library 2020). The main directions of its work were: coordination of work at the European level; developing a European perspective on digitisation policies and programs; dissemination of positive digitisation experience; cooperation in projects to ensure access to the digitised cultural and scientific heritage of Europe; development and dissemination of common European standards; definition of quality criteria for websites providing access to cultural resources (Brussels Quality Framework); development of national training programs and development of skills in working with the latest technologies. An important project that stimulates intensive economic development

and strengthening of the EU's position in the international market is the largest political project "Electronic Europe" (eEurope), within which many programs can be carried out both inside the EU member states and at the level of the European Commission. The eEurope project (eEurope action plan 2002, eEurope action plan 2005, then 2010 (Shaping Europe's digital future 2020)) aims to ensure that EU citizens get the maximum benefit from the information revolution, and European countries receive strong support (Provalova *et al.* 2019; Pukhkal *et al.* 2016; Yeskindirova and Alshinbayeva 2017a; Zhuravel and Kerikmäe 2019; Shumylo *et al.* 2019).

The eContent program (2001-2004) focused on the market for programs that aim to support the production, use and distribution of European digital content and to promote linguistic and cultural diversity in global networks, aimed at a multilingual resource reflecting the cultural diversity of European peoples, providing opportunities to meet specific cultural, scientific, educational needs of users. One of the goals of the eContent program is to create and access European content across global networks in order to take full advantage of the opportunities provided by digital technologies for the transition to a knowledge-based society. The new program of the Commission of the European Communities eContentPlus (Information Day... 2007) promoted European digital information resources to the market and focused on the development of multilingual content for innovative online services in Europe. Only for its development, for improving access and use of geographic information, information about culture and resources for education, the European Parliament approved an amendment that determines the size of the program budget – 149 million euros for the 196 period 2005-2008 (Pylypenko 2018; Yeskindirova and Alshinbayeva 2017b; Kostruba and Schramm 2019).

One of the financial instruments that allows the implementation of programs and projects within the framework of eEurope and e-Content and the implementation of ERA ideas are the Framework Programs of the European Commission. These are funding programs that the EU creates to support and encourage research in the European Research Area (ERA), aimed at a comprehensive unified funding system by the European Commission (the government of the European Union), at coordinating pan-European topical research within a certain period (frames). The Framework Programs were recommended for use and approved at the Rome Summit of the leading European

countries in 1983. The Framework Program is the EU's main instrument in research funding, as stipulated by the Agreement on the Establishment of the European Community (UNESCO Digital Library 2020). Since 1984, seven such framework programs have been funded and implemented, and the eighth FP8 is currently under way. Tens of billions of euros are spent every time. For example, the Seventh Framework Program for the establishment of the Joint European Scientific Centre for Non-Nuclear Research has allocated a budget of 1.751 billion euros (3.46). And the eighth – Horizon 2020 (English HORIZON 2020, abbreviated name H2020) – is the largest EU framework program for financing science and innovation with a total budget of about 80 billion euros, designed for 2014-2020 (Atabekova and Gorbatenko 2017; Pylypenko 2020a; Pylypenko 2020b; Rozhnova 2019).

One of the most important and fundamental framework projects that directly concerns digital culture was the project of the Commission of the European Communities MINERVA, which was implemented in the fifth Framework Program 2002-2005 (The Minerva Portal... 2001). The aim of the project is – network interaction between the ministries of culture of European countries to coordinate and strengthen the digitisation of cultural and scientific heritage. This project received its continuation and development in the draft of the sixth MINERVA PLUS Framework Program. The MINERVA and MINERVA PLUS projects are a concrete mechanism for the implementation of the Lund Principles. Within the framework of the MINERVA project, networking was organised by the ministries of culture of European countries to coordinate national programs for the digitisation of cultural and scientific heritage, to discuss, coordinate and harmonise digitisation activities, to create an agreed pan-European platform, recommendations and digitisation techniques, standards and metadata to ensure long-term access and preservation information from culture and science. In addition, during this period, within the framework of the Sixth EU Framework Program, the BRICKS Project (Building Resources for Integrated Cultural Knowledge Services) (2004-2007) was adopted – an integrated project that brings together 24 partners (academic research institutions, museums and libraries, public and private organizations) and is supported by the IST program of the 6th Framework Program of the European Commission (Building Resources... 2003). The project actually plays the role of European Digital Memory, in

which collections of multimedia digital documents from various fields of knowledge will be available to all users (Atabekova *et al.* 2019; Magsumov *et al.* 2019a; Magsumov *et al.* 2019b; Sabirova *et al.* 2018; Tugarova 2019).

BRICKS is an integrated system that has provided functionality for the next generation of digital libraries, digital museums, digital archives and other digital storage systems. BRICKS's mission is to create, develop and maintain a space for sharing knowledge and resources of the cultural heritage domain. The program is aimed at strengthening and developing the role of art in digital libraries, implies an open distributed infrastructure and maximum use of information resources, and the rejection of a centralised infrastructure. The main goal of the project is to develop an infrastructure capable of integrating cultural resources and services from different countries. The BRICKS information system is based on open standards and open source software and invites a wide range of cultural institutions to cooperate. To manage such a complex set of services, BRICKS provided users with a specific set of scenarios and pilot projects and services, balanced in the way they operate in a digital context (Bakhmat *et al.* 2019; Bakhmat *et al.* 2020; Sakulyeva 2020; Samarin *et al.* 2019; Tolochko 2019).

It is worth noting the effective cooperation between the EU and UNESCO in the development and implementation of international policy in the field of culture and the cultural process, in particular, in the project of a special conference “Soul of Europe”, which was announced at the First Berlin Conference of the EU in 2004, which prompted the creation of a group of initiators of the conference “Soul of Europe” for a more intensive use of European culture for the benefit of the European community, which included leading public figures, prominent politicians, in particular members of the European Parliament, famous cultural figures and scientists. At the same time, the tasks of finding the foundations of European identity in the field of economics and culture were set. It was recognised that Europe can achieve success only if a higher goal is formulated and achieved than economic prosperity, which will be based on universal human values and ideals in order to become a real community of Europeans, use its cultural potential, cultural heritage in order to show their strengths and contribute to successful internal development. At the second Berlin Conference of the EU in 2006, the potential of culture and the possibility of effectively using its strengths and

in different aspects were examined (Berlin Conference 2006):

- the European idea (the principles and values on which Europe was formed and on the basis of which Europe is developing; the ultimate goal to which it strives; the degree of Europe's importance; the path of the European community development);
- internal order: ("civilisation" of Europe arose in the process of establishing the principles of democracy, the rule of law and a peaceful EU);
- the foreign policy through which Europe presents itself to the world (a concrete contribution that can be presented based on the European cultural experience and competence of Europe);
- structural and financial policy (the use of cultural in politics for the benefit of European regions).

Therefore, a particularly important point of the 2006 Berlin Conference was the decision of the EC members to start a dialogue on cultural components within the framework of specific policy areas and the association of equal partners, to involve four types of partners in cooperation:

- organisations aimed at accelerating the development of Europe and ensuring support from European citizens;
- organisations whose purpose is to develop and improve the status of the cultural achievements of Europe;
- state structures that work for the benefit of Europe and its culture, having national or international powers for this;
- private organisations and structures committed to the European idea in the framework of various activities.

The European Union has appealed to the states of the continent with an appeal to support the revitalised "Berlin Process". It was suggested that the chairpersons of parliaments, ministers for Europe and culture, chairmen of committees on European affairs and culture of national parliaments "every two years provide reports on the status of the Soul of Europe Initiative, which offer guidelines and suggestions in the field of their activities, cover exchange of ideas on further development, it is planned to organise

monitoring of the development of cultural components in political strategies every two years". In parallel, in 2005, a global international project "World Digital Library" (World Digital Library 2020) was born at the UN. The submission of digital copies published by various publishers in Internet resources was accompanied by the signing of special agreements on digitisation between various leading libraries of the world with Google, in full compliance with copyright. In 2007, the EU adopted the Seventh Framework Program for Research, Technological Development and Demonstration (2007-2013). This program was the next step towards the creation of a single European scientific space (Semenycheva *et al.* 2020; Makushkin 2019a; Makushkin 2019b; Seitova *et al.* 2018; Boichuk 2019).

As a result of the implementation of these agreements, in March 2010, the EU approves a new, eighth, European strategy for economic development for the next 10 years – "Europe 2020: a strategy for smart, sustainable and inclusive growth", with the aim of achieving high rates of intellectual, sustainable and inclusive economic growth, which should ensure Europe's leading position in the competition in the international market. In addition, the new EU development strategy until 2020 contains a targeted initiative (Innovation Union), complemented by other innovation-related initiatives such as Digital Agenda (Digital Agenda – digital challenges), a project to identify priorities in information and communication technologies to promote innovation, competitiveness and growth of the digital economy), An Industrial Policy for the Globalisation Era (industrial policy in the era of globalisation) and An Agenda for New Skills and Jobs (the task of developing new skills and new professions). Individual issues of the development and harmonisation of digital resource technology were resolved, in particular those related to the standards of description and information exchange. The European Commission for Communication Networks, Content and Technology (Directorate General for Communications Networks, Content & Technology – DG CONNECT) has identified the main priorities and recommendations in the field of digitisation (Communications Networks... 2020).

The main goal was to digitise and preserve the cultural memory of Europe. The latter includes works of print (books, magazines and newspapers), photographs, museum items, archival documents, audio-visual materials, monuments and archaeological sites (hereinafter "cultural material"). Among the tasks

is the expansion of access and the use of cultural material as a social asset. Europe 2020 noted that public funding should ensure equal access to cultural material. The use of common standards and permanent identifiers from digitisation, defined by the strategy in cooperation with cultural institutions, should be promoted in order to ensure interoperability at the European level (Mamadaliyev *et al.* 2020; Mansurova *et al.* 2018; Shandruk *et al.* 2019).

The recommendations suggested the development of national strategies for solving financial, organisational and technical problems, and sometimes also strategies for updating legislative provisions in the field of creating an integrated cultural resource, long-term storage of digital materials, ensuring the possibility of multiple copying and migration of digital cultural materials by government institutions in order to preserve in full compliance with European and international legislation in the field of intellectual property rights. Also, attention was focused on the implementation of the necessary measures for the transfer for storage of materials created in digital format in order to guarantee their long-term preservation, and the like.

It is necessary to mention the European project ATHENA, initiated by the partners of the MINERVA project, implemented within the framework of the eContentplus program. The ATHENA project covers 20 EU member states + 3 observers from countries outside the European Union, more than 100 museums and other cultural institutions and 20 European languages. This project was coordinated by the Italian Ministry of Cultural Heritage. Objectives of the ATHENA project:

- to strengthen, support and stimulate the participation in the European Digital Library Europeana of museums and other organisations and institutions that preserve cultural heritage that are not yet fully involved in this activity;
- to develop a set of tools, recommendations and methodological materials on multilingualism and semantics, metadata and thesauri, data structures and intellectual property rights that can be used by museums both for their own digitisation activities and for the integration of museum collections into the European digital library Europeana;
- to identify digital and information resources of European museums;

- to promote the integration of information resources of various sectors of cultural heritage, collaborating with other projects directly dealing with libraries and archives in order to include a variety of content in the European Digital Library Europeana;
- to develop a technical infrastructure that will ensure semantic compatibility with the European digital library Europeana.

The ultimate goal of the ATHENA project (2016) is to unite all stakeholders and owners of information resources in Europe, to assess and integrate the standards and tools necessary to enrich and expand Europeana content, and as a result, to provide the user with access to the rich and diverse cultural heritage of all of Europe. The contribution of the ATHENA project to the reference publication "Digitisation: a landscape of standards for European museums, archives, libraries" prepared by the working group and published in 2009 cannot be overemphasised. The text of this publication is part of the report of the ATHENA working group and is based on the analysis of information resources sent at Europeana, using the services developed by the ATHENA project. The brochure provides definitions of the basic concepts associated with the standards, and then, according to a certain scheme, describes international metadata standards, formats for presenting multimedia information, information transfer protocols, coding standards used in cultural institutions, archives, libraries, museums that provide their resources for Europeana. ATHENA worked closely with other projects, in particular the European Network of Digital Libraries and MICHAEL, focused on the development and development of Europeana content (Michael Culture Association 2007). The MICHAEL Association allows finding and researching digital collections from museums, archives, libraries and other cultural institutions from all over Europe of any nature. If a person is interested in art or archaeology, history of a kind or holiday planning, Romans or modern history, MICHAEL can show what is available on its portal (Barabanshchikov *et al.* 2016; Matyushenko *et al.* 2018; Shormakova *et al.* 2019).

Another important European research project is DC-NET – Digital Cultural Heritage NETWORK (2009) – an ERA-NET (European Research Area Network) project funded by the European Commission under the E-Infrastructure – Capacities FP7 program. DC-NET – Digital Cultural Heritage NETWORK is an ERA-NET (European Research Area Network) project. The main

goal of the DC-NET is to develop and strengthen the coordination of public research programs among European countries in the digital cultural heritage sector. The ministries of culture of different countries took part in it, having approved a preliminary joint plan of activities, holding seminars, meetings and presidential conferences dedicated to contacts of digital cultural heritage with technological research and suppliers of electronic infrastructure in Europe. The project also aims to create the ECB. It began on December 1, 2009 and ended on March 31, 2012. At the final conference in March 2012, "European Commission activities on electronic infrastructures: current state and vision for Horizon 2020", final reports were made, revealing the improvements to the draft, and recommendations, in particular, regarding the opportunities for the cultural sector to use the results of the project, in particular the accumulated digital rights and digital culture (Shtal *et al.* 2018; Shtal *et al.* 2019; Hladky 2019; Zhuravel and Kurumisawa 2019).

Today the EC is implementing the idea of a single digital market, stating that "the Internet and digital technologies are transforming our world. But existing barriers to the Internet mean that citizens are losing information on goods and services, Internet companies and companies that start out have limited prospects, and businesses and governments are unable to fully utilise digital tools. The time has come to make a single European market fit for the digital age – to break down the regulatory walls and move from 28 national markets to a friend." It is also worth emphasising that since 2016, issues of the quality of digital resources have come to the fore in the formation of integrated content before quantitative indicators. More and more countries are participating in the implementation of comprehensive digital projects, and therefore, initiatives towards long-term preservation strategies, creating the necessary digital infrastructure, developing standards and protocols for data transfer, and developing the necessary legal mechanisms for the collection of digital materials in the field of cultural heritage are becoming extremely important. As part of the implementation of international projects for the creation of integrated electronic resources of historical and cultural heritage, legal issues turned out to be the most relevant, including in the direction of harmonising legal approaches to the problems of digitisation in different countries.

In addition to UNESCO, significant work in the field of improving intellectual property rights to content in the digital age has been carried out by the International

Federation of Library Associations and Institutions (IFLA) and the Association of European Research Libraries (LIBER), which took part in the development of The Hague Declaration on the Discovery of Knowledge in the Digital Age and the roadmap (The Hague Declaration... 2015). LIBER monitors and oversees the preparation of signatures to the Declaration and the implementation of the Roadmap. practice, legislative reform in the field of copyright and intellectual property, and the development of policies and infrastructure for open access to knowledge contained in digital content. It states that intellectual property laws that originated in the pre-digital period and in the period of the Internet limit the use of scientific methods for the intellectual analysis of digital content (for computer analysis of content in all formats). These factors also create inequalities in access to open knowledge in the digital age. Computer analysis of content in all formats, that is, content mining, provides access to undiscovered public knowledge and provides information on all important aspects of economic, social and cultural life (Barashkin and Samarin 2005; Melnichuk *et al.* 2020; Soloviova 2020a; Soloviova 2020b; Kaplina 2019).

The work of the IFLA special commission in the field of copyright is important. Because copyright affects the interests of libraries and users, in 2000 IFLA management announced "The IFLA Position on Public Lending Right" (The IFLA Position... 2001), which advocates a balance between copyright and the user's right to access information regarding content of a digital resource for research and cultural purposes. The idea of balance should be realised both in law and in copyright. Following the adoption of the EU Memorandum "Fundamental Principles on Digitisation and Access to Non-Commercial Works" in 2011, 14 EU countries have already provided mechanisms in their legislation to facilitate digitisation and online access to non-commercial works (for science and education) outside of the EU Memorandum "Basic Principles Concerning Digitisation and Access to Works without Commercial Use" (Memorandum of Understanding... 2011). Most EU countries have clear provisions in their national copyright or archival laws that allow government agencies to duplicate digital cultural material in order to preserve it. In addition, European countries (for example, the United Kingdom) have adopted legislation at the state level obliging publishers to supply national cultural institutions with legal deposit copies of digital cultural materials (digital-born cultural materials) along with a copy of a computer program or

any information necessary to access digital resource (Beljatynskij *et al.* 2010; Melnyk *et al.* 2019; Starikov *et al.* 2011; Bespalko 2019).

An important step towards solving legal problems was the EU Directive 2012 on the digitisation of documents of undetermined origin (orphan works), which defines the general rules for the digitisation and online display of such documents. Books, newspaper and magazine articles and films, which until this time were protected by copyright, but whose authors or other copyright holders are unknown or not available for copyright permission, documents of undetermined origin. Therefore, the resources cannot be considered public domain without this Directive. Also, the Open Access policy, the recognition of documents in the public domain, and the distribution of documents based on Creative Commons legal licenses, which provide tremendous benefits to both users of scientific development and authors of scientific publications, are important for organising access to digital resources (UNESCO Digital Library 2020). Using the Creative Commons (CC) Creative Community Licensing Principles in pictorial iconography allows informing about the terms of access to the relevant documents (copyrighted items). The Creative Commons licensing model was used as the basis for agreeing the legal terms for the delivery of data to the integrated resource Europeana, based on an open access policy. To ensure the correct use of digital objects by almost all countries working on national digitisation projects and participating in international digital initiatives as an obligatory element in the databases of digital historical and cultural heritage, information on the legal status of the digital resource was introduced (Bieliatynskiy *et al.* 2018; Natolochnaya *et al.* 2020a; Natolochnaya *et al.* 2020b).

In the course of the implementation of large-scale digitisation projects in almost all countries, problems arose in the organisation of universal free access to digitised materials (public domain status). In the direction of explaining the importance of open access to historical and cultural heritage and the possibility of reusing digital content, the governing bodies of the national digitisation programs held a number of events and training seminars, at the state level, relevant resolutions were adopted on the legal status of digital objects of national cultural heritage intended for free use for science and learning. It was noticed that some cultural heritage institutions, especially museums and archives, are still hesitant to freely distribute digital copies of materials from their own funds. The European

Commission's recommendations also aim at the free using of digitised public domain material by adopting measures to restrict the use of intrusive watermarks or other visual protective measures that impair their usability. In the EC report for 2012-2015. "Cultural Heritage: Digitisation, Online Access and Digital Preservation (2013-2015) (European Commission... 2019), it is noted that most European libraries and archival institutions, in addition to digitisation and digital preservation programs, also provide free online access to digital public domains. In most cases, resource descriptions and downgraded materials are provided free of charge, high quality original master copies and services for reusing digital resources are paid. In five EU countries (Austria, Czech Republic, Spain, Poland, Slovakia), the condition for obtaining state funding for digitisation projects is the provision of free access to digital objects by cultural institutions through the Europeana portal, for which work was carried out to agree on the use of a standardised metadata format and controlled vocabularies, international digital identifiers (Bogaevskaya *et al.* 2020; Nechyporenko *et al.* 2019; Stepanchuk *et al.* 2017).

European countries provide a wide range of long-term conservation strategies or schemes (in exceptional cases) with the creation of a specialised body that manages the digitisation process (Germany, Sweden). A growing number of countries are reporting the development of clear provisions for the preservation of cultural digital materials or specific mechanisms for the long-term preservation of digital materials. Progress has also been seen in the area of web content preservation. Most European countries have long-term conservation strategies that are being developed at national, regional or institutional levels, some of which have already developed operational plans to implement these strategies.

## CONCLUSIONS

Over the past 10 years, significant progress has been made towards the digitisation of the historical and cultural funds of libraries, archives and museums in European countries. This applies to areas such as planning for digitisation and coordination, accessibility and reuse, bringing copyrighted content to the Internet, or long-term preservation of digital cultural heritage. Despite the progress, the overall picture of the digitisation of the cultural heritage of Europe remains fragmented and heterogeneous, depends on the initiatives or funding of cultural institutions, interdepartmental inconsistency. The only agreed upon



criteria of historical and cultural heritage is the chronological decision to digitise documents before 1700. And for all countries it is an unconditional constant criterion. However, even this task on a global scale cannot be quickly implemented.

Despite progress in some areas (such as provisions to prevent over-watermarking of property or visual protections), barriers still exist for publicly available content on the Internet. Watermarks, poor quality metadata or permissions, or regulatory constraints (such as cultural heritage protection laws) still stand in the way of wider as well as reuse of these materials. Significant progress has been made in promoting the online availability of copyrighted material. However, there remain wide variations in national legal mechanisms that impede mechanisms for multiple copying (reformatting) and long-term preservation of digital cultural material. It is worth noting the effective cooperation between UNESCO and the EU in the development and implementation of international policy in the field of culture and the cultural process, in particular in the “Soul of Europe” project, which was the first step towards a qualitatively new development of the European Union, aimed at holding biennial conferences on the integration of culture.

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