

FaR 2021**International Forum “Freedom and responsibility in pivotal times”****DIGITALIZATION OF THE CULTURAL HERITAGE OF THE
INDIGENOUS PEOPLES OF THE ARCTIC**

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Abstract

The article is devoted to the scientific rationale and issues of practical implementation of the Arctic Council project "Digitalization of the linguistic and cultural heritage of the indigenous peoples of the Arctic". The project was submitted to the Sustainable Development Working Group (SDWG) of the Arctic Council by International UNESCO Chair at M.K. Ammosov North-Eastern Federal University in June 2020, and on October 26, 2020, it received the status of an Arctic Council project. The project aims to collect information and materials on the traditional knowledge of the indigenous peoples of the Arctic. The unique character of spiritual traditions, intellectual resources of the indigenous peoples of the Arctic, who managed to find special mechanisms of co-evolution with nature, represent a unique experience that is of interest to other civilizations and peoples. At the same time, the deepening processes of globalization, anthropogenic impact on the environment, active industrial development have a destructive effect on the original habitat and traditional way of life of the indigenous peoples of the Arctic. All this leads to the fact that the peoples of this group are on the verge of complete assimilation and cultural extinction. The number of native speakers of these languages is reducing every day. This project envisages the use of modern digital technologies for the preservation and development of indigenous languages and cultures, as well as their presentation on the uniform multilingual portal www.arctic-megapedia.com, which will center the traditional knowledge of the indigenous peoples of all Arctic countries.

2357-1330 © 2022 Published by European Publisher.

Keywords: Globalization, the Arctic, Internet, multicultural environment, indigenous peoples of the Arctic



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1. Introduction

Each person is brought up in a certain environment, the most important components of which become an integral part of this person's worldview, as a member of a certain community. Any national culture can be characterized as a certain way of thinking and acting, a way of spiritual perception of reality, which can be described using parameters such as awareness of oneself and one's environment, attitude to time, language, clothing, food, behavioral norms, etc. Any culture or cultural environment of people is a way of adapting to the existing physical, social and biological environment.

A prerequisite for the effectiveness of communication between representatives of different cultures is the understanding of other cultural values, feelings and ideas. The first step to understanding and recognizing existing cultural differences is to develop cultural tolerance and become aware of the complex phenomenon of culture and its constituents, as it gives people a sense of identity, especially in terms of awareness of human behavior and recognized values. Knowledge of culture allows you to look at its representatives from the inside and apply a certain set of rules and etiquette in accordance with national or local traditions, norms, habits. The ability to learn and show respect towards others is an important part of successful communication in any country (Zvyagintseva & Valihahametova, 2014).

The ideas of multiculturalism have deep historical roots. Thoughts about the need for the development of a child's personality in a multicultural environment were developed in the philosophical and educational works of Disterweg A., Comenius J. A., Pestalozzi J. H., Makarenko A. S., Sukhomlinsky V. A., Ushinsky K. D. and others. Modern teachers also pay great attention to the concept of multiculturalism.

According to Bondarevskaya (2010), "multiculturalism" is the creation of various cultural environments where human development will be carried out, and where he/she will gain experience in culture-congruent behavior and he/she will be supported in cultural identity and self-realization of creative potential and abilities.

The multicultural approach was discussed in the works of such researchers as Banks J., Grant K., Gukalenko O. V., Kuzmina N. V., Makurin I. Y., Suprunova L. L., Young P. and others. In light of the current trends of globalization and Russia's integration into the world economic, political, cultural and information space, these ideas must find their application.

According to the German scholar Mitter (1993), "multicultural education, therefore, can be conceived as an interpersonal relationship, i.e. as the network of educational processes (including their foundations and results), characterized by the coexistence of children (and also adults) of different cultural descent and environment" (p. 45). The ideas of the German colleague are supported by the Russian scientist.

Suprunova (2011) noting that the goal of multicultural education ... is to form a person capable of effective life in a multinational and multicultural environment, with a developed sense of understanding and respect for other cultures, the ability to live in peace and harmony with people of different nationalities, races, beliefs. (p. 87)

Analysis of pedagogical literature (Bessarabova I.S., Dzhurinsky A.N., Dmitriev G.D., Makaev V.V., Malkova Z.A., Palatkina G.V., Suprunova L.L., and others) made it possible to reveal that the multicultural approach contributes to the creation of a multicultural environment, which is designed to educate professionalism in cultural identification through dialogue, cognition, creation and involvement with national and common human culture.

Based on the academic literature, it is possible to identify some of the objectives of the multicultural approach, such as:

1. actualization of dialogue and interaction of cultures;
2. contrastive proficiency in education in modern languages;
3. creative feasibility, preservation and creation of new professional and linguistic values;
4. fostering respect for the history and culture of other peoples;
5. creation of a multicultural educational environment as the basis for the interaction of an individual with other cultures.

It seems that the multicultural aspect of modern civilization can become a powerful humanistic paradigm of multicultural dialogue based on the ideas of pedagogical tolerance. From the point of view of multiculturalism and tolerance in the philosophical aspect at the present stage, Kemerova and Khomyakov (2003) formulated the following principles of tolerance:

- Tolerance is one of the main universal values of modern society;
- The universality of tolerance is associated with the deepening of globalization on the one hand and the desire to preserve national identity on the other;
- Tolerance has acquired the status of a global socio-cultural problem;
- The need to accept the pluralism of the modern multicultural world, which requires the development of pluralism of tolerance paradigms.

The rapid development of the Internet and mobile communications have become the basis of a new environment for multicultural communication and education in the global information space. The virtual environment is becoming the basis for dialogue and interaction of civilizations, cultures, religions, and which will determine the worldview of generations of the new century and their sustainable development.

Today, in the context of the formation of the information society, it is necessary to pay special attention to the emerging contradictions between the global processes of the formation of the information society and the preservation of the national identity of any, even the smallest people. One of such contradictions, as noted in (Siganatulin, 2006), is the clash of globalization and national identity. Information and communication technologies (ICT), especially the Internet, on the one hand, contribute to the development of globalization processes and the erasure of cultural and linguistic diversity, but, on the other hand, they play an integrating role in creating a new world order, open up new opportunities for representation in the world information space of all peoples, contribute to the preservation of languages and cultures of different ethnic groups.

2. Problem Statement

The indigenous peoples of the Arctic are the creators and keepers of a unique human culture and form an important part of modern world civilization. The inhabitants of the North and the Arctic have for

many centuries mastered the Arctic landscapes, adapted to extreme climatic and natural conditions, developed their own distinctive culture and lived in harmony with nature, without violating and preserving the ecology of the vulnerable northern nature. However, in the conditions of globalization and industrial development of the North, they, like no one else, are experiencing the challenges of modern society: the deepening processes of globalization, anthropogenic impact on the environment, active industrial development of their native habitat, all of which have a devastating effect on the traditional way of life. The rapid processes of globalization and industrial development of the North have led to the fact that these peoples are on the verge of an ethnic crisis, which threatens the unity of ethnic characteristics (language, culture, way of life, traditional lifestyles: reindeer husbandry, hunting, fishing).

In this regard, it is necessary to pay serious attention to these processes and to intensify activities for the preservation and development of languages and traditional culture. At the present stage of scientific and technological progress, information and communication technologies (hereinafter - ICT) can play an important role in the preservation and development of languages and culture. The objective of our project is to use the capabilities of modern ICT to preserve and develop the linguistic and cultural diversity of the indigenous peoples of the Arctic.

3. Research Questions

In the last decade, the international community has been paying great attention to the problems of long-term preservation of digital heritage and ensuring access to it. A significant number of programs and projects are being implemented, both at the international level and in individual countries. Thus, UNESCO adopted in 2003 the "Charter on the Preservation of Digital Heritage" and the "Guidelines for the Preservation of Digital Heritage" developed by the National Library of Australia. Preservation of information is one of the priorities of the UNESCO Information for All Program (IFAP) for 2008-2013. The Commission of the European Community finances a number of large-scale projects for the preservation of digital heritage (DPE, CASPAR, PLANTES, LiWA, PROTAGE, SHAMAN, KEEP, PrestoPRIME, etc.). The Internet Archive www.archive.org collects, preserves and provides access to Internet resources on science, culture and education since 1995.

The preservation of endangered languages and cultures of indigenous peoples of the North on digital media is of the greatest relevance. Digital cultural heritage will include information resources on language and culture, both created as a result of digitization on traditional media, and materials immediately created in digital form. These are texts, static and moving images, 3D images, audio files, databases, software, web pages, portals, websites, electronic publications, etc., created in a variety of formats. The purpose of preserving digital objects is to ensure the long-term (or eternal) availability of digital materials, while preserving all the semantic and functional characteristics of the source materials, search capabilities, presentation and interpretation.

Documenting contemporary linguistic and cultural heritage in verbal and non-verbal forms will be carried out within the framework of documentary linguistics, taking into account ethical and technological considerations, in order to ensure a long-term positive impact on the revitalization and sustainable development of the indigenous peoples of the Arctic. Technological aspects will be enhanced by basic language technologies developed for a number of Arctic languages within the framework of the University

of the Arctic Thematic Network on Language Documentation and Language Technologies for Circumpolar Region, which is the basic technological support for existing orthographies, including a standardized UNICODE-based character storage and keyboard. The presented project is based on the fundamental principles of sustainable development and guidelines set out in the documents of the UN Conference on Environment and Development (Rio de Janeiro, 1992), the decisions of the World Summit on Sustainable Development (WSSD) (Johannesburg, 2002). The project takes into account the initiatives of the Arctic Council, the Northern Forum and other international organizations whose activities are aimed at promoting sustainable development and environmental protection of the Arctic region.

The project will be implemented in accordance with the following documents:

- UNESCO Universal Declaration on Cultural Diversity, which states that, as a source of exchange, innovation and creativity, cultural diversity is as necessary for humankind as biodiversity is for nature.
- The main documents of the World Summit on the Information Society (WSIS) (Geneva, 2003, Tunis, 2005) and the WSIS Concepts for the period after 2015 (WSIS+10, Geneva, 2014), which emphasize the importance of preserving cultural and linguistic diversity;
- Guidelines for the policy of improving state information that is in the public domain of the Russian Committee of the UNESCO Information for All Program (UNESCO, Paris, 2004), which emphasize the importance of reducing the "digital inequality".
- The project corresponds to the following thematic areas of the Sustainable Development Working Group (SDWG), reflected in its Strategic Framework Document:
- Heritage and culture of Arctic communities: deepen global understanding of the region's peoples, cultures, traditional ways of life, languages and values and promote traditional and local knowledge. Sustain and celebrate Indigenous languages, traditional lifeways and practices, including knowledge about traditional diets and food security. Support the identification and promotion of heritage sites and areas of particular cultural significance in the Arctic.
- Science and research for sustainable development: facilitate good use of the Arctic region's research institutions and extensive intellectual resources to benefit sustainable development, including through academic exchanges and joint Arctic research.
- Reduction/elimination of inequalities: strengthen and promote the adoption of sound policies for the elimination of inequalities based on age, sex, disability, race, ethnicity, origin, religion or economic or other status at all levels

The project also corresponds to international initiatives dedicated to the problems of multilingualism in the world (proclamation by the UN General Assembly of the International Year of Indigenous Languages (2019) and the International Decade of Indigenous Languages (2022-2032).

In the project, the role of indigenous peoples in the implementation and monitoring of the achievement of sustainable development goals in Russia is important. It is by changing their lives that it will be possible to talk about the effectiveness of the measures taken. The project also provides for the sustainable development of all indigenous peoples living in the Arctic zone of the world. It should be noted that the unstable situation of indigenous peoples makes it necessary to ensure their full participation in this

process. Therefore, first of all, it is necessary to monitor indicators of sustainable development in the context of indigenous peoples. This will allow us to assess the effectiveness of their implementation and adjust government policy.

According to the implementation of the SDGs within the framework of this project, the following can be distinguished:

SDG 3 - Ensure healthy lives and promote well-being in the Arctic.

SDG 4 – Ensure inclusive and equitable education not only in official language, but also in native languages that are on the verge of extinction.

SDG 10 - reduce digital inequality in education and access to information between majority and minority peoples.

SDG 13 - Study and prevention of the consequences of climate impact in the Arctic.

SDG 16 - creating a peaceful and open educational environment on the Internet, with access to educational and legal resources and increasing the level of protection of the legal status of the indigenous peoples of the Arctic.

SDG 17 - The UNESCO Chair of NEFU organizes a global international partnership on a wide range of issues related to strengthening sustainable development (University of the Arctic, the Northern Forum, the International Arctic Association of Social Sciences (IASSA), the European Polar Council, etc.)

4. Purpose of the Study

Creation of a public multicultural educational environment on the Internet based on uniform multilingual Arctic portal www.arctic-megapedia.com for the preservation and development of the languages and culture of the indigenous peoples of the Arctic.

5. Research Methods

To implement the project, general scientific and philosophical research methods (classification, survey, observation, analogy, analysis and synthesis, hypotheses, text analysis, determinism) and the following sociological research methods will be used: poll, survey, expert poll, focus group, interview, sociometry, as well as methods of culturological research (evolutionary, diachronic, typological, semiotic, structural and functional), as well as analysis of the capabilities of modern ICTs to achieve this goal.

6. Findings

In order to solve this task, M. K. Ammosov North-Eastern Federal University has been working since 2011 to integrate the languages and cultures of the indigenous peoples of the Arctic into the world information space. The implementation of this project was initiated under the Development Program of the M. K. Ammosov North-Eastern Federal University "Program for the preservation and development of languages and cultures of indigenous peoples of the North on digital media and in Cyberspace" (Kuzmin & Plys, 2008; Zhozhikov & Zhozhikova, 2013). Expeditions were organized to record information about the indigenous small-numbered peoples of the North on digital media (the Republic of Sakha (Yakutia) (Evens, Evenks, Chukchi, Yukaghirs and Dolgans), to Chukotka (Chukchi, Eskimos), Kamchatka

(Koryaks, Itelmen) and Khabarovsk Krai (Nanais, Negitals and Udege)). Unfortunately, it has not yet been possible to cover all indigenous peoples, but in the near future it is planned to present on the portal all the indigenous peoples of the Far East, and in the long term all indigenous small-numbered peoples of the North, Siberia and the Far East. As part of the expeditions, recordings of almost disappearing native speakers of the language and members of culture were made, materials available were collected. All this information is gradually placed on uniform portal of the indigenous small-numbered peoples of the North www.arctic-megapedia.ru. In addition, a Facebook group of indigenous small-numbered peoples of the North has been created on the basis of the Arctic Portal, where an environment for the exchange of information and communication of indigenous small-numbered peoples of the North is also being formed.

The collected material is used in two directions:

Creation of digital educational multimedia DVDs on the language and culture of the indigenous small-numbered peoples of the North;

Creation of a public multilingual portal of indigenous small-numbered peoples of the North www.arctic-megapedia.ru

The end result of this project is to achieve that uniform portal of the indigenous small-numbered peoples of the North, www.arctic-megapedia.ru, becomes an accessible information, multicultural educational environment for all indigenous small-numbered peoples of Republic of Sakha (Yakutia) and Khabarovsk Krai (territory) (Evens, Evenks, Yukagirs, Chukchi, Dolgans, Nanais, Udege, Negital, Nivkh, Ulchi and Orochi). The long-term result of this project is that uniform portal of the indigenous small-numbered peoples of the North will become an accessible information, multicultural educational environment for all indigenous small-numbered peoples of the Far East, and subsequently all indigenous small-numbered peoples of the North, Siberia and the Far East of the Russian Federation, as part of a single global multicultural information space. In general, a multicultural environment of the 21st century should appear in the global information space, allowing for a dialogue of civilizations and intercultural cooperation.

The future of Russia may depend on the successful implementation of these tasks. Will the process of plunging into the abyss of lack of culture, disappearance of small languages and ignoring the processes of integration into the global world on the principles of equality continue? Perhaps, the country has a chance to become a nation of highly cultured people capable of joining the global information space with a multicultural environment of communication in all spheres of activity: political, economic, cultural and spiritual life of society.

Today, in the context of expanding globalization, it is necessary to pay special attention to the problems of preserving the languages and cultures of the indigenous peoples of the North and the Arctic, their ethnocultural identity. The main instrument of integration into the world information space today is the global Internet. The Internet provides tremendous opportunities for users to ensure freedom of expression, education, preservation and development of culture, spirituality and languages. However, a very serious problem is that today it is possible to obtain information and services on the Internet only in the dominant languages.

Thanks to the creation of uniform international portal www.arctic-megapedia.com, the indigenous peoples of the North and the Arctic will be able to actively participate in information exchange and will

have the opportunity to present their information both in their native and other languages of international communication, to preserve their culture and language. The database accumulated on the Arctic multilingual portal will become the basis for studying the history, culture and languages of all indigenous peoples of the Arctic. The project will support the potential of the indigenous peoples of the Arctic themselves, who could contribute to the digitalization of the linguistic and cultural heritage of their people. All indigenous peoples of the Arctic will be represented on a single portal. This tremendous potential of the experience of the traditional way of life in the Arctic, along with linguistic and cultural heritage will become the basis for improving the quality of life of the inhabitants of the Arctic. Using the information available on the portal, the indigenous peoples of the Arctic will be able to adopt and adapt the experience of peoples living in similar environment. Representatives of peoples who have lost their linguistic and cultural connection will be able to restore it on a personal and family level, and even return to their native language environment, culture, traditional way of life, ensuring the preservation and development of an ethnic group as a whole. The main potential of the project will be youth who are proficient in modern ICT. They will participate in the creation of information resources about their people, their kin and will join their native culture and will begin to communicate in their native language.

As a result of the implementation of the project, the indigenous peoples of the Arctic will benefit, who, while maintaining their language, culture and traditional way of life, will contribute to the sustainable development of their people, as well as contribute to the development of the Arctic with their knowledge and experience. The indigenous peoples of the Arctic live practically throughout the entire Arctic, have different nationalities, languages and distinctive cultures, but they have a lot in common. These are the harsh climatic and natural conditions, sparse population, remoteness and similar traditional livelihoods (reindeer husbandry, hunting and fishing). The project is focused on a specific target group - indigenous peoples living in the Arctic and sub-Arctic territories. As a result of the implementation of this project, all of them will benefit in the sense that they will digitally preserve the language and unique culture of their people, will exchange experience and traditional culture with other indigenous peoples of the Arctic, which will be very useful for all of them, as well as for future generations and persons who study their language and culture, as well as their traditional livelihoods. Within the framework of the project, electronic textbooks, dictionaries, phrasebooks and much more will be created, which will contribute to the preservation and development of the languages and culture of the indigenous peoples of the Arctic. The partners' contribution will consist in providing information about the indigenous peoples of the Arctic living in their territories, financial support for organizing expeditions and creating unique photos and videos on the linguistic and cultural heritage of the indigenous peoples of the Arctic of their country. Responsibility for research and information content, as well as financial support should be assumed by each country under the flag of a single project of the Arctic Council.

The distribution of responsibilities of the co-implementing countries of the project will be carried out as follows:

Each country will be obliged to provide comprehensive information on the indigenous peoples of the Arctic living in their country, according to the formulated and coordinated questionnaires. The largest number of indigenous peoples of the Arctic live in Russia, Canada and the USA. In this regard, the most extensive work will be carried out in these countries to collect and search for information on indigenous

peoples for inclusion in the GIS map of the indigenous peoples of the Arctic. Countries where one or more peoples live, as a rule, have good practices in creating online phrasebooks, translators and language training programs. For example, Norway, Finland and Sweden could provide tangible assistance to the Finno-Ugric peoples living in Russia. Iceland, where there are no indigenous peoples, but has extensive experience in the use of modern information and communications technology, could provide assistance in this regard.

In general, to implement such a large-scale project, at the first stage it is necessary to assess the capabilities and available developments of each country and allocate the area of responsibility of each country.

As part of the preparation and implementation of the project, the UNESCO Chair of NEFU, together with Norwegian and Finnish scientists, became a co-author of the following grant projects:

The project "Arctic indigenous languages and revitalization: an online educational resource", which will be launched in 2021 jointly with the University of Tromsø, the Institute of the Peoples of the North at the Herzen State Pedagogical University of Russia, the Northern University and the Arctic Council Indigenous Peoples' Secretariat under a grant from the University of the Arctic. The result of the project – a GIS map will be part of the project "Digitalization of the linguistic and cultural heritage of the indigenous peoples of the Arctic" and posted on the portal arctic-megapedia.com.

"Joint production of knowledge between researchers and indigenous communities for adaptation to climate change", which is implemented jointly with scientists from Norway, Finland and NEFU (UNESCO Chair and the Institute of Natural Sciences) with grant support from NordForsk.

The project "Innovations in the field of food of indigenous peoples". The project manager is the Business School of the Northern University. The project is part of the Arctic Council EALLU Indigenous Youth, Food Knowledge and Arctic Change project. The Indigenous Peoples' Food Innovation project is linked to the Arctic Council's Arctic Food Innovation Cluster (AFIC) project. This project is also being implemented under a grant from the University of the Arctic. The UNESCO Chair of NEFU at the beginning of 2020 became the leader of the Thematic Network on Human Adaptation in the Changing Arctic of University of the Arctic. The aim of the network is to study the impact of climate change and globalization on the development of traditional industries of the indigenous population of the Arctic. The thematic network has an interdisciplinary focus, where human adaptation in the Arctic will be considered from the point of view of various sciences. The thematic network includes climate, environmental, sociological, cultural and linguistic studies that will assess the adaptation of indigenous peoples to climate change and globalization. The project aims to collect information and materials on traditional and local knowledge for subsequent presentation through appropriate tools in cyberspace. Circumpolar countries have the energy of socio-cultural stability in the form of a variety of cultural heritage relating to the ancient history of the life of the peoples living around the North Pole. And all this traditional and local knowledge will be integrated into this large comprehensive project, which will present the experience of indigenous peoples of all Arctic countries.

For example, ornamental art is used for the design of the portal. Video recordings of rituals or traditional dances, audio recordings of live speech, language, legends and tales, photography of clothing, housing and household items are used on the relevant sections of the portal for informational, educational

and scientific purposes. During the recording of ethnographic materials, cultural speakers increase their national self-awareness, the importance of traditional local knowledge grows in their eyes.

All information that will be published on the portal will be considered the property of the country or organization that provided this information. Only a limited audience will have access to confidential information. Each country or organization decides for itself which information should be considered confidential. UN bodies specializing in human rights have repeatedly pointed out the possibility and necessity of using the Internet as a tool that facilitates the realization of the right to freedom of opinion, education and other inalienable human rights in a democratic community. International and national organizations of states pay considerable attention to the development of tools for non-discrimination in relation to the Internet.

7. Conclusion

As a result of the project, traditional local knowledge will be preserved on digital media and in Cyberspace on a multilingual portal, which will allow anyone, at any time and from around the world, to access traditional local knowledge, learn about it, use it in their scientific research or in everyday life. The peoples of the Arctic were the first to settle the tundra and mastered the harsh lands covered with permafrost. The peoples of the Arctic were the first to settle the tundra and reclaim the harsh lands covered with permafrost. They have created unique cultures of reindeer herders, fishermen, trappers, hunters, farmers and the northernmost herders, adapted to extreme climatic conditions.

Thus, traditional local knowledge will not be forgotten or lost in time and can be used in modern conditions. The integration of the traditional knowledge of the indigenous peoples of the Arctic, gained through centuries of experience, with the results of scientific research on the development of the Arctic, including research on the impact of climate change and its consequences, can lead to significant results for sustainable habitation and human activity in the harsh conditions of the Arctic.

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