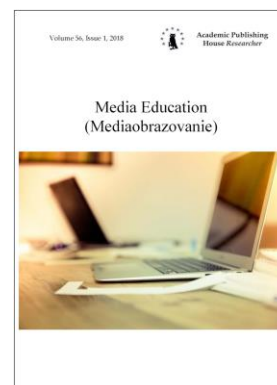




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The Organization of Ecological Education of Per-school Children by Means of Media Literacy Education: Theory, National Policy, Scientometrics and Vectors of Development

Alexey Demidov ^{a, *}, Timur Melnikov ^b, Anna Moskvina ^b, Andrey Tretyakov ^b

^a Russian Academy of National Economy and Public Administration under the President of the Russian Federation, Russian Federation

^b Moscow State Regional University, Russian Federation

Abstract

Modern world presents a system of digital segments of life that require theoretical consideration, experimental testing and forecasting. According to J.R. Heckman's theory, pedagogical community appears to be interested in investment attractiveness of preschool childhood problems. The duality of digitalization, media education and ecologization of young adults' lives has become the field for scientific search of the article. At present, the Russian Federation is experiencing a new digital impulse, which entails research into the impact of information and media technologies on the sociocultural and educational activities of all participants of educational relations.

Thus, from the standpoint of theory, national policy and scientometrics the article attempts to consider the phenomenon of environmental education of preschool children in the context of psychological, pedagogical, organizational and methodological opportunities of media education. The aim of the research lies in the identification of guidelines for the development of environmental education of preschool children in the media of kindergarten. To solve this goal, the article presents a historical and pedagogical analysis of the development of media education and its role in the formation of ecologically oriented consciousness of preschool children. The leading research method is scientometrics (webometrics and bibliometrics). The authors analyze and comment on professional discussions of domestic and foreign researchers about environmental and media education. Special attention is paid to the scientometric prognostic analysis of the documentary data on the environmental education of children on the base of media resources. The research directions of the problem of childhood ecologization study in a new sociocultural media reality are presented. The results of the study allow to form the concept of current state of children environmental education, its meaningful implementation in preschool educational organizations with the focus on media education opportunities.

Keywords: environmental education, media education, preschool children, pedagogical conditions, preschool educational organization.

* Corresponding author

E-mail addresses: aademidov@yandex.ru (A. Demidov), tmelnikov@inbox.ru (T. Melnikov), anna.moskvina@list.ru (A. Moskvina), altretyakov@list.ru (A. Tretyakov)

1. Introduction

Both environmental pedagogy and media pedagogy, environmental education and media education almost simultaneously arose more than half a century ago under the aegis of UNESCO and a number of other specialized organizations of the UN family, European and other national institutions. These institutional platforms are an alloy of several branches of scientific knowledge at the intersection of the natural sciences and the humanities, education and communication, otherwise, they are also systematically and complementary oriented towards the formation of an environmental and media culture of the individual and society. Their importance is growing critically in the conditions of the information society, knowledge societies, as well as permanent growth of environmental problems.

According to UNESCO normative documentation, media education is recommended to be implemented in the national curricula of all states, in the system of preschool, additional, non-formal and lifelong education. The idea completely coincides with the provisions of the Concept of long-term socio-economic development of the Russian Federation for the period until 2020 and the State Program of the Russian Federation Of the Federation “Development of Education for 2013-2020”, that highlights the necessity of media education in connection with the need to implement information in public life and telecommunication technologies. The documents state the need for non-formal and informal education development, as they present the concept of media education (Demidov, Fedorov, 2015; Minbaleev, 2007).

One of Russian authoritative scientists I.V. Wagner argues that the development of youngsters' ecological culture in the information society, as well as the intensity of informatization, greatly enhances the influence of the media on the processes of upbringing, socialization, and personality development (Wagner, 2012). The development of a specific communicative culture, different personal characteristics and sociocultural experience formation forwarded and became a basis of fundamentally new generation – the media generation. The erosion of educational boundaries under the influence of the media may soon lead, and in a number of issues had already led to the superiority of the media in influencing the development of the individual, including its cognitive sphere, and education resulting in a change of its essence and structure. The way to provide the positive nature of this process is to accelerate the development of the information space of childhood, focused on environmental values, creating conditions for the development of the information and environmental culture of the person, which, as an internal regulator of the subject's actions, can become the most reliable guarantor of environmental and information security, harmonizing relationships between human and nature (Pomerantseva, Syrina, 2017).

I.V. Wagner established the basis for scientific and applied understanding of the development and implementation of environmental education and children's education in terms of information era.

The scientific director of the Russian school of media literacy education A.V. Fedorov (Fedorov, 2005, Fedorov, 2009, Fedorov 2011; Ryzhikh, 2011), as well as other authors of the Russian and foreign schools of media pedagogy, film education and communication laid the theoretical foundations of media education and the use of forms and methods of media education in raising children in institutions of general, preschool and additional education of children, as well as the training of pedagogical specialists.

Modern digital economy intensified the duality of environmental education and media education. The implementation of means and methods of media education form the outlook and culture of using new technologies that will operate in the format of the development of artificial intelligence, robotics, the Internet of things and smart home will be formed, starting from awareness and understanding energy saving efficiency, energy security and energy efficiency, ethical and legal aspects of ecology with access to environmental philosophy of society and relations, following in the stead of democracy and tolerance (Balabas, 2012).

National policy in the areas under consideration received a new impetus with the signing of the Decree “On National Goals and Strategic Tasks of the Development of the Russian Federation for the Period until 2024” (Decree..., 2018) and its national projects. Indeed, environmental education and media education should become a connecting link and create a synergistic effect, which links together major structural elements of the national projects “Healthcare”, “Education”, “Demography”, “Culture”, “Housing and Urban Environment”, “Ecology” and “Digital Economy” in the format of education for all or life-long education, starting with preschool age.

A landmark of Decree No. 204 implementation is the necessity to create opportunities for self-development and reflection of talent, giftedness of each person, starting from the period of preschool childhood. It is well known that investments in childhood are 5-6 times higher than the effectiveness of investments in the education and upbringing of children in general educational institutions and educational organizations of higher education.

In the framework of the article, the phenomenon of environmental education of preschool children (3-7 years) is studied. According to Russian researchers of preschool education (T.S. Komarova, S.N. Nikolaeva, N.A. Ryzhova, N.N. Kondratyeva, etc.), preschool age is the most sensitive period for building the foundation of a continuous environmental education of individual, including one based on the development of feelings of citizenship and patriotism, orientation on respect for the nature of a small Motherland, reflected in native speech, songs and music, poetry and prose, animation, film and television (Komarova et al., 2018).

In this regard, the issue of comprehensive harmonious development of a preschool-age personality through the prism of children's environmental education is being updated. In our opinion, during national projects and global ratings, the time of assessing the quality of life, we consider it quite advisable to consider the reflection of the problems of environmental education of children in domestic pedagogical literature for 2018–2019.

It is important to notice that publications on environmental education of preschool children can form benchmarks for the development of this phenomenon in accordance with the formation of innovative tools for teaching and raising children in the new sociocultural and informational reality. We emphasize that current possibilities of media resources allow us to make this analysis significantly qualitative and practical one. In pedagogical scientometrics, it is considered quite full-fledged to use the publication stream of articles over two years as a representative sample of documents for analytical and theoretical research. This time sample is representative and reflects the vectors of further development of the investigated problem in various planes.

At this juncture, the need for a system-active connection between the declarative, state, public and procedural knowledge of preschool children about themselves and the world around them becomes an urgent one. The basis of its realization lies in practical self-realization of children daily life, which ensures the social and professional development of the younger generation in digital and media realities. The described connection can be provided in various types of children's activities in the field of ecology, which stipulates the inclusion of various institutions in solving urgent environmental problems facing modern preschool education.

In our opinion, the problem of environmental education of pre-school children seems to be the most relevant research field for specialists in various spheres – teachers, psychologists, biologists, ecologists, geographers, chemists, sociologists, and etc. The environmental education system has unique resources, the use of which reveals the talented and creative personality of each child.

2. Materials and methods

In order to study the microflow of pedagogical literature on environmental education of preschool children in more detail, a comprehensive technique was developed, including bibliometric and webometric methods. Formed as an independent scientific direction in the 1960s and based on the ideas of A. Prichard, bibliometry was immediately integrated into various different sciences – sociology, psychology, pedagogy, etc. However, bibliometry became especially popular and widely known in the 1980s, which was due to the rapid growth of science, the search for new methodological development vectors, and, as a result, the increase in document flow, which required statistical methods to study and predict problems of scientometrics.

It should be noted, that the application of the bibliometric method offers fairly easily accessible flows of secondary information that are presented in various information databases (for example, the electronic platform of the Scientific Electronic Library: <https://elibrary.ru/defaultx.asp>). In addition, the other distinguishing feature of the bibliometric method is that it provides quantitative data to the researcher, who can identify trends in the development of a particular issue, and give some long term predictions. This fact is an important necessity and effective element in the development of media and pedagogical strategic science in a new reality.

The study of the microflow of pedagogical literature on environmental education of preschoolers required another scientometric method to be used – webometrics. This method includes:

- the use of so-called web-based tools for studying publications (impact factor of the journal, number of citations per article, etc.);
- analysis of the website of the journal / proceedings of the conference where the article is published;
- analysis of the list of references and so on.

Thus, the scientometric methods for studying the documentary stream of pedagogical literature on environmental education of preschool children – bibliometry and webometry – in our opinion, fully reflect the innovative vectors of the ecologization of childhood and media education in line with new directions in the development of the preschool education system. In addition, the researchers relied on a systematic approach when taking into account the requirements of the Federal State Educational Standard of preschool education and additional education of children.

3. Discussion

Environmental education of preschoolers is not just a trendy direction in pedagogy. The environmental education of preschool children is the education that forms the ability of a child to understand and love the world around and take care of it. Nature expands the opportunities for aesthetic, patriotic, moral education. Communication with nature enriches the spiritual sphere of a man, contributes to the formation of positive moral qualities. Introducing nature to preschoolers is an important way of educating preschoolers in terms of environmental culture. Human existence is impossible without knowledge of nature and love for it. It is important to lay the foundations of environmental education from early childhood, as the main personality traits are laid in preschool age.

Ecological education of preschool children is one of the fundamental problems of the theory of education and it is of paramount importance for educational work. A lot of outstanding thinkers and educators of the past attached great importance to nature as a mean of raising children: J.A. Komensky saw nature as a source of knowledge, a mean for developing mind, feelings and will. K.D. Ushinsky was in favor of “leading the children into nature” strategy, in order to inform them of everything accessible and useful for their mental and verbal development. The ideas of introducing nature to preschool children were further developed in the theory and practice of Soviet preschool education. I.D. Zverev proposes to consider environmental education as a continuous process of education, upbringing and personality development, aimed at the formation of a system of knowledge and skills, value orientations, moral, ethical and aesthetic relations that ensure the person’s environmental responsibility for the state and improvement of social environment. G.A. Yagodin repeatedly pointed out the worldview nature of environmental education.

The scientist emphasized that environmental education is the education of a person, who is a citizen of the Universe, capable of living safely and happily in the future world, without undermining the foundations of development and life of future generations. S.N. Nikolaeva believes that the formation of the principles of ecological culture is the formation of a consciously correct attitude to nature in all its diversity, to the people who protect and create it on the basis of its wealth, material and spiritual values (Tretyakov, 2017).

Since the 20th century, Russian witnessed an increase in the practice of preschool education especially in the field of environmental education. Partial programs of environmental education were developed and demanded (“We Are Citizens of Earth” A. Veresova, “I Am a Man” S.A. Kozlova, “Our Home Is Nature” N.A. Ryzhova, “Young Ecologist” S.N. Nikolaeva and others). At the same time leading specialists in preschool education developed regional program materials and held conferences on environmental education. It is proposed to consider kindergarten as a “standard of ecological culture” (T.V. Potapova). The result of the study was a contradiction between the diversity of the search for researchers and practitioners in the field of environmental education of children and the lack of generalizing methodological works systematizing domestic and foreign experience (Sarycheva et al., 2017).

The first foreign tutor who made a significant and systematic contribution to the development of environmental education for children was J.A. Komensky. He was a contemporary of the formation of the experimental sciences and sincerely welcomed the penetration of man into the secrets of nature, which, in his opinion, is a reflection of God himself. J.A. Komensky studied nature and made attempts to create “Pansophia” – an encyclopedia of knowledge about nature and

society, which in fact laid the foundation for the development of foreign and domestic environmental education. In his opinion, the basis of the child's environmental education should be organized in the form of mother's school – to foster a sense of love for nature in the family. Environmental education of children in the family and society was considered in the writings by J.-J. Russo and J.H. Pestalozzi (Veselovsky et al., 2018).

Modern approaches to the development of ecological education of children are reflected in the works of M. Montessori. The development of the child, according to W. Bronfenbrenner, is considered as a process taking place in active interaction with his environment. Environmental aspects of the child's psychosocial development were also presented by E. Erickson.

Foreign researchers of environmental education in the modern media environment note that environmental education acts as a guarantor of harmonization of person's successful life. Thus, L. Barraza is convinced that preschool organizations play an important role in shaping positive attitude to the environment (Barraza, 2012). The culture and the positive spirit of the kindergarten are the channels of a positive respect for children by the environment, which affect the formation of environmental knowledge and ecological culture. The researcher cites results that showed a great difference between educational institutions with a strong focus on environmental research and preschool organizations without environmental policy. Thus, according to L. Barraza, it is necessary to develop effective environmental tools in the media space of a preschool organization in order to increase environmental awareness among all participants of educational relations.

In addition, A. Pleshakova, considering the binary educational system of Germany, combining media resources and practical aspects of training of educational subjects, notes the effectiveness of such training (Pleshakova, 2019). The undeniable benefits of this approach include the ability to respond quickly to the challenges of globalization and transformation in the digital world. In this regard, in the opinion of the researcher, it is very important to introduce sociocultural and historical practices of the formation of the dual system, including for the sphere of preschool education with a view to its successful modern functioning.

Educational visualization is thoroughly studied in the works of A. Zakharova, Ye. Wechter and A. Shklyar. Scientists believe that at this stage educational environment design for the system of preschool education one of the most important problems is the creation of effective visualization tools for the collection, organization and analysis of educational information (Zakharova et al., 2019). In researchers' opinion, it is necessary to create conditions for the use of visualization tools to assess the design of educational environments, that will allow to develop the necessary tools for dealing with a large amount of educational information, as well as in case of their change or accumulation.

The purposeful use of visual perception for the organization of educational activities creates prospects for visualization tools when working with large volumes of information (big data). One of the mechanisms for resolving this issue may be media education.

Necessary to highlight the phenomenon of media education as a properly formed, qualitatively new paradigm of national education (Bykasova et al., 2019). Modern media literacy education in Russia is the most important platform for cultural, economic, social, ethno-confessional development of the individual, therefore it is important to develop it in the context of modern pedagogical theory and practice. Digital technologies are mechanisms for creating a disciplinary matrix that serves as the basis for training, education and upbringing people of a new type that meet the requirements of modern society. The cornerstones of the development of a new paradigm in Russian preschool education lie in the use of advanced technologies in teaching, the enhancement of subject's susceptibility, updating the practice-oriented nature of education, change of individual epistemological potential, design of mechanisms for diversification and modernization of media education that determines the degree of influence of the mediated product on the implementation of the educational strategy.

S. Krucsey notes that there are numerous laws of media education. According to Australian Law, legitimate activities in the field of media education are spelled out in the corresponding regulatory legal document, which highlights pedagogical context as well. The main distinguishing feature of this legal act is emancipation, that is, the dominance of the liberating concept of education, which is obliged to the ideas of enlightenment. Media education is used in a holistic sense, encompassing both the so-called traditional media and new media, including the Internet. Critical reflection and creativity, individual and social responsibility are highly important. The ultimate goal of applying the opportunities of media education is the formation of the universal competencies of a

citizen of multimedia (Fedorov, 2019; Fedorov, Levitskaya, 2018; Gálik, Gáliková Tolnaiová, 2015; Kačínová, 2018; Krucsay, 2017; Petranová et al., 2017; Šupšáková, 2016).

M. Imeridge believes “media education as a complex professional structure that provides understanding of socio-cultural, economic and political features of mass media functioning, reflecting their desire and ability to be carriers of media standards in educational environments of various levels” (Imeridze, 2016). The author substantiates the model of media competence in the framework of the educational process aimed at developing culture of social media, preparing a person for safe and effective interaction with modern media, including traditional (print, radio, cinema, television) and innovative (computer-mediated communication, Internet, mobile telephony) forms with the development of information and communication technologies; understanding types of media and their impact on people and society.

According to researchers from de Jaen University, modernity needs methodology to promote the development of media competency among pedagogical community, which should fulfill the requirements for teaching and raising children (Ortega-Tudela et al., 2015).

Specialists from University of Oviedo (Spain) and Technological University of Mexico argue that modern globalized media community with an unprecedented technological development of education, needs to adapt their educational models and programs for training teachers and raising children and youth. The formation and development of media competency must be implemented through transversal training and ecosystem development models of all educational organizations.

Dealing with society that uses media every minute, it is necessary to determine the relationship between users and the media. Based on the study carried out by Spanish scientists, the relationship between theory, practice of media education and new forms of educational development is inextricable. Besides, there is a need to build new communication formats in various educational planes, including the conditions of environmental education (Ramarez-Garcia, Gonzalez-Fernandez, 2016).

The research team from China believes that the development and formation of a new functional toolkit of media education is necessary in the context of increasing informatization of modern society, the need to create unified information space, the emergence of new competencies that a modern person must master, the increase of requirements for qualifications and professional activities of an information citizen; the need to establish the strategic goal of turning the country into a world intellectual state with a predominant development of disparate intellectual and knowledge-based material industries (Chen et al., 2017).

An example of the presented theoretical models in Russian practice of preschool and further education can be the experience of the Center for Cultural Initiatives “Sretenie” (“Candlemas”) that has presented cultural and educational multimedia project “The Seasons” (Circle of the Lord’s Summer), containing 700 poems from 94 authors of the 17th-20th centuries, from Simeon Polotsky to Joseph Brodsky, who are presented in poetic form and describe the state of domestic nature, flora and fauna, divided into seasons. Poems from the anthology are read by famous artists. The site antologia.xxc.ru also hosts hundreds of paintings of Russian landscape and miniatures of spiritual painting. The resource also presents dozens of original animated films created by the director I. Komladze. The Seasons by P. Tchaikovsky performed by the famous Russian pianist A. Gindin and traditional chants performed by the Patriarchal Choir of the Cathedral of Christ the Savior were selected for musical accompaniment of poems. The original music for the project was written by composer A. Viskov.

Environmental education at preschool stage is at its beginning, although environmental knowledge gained in childhood will help the child navigate the surrounding reality, correctly understand it, treat it carefully, especially through the means of media literacy education.

Due to the fact that the article focuses the attention of pedagogical community on the disclosure of the phenomenon of environmental education of preschool children based on scientometrics, it is worth looking at a brief review of current areas of scientometrics.

Modern researchers in the field of scientometrics (M.A. Akoev, O.V. Kirillova, V.A. Markusova, O.V. Moskaleva, V.V. Pislyakov, etc.) believe that the development of this scientific direction should take into account the achievements of various sciences and technologies. Thus, scientometrics should attract new methods, technologies and forms of scientific communication from other fields of activity for effective development and forecasting.

The analysis of reports at such international scientific and practical conferences as: “Education and training of young children”, “Scientific school of educational systems management

of T.I. Shamova”, “Pedagogical science and modern education”, etc. shows that professional pedagogical community needs high-quality scientometric research of pedagogical trajectory, information forecasting through scientometric analysis of Russian and foreign scientists’ works.

Currently, a significant array of studies, theories, systems, models of development and organization of environmental education of preschool children has been accumulated in pedagogical theory and educational practice. However, in our opinion, any sociocultural reality and informational reality needs a new understanding and functional disclosure of ecologically oriented activities of modern preschool educational organizations.

Let us turn to the results of studies that deal with issues of personality development in a new reality. The articles of T.P. Afanasyev, T.S. Komarova, N.S. Kramarenko, T.N. Melnikov, G.P. Novikova, L.T. Potanina, N.A. Ryzhova, A.S. Moskvina, S.N. Nikolaeva and others (Afanasyeva, Novikova, 2016; Komarova at al., 2011; Kramarenko, 2011; Melnikov, Potanina, 2017; Nikolaeva, Ryzhova, 2018; Moskvina, 2017) emphasize new directions of personality development in changing reality. The network paradigm of the development of a preschool child personality deserves special attention, since it is being realized in the context of digital economy and knowledge society where all participants of educational relations need to find new forms and methods of the socio-ecological system of pedagogical activity of early childhood education.

The substantive foundations of environmental education of preschool children, as a rule, should be based on regulatory legal documents at the federal level (Constitution of the Russian Federation; federal laws: On Environmental Protection, On Education in the Russian Federation; State Program “Development of Education” (2018–2025)); Decree of the President of the Russian Federation “On National Goals and Strategic Tasks of the Development of the Russian Federation for the Period until 2024”, Federal State Educational Standards and many others. Despite the great number of documents, their main task is to build a holistic, continuous environmental education of the 21st century personality.

An important factor can be found in clause 7 of the list of instructions of the Prime Minister of the Russian Federation addressed to the Ministry of Natural Resources of the Russian Federation based on the results of the National Projects – Implementation Stage forum held in April 2019, which involves the preparation of the Ministry of Education of Russia, the Russian Ministry of Education and Science, and the governor of Nizhny Novgorod Region G.S. Nikitin (the head of the working group of the State Council of the Russian Federation in the direction “Ecology and Natural Resources”). It contains proposals for the formation of environmental culture among the population, Vyshen level of environmental education of citizens, including those referring to the need to implement appropriate additional educational programs in pre-school educational institutions, educational organizations, professional educational institutions and educational institutions of higher education.

The Federal State Educational Standard for preschool education addresses the phenomenon of environmental education through the experimental and research activities of children. So, “for children of preschool age (3-8 years) – a series of activities, such as playing, including a role-play games, games with the rules and other types of games, communicative (communicating and interacting with adults and peers), research (research of objects of the surrounding world and experimenting with them), as well as the perception of fiction and folklore, self-care and basic household work (indoors and outdoors), construction from various materials, including designers, modules, paper, with native and other material, visual (drawing, modeling, application), musical (perception and understanding of the meaning of musical works, singing, musical rhythmic movements, playing children's musical instruments) and motor (mastering the basic movements) forms of child activity should be implied”(Federal..., 2013).

The structure of children's experimentation consists of the following elements: statement of the problem that needs to be solved; goal-setting (what needs to be done to solve the problem); hypotheses (search for possible solutions); testing the hypothesis (data collection, implementation); analysis of the result (confirmed or not); formulation of conclusions.

Summing up, studies of modern scholars and regulatory legal documents stress the need to create a new type of interaction between socially significant systems, the development of the theory and practice of sustainable development on the basis of multimodal integrated approach of the social environment in the dialectic space.

Thus, the scientometric analysis of the problem of environmental education of preschool children is an important direction in the development of pedagogical theory and educational practice in the discourse of media education.

4. Results

Having started the scientometric study on the problem of preschool children environmental education in the electronic information database of Scientific Electronic Library, we designated a search query on the topic, stating time interval from 2018 to 2019.

In total, we found 291 publications of various types:

- scientific article (75 % of the total microflow of pedagogical documents);
- review article (20 % of the total microflow of pedagogical documents);
- collections of materials of international scientific and practical conferences, monographs (5 % of the entire array of documentary stream on the research topic).

Thus, we see that most publications are scientific in nature and published in such authoritative scientific journals as: *Bulletin of pedagogical innovations*, *Preschool education*, *Bulletin of Chechen State Pedagogical Institute*, *Science and school*, *Problems of modern teacher education*, *Modern problems of science and education* and so on.

We consider it very advisable to focus on the scientific article “Environmental education for sustainable development. Analysis of fundamental regulatory documents”, published in the journal from the Approved List of Higher Attestation Commission “Preschool Education” in 2018. This article was written by prominent theorists and practitioners of environmental education of preschool children in modern Russia – S.N. Nikolaeva and N.A. Ryzhova (Nikolaeva, Ryzhova, 2018).

These researchers examined the phenomenon of environmental education of citizens of the Russian Federation for the development of their environmental awareness and environmental culture. In addition, researchers pay attention to the first stage of the educational ladder of personality – the stage of preschool education, where much attention should be paid to environmental education and the new directions of its organization in preschool educational organizations in modern Russia. Along with this, S.N. Nikolaeva and N.A. Ryzhova describe the problematic places for the implementation of the Federal State Educational Standards of Higher Education, preschool educational organizations and standards and regulations (SanPiN) in terms of the organization of environmental education, the educational effect of which is not always possible to achieve in all domestic kindergartens and organizations of additional education for children. The attention of the pedagogical community and the social sector is also drawn to ecological climate in preschool organizations and organizations of additional education for children with an orientation on the conditions of sustainable development.

Ergo, Federal State Education Standard for Pre-school Education orientates participants of educational relations on the need for expansion of the experience of positive interaction of preschool children with the outer world, the acquisition of experience in environmental activities, the formation of the foundations of ecological culture.

Thus, the issues of environmental education of children are reflected in various articles and monographs, as we have seen when conducting the scientometric study.

It is important to note that a significant part of the articles has an overview scientific practice-oriented nature and is published in collections of materials of Russian and international conferences. For example, in the following:

- Actual issues of continuity of preschool and primary education;
- A problematic and informational approach to the implementation of modern education methods: issues of theory and practice;
- Professionalism of the teacher: essence, content, development prospects;
- Modern childhood: psychological and pedagogical support for the family and the development of education;
- Language and current problems of education, etc.

It is important to focus attention on the activities of the Department of Theory and Methods of Preschool and Primary School Education of the International Academy of Pedagogical Education Sciences, headed by the Head of the Department of Preschool Education of Moscow Region State University, Professor of the Department of Aesthetic Education of Preschool Children of Moscow Pedagogical State University Prof. Dr. T.S. Komarova and Professor, Leading Researcher at the Institute for Educational Development Strategy of the Russian Academy of Education, Rector of

the Institute for the Development of Educational Technologies Prof. Dr. G.P. Novikova. This Department holds the majority of scientific and practical conferences related to the phenomenon of childhood and the unleashing of the potential of each child, which corresponds to the Decree of the President of Russia No. 204 of 05.07.2018.

Particularly noteworthy is the activity of the Department of Preschool Education of Moscow region state university, which annually holds an international scientific-practical conference "Environmental Education and Early Childhood Education: Problems and Development Prospects", the results of which are reflected in the eponymous collection of works and highlighting innovative vectors of the development of the ecologization system childhood in the new environment. In the future, it is planned to organize network conferences and create the Association of Ecologists and Teachers of the Russian Federation to develop the ideas of environmental education and the formation of civil society in the context of sustainable media development.

Along with this, it can also be noted that most pedagogical publications on environmental education of preschool children were published in Moscow, which is due to objective reasons. Firstly, Moscow is a city of federal significance, accumulating preschool practice. Secondly, the main centers of training the personnel for the system of preschool education are concentrated in Moscow. And, thirdly, metropolitan specialists are building innovative vectors for the development of preschool education in the context of new ideas that define a new vision of the problem of the sphere of preschool childhood.

In addition, consideration is given to the essence of media education in the environmental paradigm in preschool childhood.

Thus, on the basis of scientometric research, it should be noted that media education is currently advisable to divide into the following main areas, taking into account the specifics of preschool education:

1) media education of future and current professionals – journalists (press, radio, television, Internet), filmmakers, editors, producers, etc.;

2) media education of future and current teachers and educators at universities, pedagogical institutes, pedagogical colleges, universities and colleges in the field of culture (primarily in the preparation of library specialists for work in children's libraries) in the process of continuing education of teachers of universities, colleges and schools in courses on media culture, environmental culture, film and media education;

3) media education as part of the general education of schoolchildren and students studying in schools, colleges and universities, which, in turn, can be integrated with traditional disciplines or autonomous (special, optional, circle, etc.) disciplines;

4) media education in institutions of additional education for children and leisure centers (youth creativity centers, scientific and technical creativity of children and youth, extracurricular activities centers, art schools, aesthetic and artistic education centers, community clubs, sports schools, etc.);

5) remote media education of preschool children and parents, schoolchildren, students and adults, all participants in the educational process of children, using television, radio, the Internet system (here media criticism plays a huge role) – this is actually an informal education;

6) independent / continuous media education throughout life – in fact, this is an informal education (Fedorov, 2009; Demidov, Tretyakov, 2016).

Based on the results of scientometric research, we found that the active development of high information technologies at the beginning of the 21st century and their impact on society and personality gave rise to many new questions related to a number of phenomena, the study of which is only possible within the framework of existing methodological positions (for example, the choice as the "living environment" of the self-realization of the Internet environment with all its features and in its various manifestations). One of the new directions in the development of post-non-classical science, which can provide new methodological support in solving this problem, is the development of a network paradigm.

Talking about its essence, we note that the concept of "network" is interpreted differently. However, despite the variety of interpretations, the researchers agree to determine its essence. The network has a branched structure, which has many interconnected and equivalent paths, and covers all spheres of society. As T.A. Kravchenko mentions, network technologies are currently being actively developed, which are characterized by a number of features: the basis of networks is

the communication of individuals; a network exists as a specific environment where participants can interact; something new arises in the network, which is a product of its functioning (this is the main ontological property of the network); products generated by the network are virtual and can be relatively independent; the network is non-hierarchical, has a branched structure and is more similar to a rhizome. (G. Deleuze and F. Guattari as a network mean a rhizome formation that does not have a central core, but has a branched structure. From the authors' point of view, in a broad sense, the concept of "rhizome" can be applied to the description of the modern world, which is characterized by the absence of centralization and symmetry). In addition, these features of networks are manifested in all spheres of human activity (education, economics, political and spiritual sphere) (Kramarenko, 2011).

Thus, in this context, media education is a vivid and understandable resource for all examples, permeating all spheres of society and exerting influence on them.

5. Conclusion

Based on theoretical and analytical studies, we may conclude that the media space of a preschool educational organization as a factor in the formation of the foundations of the ecological culture of the personality of a preschool child will be more effective if:

1. A model has been developed for the formation of the foundations of the ecological culture of the personality of a preschool child in the media space of pre-school educational organization;
2. A partial educational program has been developed for the formation of the foundations of the ecological culture of preschool children in the media space of pre-school education;
3. There are guidelines for educators on the formation of the foundations of the ecological culture of preschool children in the media space of early childhood care.

The novelty of the study cited in the article lies in the theoretical and analytical understanding of the publication activities of Russian teachers, so we consider it appropriate to develop a scientific and methodological support for the educational process of forming the foundations of the ecological culture of a preschool child in the media space of pre-school education.

So, on the basis of a polyaspect scientometric analysis of the problems of environmental preschool children in the pedagogical literature for the year 2018 and 2019, we made a number of final vectors of development.

The enlarged thematic areas of modern environmental education of preschool children can be considered:

- education of humane attitude to nature (moral education);
- formation of a system of environmental knowledge and ideas (intellectual development);
- development of aesthetic feelings (the ability to see and feel the beauty of nature, to admire it, the desire to preserve it);
- participation of children in feasible activities as looking after plants and animals, protecting nature.

The effectiveness can be reached when all of these areas are integrated in one session. Without bringing children closer to nature and its wide use in the educational work of a modern preschool educational organization, it is impossible to solve the problems of the comprehensive development of preschool children - mental, intellectual, aesthetic, moral, labor and physical.

Gamification is another important aspect of the ecological space of a preschool organization. The main goal of environmental education as a means of developing preschool children is the formation of the principles of environmental culture, namely, the correct attitude of the child to the environment and so on.

Thus, an extremely active scientific interest has focused on capabilities of each child (giftedness, talent, abilities, etc.), including the sphere of environmental education. We believe that a creative personality can develop in terms it is enriched with knowledge and skills. The formation of environmental education among preschool children is a leading factor in national security and the democratization of Russian society.

In conclusion, we should emphasize that modern high-quality educational media resources may serve as a universal mean of forming and updating the academic content of environmental-friendly education of children in the media discourse. In our opinion, it is necessary to prepare a new module program on environmental education of children in the media space, which will

improve the quality of preschool education, the involvement of children in the civil information society and knowledge societies.

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