

PERAET 2021**International Scientific Conference «PERISHABLE AND ETERNAL: Mythologies and Social Technologies of Digital Civilization-2021»****FINANCIAL LITERACY FOR PRESCHOOL CHILDREN IN A DIGITAL SOCIETY**

Irina A. Donina (a), Marina S. Zadvornaya (b)*, Alexander G. Shirin (c)

*Corresponding author

(a) Yaroslav-the-Wise Novgorod State University, Veliky Novgorod, Russian Federation, doninairina@gmail.com,

(b) St. Petersburg Academy of Postgraduate Pedagogical Education, St. Petersburg, Russian Federation, marina-slavovna@yandex.ru,

(c) Yaroslav-the-Wise Novgorod State University, Veliky Novgorod, Russian Federation, Alexander.Shirin@novsu.ru

Abstract

The most important directions of the state policy of the Russian Federation are focused on ensuring the global competitiveness of Russian education. At present, in the world practice, the attitude towards preschool education has changed. The understanding of its importance as the most effective investment in a person and the state is noted, in connection with which special attention is paid to this level of education. To improve the quality of education is possible due to the use of modern educational programs and pedagogical technologies which meet the modern challenges in full degree. At present, in the context of the growing use of financial services, and appearance of complicated and hard-to-understand financial tools, the issues of financial literacy of population are relevant both for Russia and for most countries of the world. This is associated with the rapid development of the modern world which, in turn, makes the problem of development of national strategies of increasing financial literacy more relevant. The central task becomes to ensure the quality of initial financial literacy from the preschool age, as well as form the foundations of financially competent behavior as a unity of financial knowledge, attitudes, standards and skills needed to make successful financial decisions during adulthood and, finally, to achieve financial wellbeing. The difficulty of this task is conditioned by special features of preschool education, age characteristics of preschool children which take their first steps in the complex world of financial economical relationships.

2357-1330 © 2021 Published by European Publisher.

Keywords: Competiveness of Russian education, digital society, financial literacy

1. Introduction

The transition of modern Russia to market relationships requires economical erudition of population of the country, and socioeconomic changes in the state have led to the relevance of the problem of search for previously unknown approaches to economic education (McDonald & Eisenhardt, 2019), providing for the organization of continuous economic education in the conditions of the modern world.

The 21st century is characterized by the need to develop economic culture in preschoolers, and the system of preschool education faces the task to form a financially literate generation. Economic culture is considered to be an element of developing the personality which corresponds to the society demand. Pre-school age is important for the development of cognitive processes in children and the formation of foundations of their system of values (Klim-Klimaszewska, 2014a), and the level of children's assimilating economic culture determines the circumstances of their future life, and economic wellbeing of their country. At different educational levels, the formation of economic competencies occurs in the process of economic learning as a purposeful process for transfer and assimilation of economic knowledge (Gorelova, & Khilko, 2020). In her works, Chelysheva (2017) noted that in the modern context, to possess knowledge was to be able to quickly navigate in the flow of the latest information, freely looking for the required information in the storage of knowledge.

Digitalization of economy occurs, due to this it is necessary to socialize children as early as possible, in order to assimilate economic knowledge throughout life (Donina et al., 2018). Children "perceive economy gradually, while growing up". Initial experience of economic life occurs in the family, however, natural formation of economic elements in preschoolers is evidently insufficient for modern life, especially in a digital society. According to modern world trends, the Russian system of preschool education is going through the next stage of modernization (Zadvornaya, 2019). Preschool educational institutions (hereinafter PEIs) facilitate children's adaptation to further life in a team, society, country, and form preconditions for financial literacy, which will further contribute to scientific and technical progress and the flourishing of social infrastructure (Bridgers et al., 2016).

2. Problem Statement

The analysis of dissertation researches which we carried out indicates that there are scientific works of domestic and foreign scientists devoted to the study of the problem of economic education for preschoolers which contributes to the formation of preconditions for financial literacy but the problem has not been fully studied. The scientific and practical relevance of this problem is confirmed by the following factors:

- the traditional approach to the formation of economic culture of preschoolers and the need to expand the use of partial programs for financial literacy, which have a certain potential in the development of educational process;
- the need for finding ways of forming preconditions for financial literacy in children of older preschool age and the absence of conditions in the PEI educational process.

The main research problem is to identify and substantiate the effectiveness of the use of partial programs for the formation of preconditions for financial literacy in preschool age.

3. Research Questions

The study of the indicated problem required to comprehend a number of questions:

3.1. In what way is the work in PEIs carried out to form preconditions for financial literacy?

3.2. In what way does the realization of a partial program for economic education contribute to the formation of preconditions for financial literacy?

3.3. What is the family role of in the formation of preconditions for financial literacy?

4. Purpose of the Study

The main purpose of the study is to identify the effectiveness of approbation of the partial program *Economic Education for Preschoolers: Formation of Preconditions for Financial Literacy* (hereinafter the Program) in PEIs of St. Petersburg in terms of solving the problems of socialization of children in the field of economic culture.

5. Research Methods

Methodologically, the research is based on the dialectics of a systemic approach which allows considering the system of preschool education as an integrated sociocultural and pedagogic phenomenon, an axiological approach focused on the understanding of preschool education as a state, social and personal value, an activity-based approach thanks to which self-development and self-understanding of the personality occurs in the process of activities. We used theoretical methods of information systematization, and of analysis. Also, we used empiric methods of questionnaire, and conversation. Statistical methods of processing data which were evaluated by the technique of D. Sepetliev allowed characterizing preconditions for economic and financial literacy of older preschoolers.

6. Findings

The problem of pedagogic support for a preschooler in the world of financial and economic relations is one of the most difficult in the preschool pedagogy. Historical and pedagogical analysis of educational programs for domestic preschool education indicates that from the time of their development (30s of the 20th century), the familiarization of children with labor of adults has traditionally been contained in them (Tyunin, 2017). The first decade of the 21st century was manifested by an increased scientific interest in the study of the problem of economic education of preschoolers. In dissertation researches of the period, models for economic education and pedagogic conditions of their realization in a preschool institution were developed (Sidyakina, 2012); the possibility of forming elementary economic knowledge was proved (Sergeeva, 2011); the initial economic experience through play was described (Shatova, 2005), as well as the education of older preschoolers in the field of consumption culture, and so on. In practice, experimental programs were actively tested, the experience of economic socialization of

children was gained in the course of PEI interaction with the family (Jenkins et al., 2019). Scientists and practitioners proved that the correct choice of an educational program could facilitate the process of acquiring knowledge and developing skills, such as logical thinking, perseverance, patience, or quick and accurate decision making (Klimaszewska 2014b).

Currently, methodological recommendations have been developed for the economic education of preschoolers in PEIs, which consider modern approaches to the educational process in the senior and preparatory groups of kindergarten. The emphasis is made rather on the upbringing in a child of such personal qualities as responsibility, prudence, willpower, needed for a modern person to make a successful economic decision, than on the formation of knowledge in the field of modern economics. The pedagogic worker plays the most important role in bringing innovations in the field of economic culture development in children (Bassok et al., 2019). In order to develop the pedagogical support for cultural practices among older preschoolers in the field of economics, it is advisable to study the effectiveness of the approbation of the new Program developed by joint efforts of pedagogical workers, psychologists and economists, and fully meeting the peculiarities of the subculture of modern preschoolers.

The program is intended for 5-7 years old children. Let us turn to the Program which consists of four sections united by tasks and content (Figure 1).

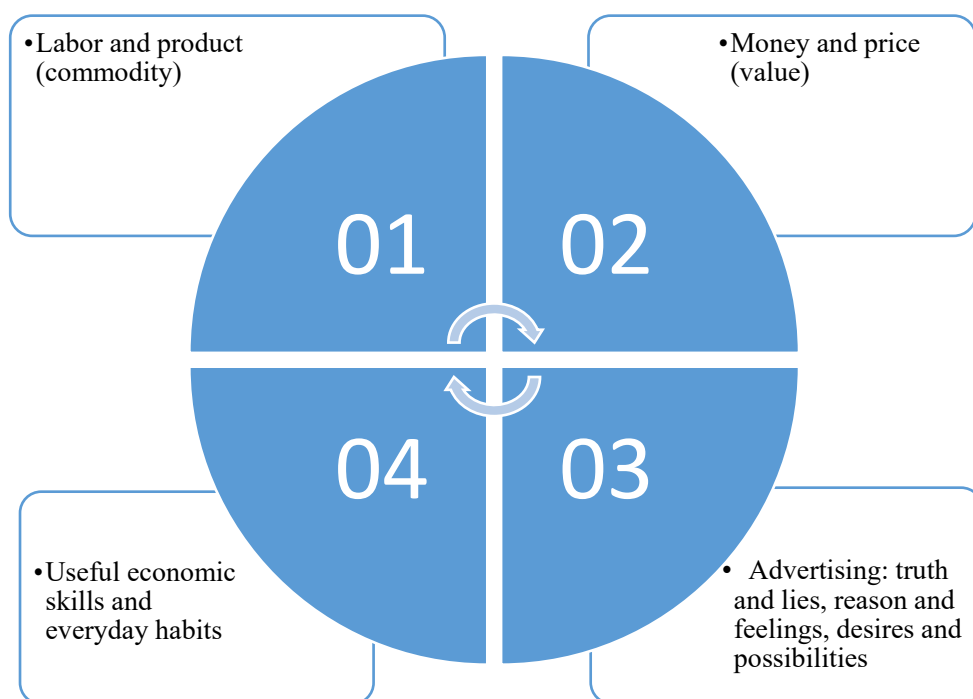


Figure1. Sections of Program for Economic Education

All sections of the Program solve a number of educational, developing and upbringing tasks. The main educational task is aimed at the assimilation of financial ideas by older preschoolers, the formation of economic abilities and skills. Developing tasks are aimed at the ability to demonstrate rational economic needs. Upbringing tasks contribute to fostering respect for representatives of various

professions in children as well as a thrifty attitude to objects of labor, and forming moral economic qualities, such as thrift, orderliness, truthfulness, justice, efficiency, initiative.

In 2020, the authors of the article carried out a research, which enrolled 409 children of senior preschool age, 34 educators, 30 representatives of administrative and managerial staff, 189 parents of children from 10 PEIs (5 PEIs, on the base of which the Program was tested, were experimental ones, 5 PEIs, which did not participate in its approbation, were control ones) from 18 districts of St. Petersburg. In order to study the effectiveness of the Program in terms of solving the problem of the economic education for senior preschool children living in St. Petersburg, we conducted the statistical processing of materials of diagnostics on the children's learning rates as the rates of economic and financial literacy in the experimental and control PEIs (Xiaoyan et al., 2020). The results of the comparative analysis are presented in figure (see Figure 2).

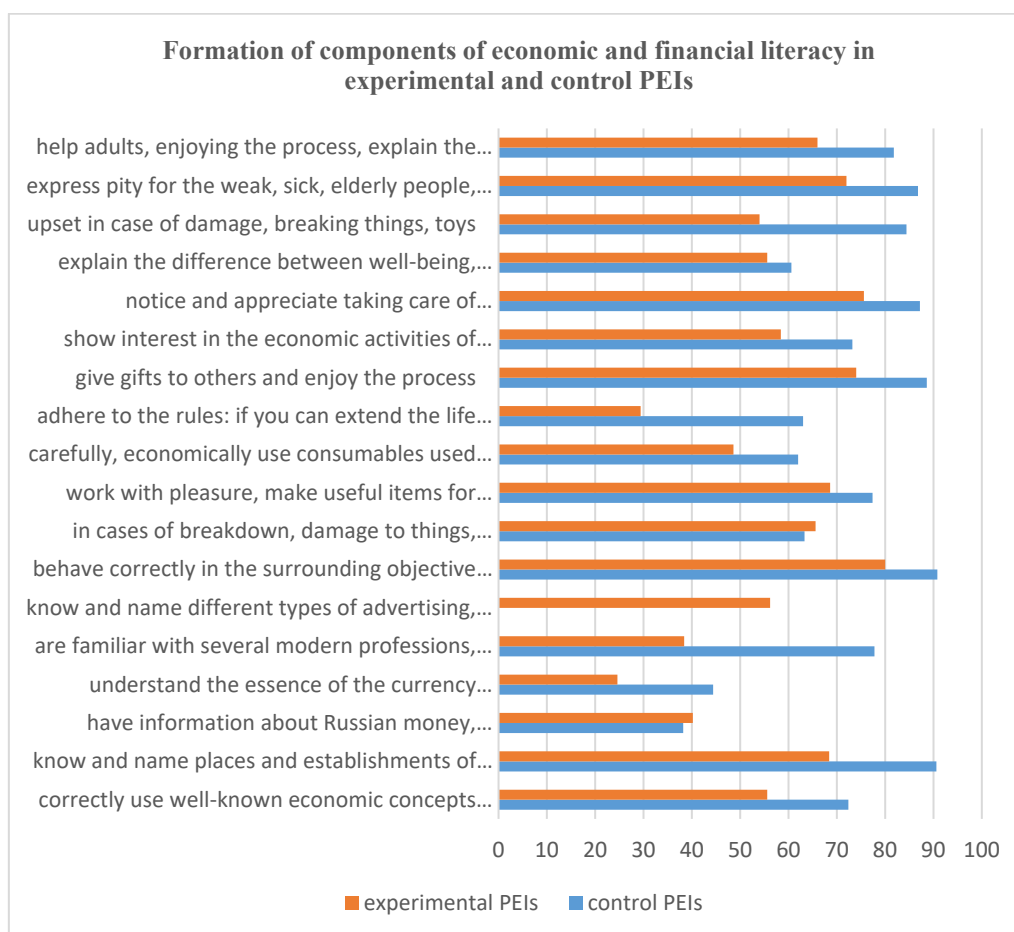


Figure 2. Diagram of formation of components of economic and financial literacy in experimental and control PEIs

The evaluation of the obtained results according to the Pt criterion (Sepetliev, 1968) demonstrated the identical level of the component formation characterizing the economic and financial literacy of senior preschoolers, which indicates statistically insignificant differences. The comparison of percentage indicators characterizing the successful learning rates of the basic Program content showed a certain

difference in the successful completion of diagnostic assignments by the children of the experimental and control PEIs (Table 1).

Children completed the diagnostic assignments in every Program section. For example, they had to find out the profession of a person by the attributes shown in the picture. In another case, the children were asked to “mint” a coin by cutting it out of a large sheet of paper, at the same time, they were given no instructions on how to place the circle on a sheet of paper, thus, a child's thrift was revealed.

Table 1. Learning rates of basic content of financial and economic literacy by children in experimental and control PEIs (according to the results of completing diagnostic assignments)

Content of financial and economic literacy	Learning rates of children	
	Experimental PEIs	Control PEIs
1. Labor and labor product (commodity)	72	40,4
2. Money and price (value)	45	38,2
3. Advertising: truth and lies, reason and feelings, desires and possibilities	50,2	67,8
4. Useful economic skills and everyday habits	36,6	58,4

The pedagogic diagnostics allowed us to identify more successful learning rates of the contents of the *Labor and Labor Product (Commodity)* and *Money and Price (Value)* sections in the experimental PEIs than in the control ones. The contents of the *Advertising: Truth and Lies, Reason and Feeling, Desires and Possibilities* and *Useful Economic Skills and Everyday Habits* sections were better learned by children in the control PEIs than in the experimental ones. These results can be explained by the fact that the contents of the *Labor and Labor Product (Commodity)* and *Money and Price (Value)* sections presented in the Program differ from the traditional content of the PEI work on the acquaintance of the preschoolers with the work of adults (especially in the field of economics), money signs, cost of goods and products.

The contents of the *Advertising: Truth and Lies, Reason and Feelings, Desires and Possibilities* and *Useful Economic Skills and Everyday Habits* sections are more traditional, therefore they are learned purposefully by children thanks to the attention of educators to these aspects of upbringing. In addition, in the 21st century, in St. Petersburg, the life of preschoolers in which advertising is actively involved in everyday life, predisposes to childish ideas about its diversity and purpose, so childish everyday ideas about advertising are quite distinct by the end of preschool childhood.

The obtained results of the mathematical analysis indicate that there are statistically indistinguishable differences ($Pt < 0,95$) between the experimental and control PEI groups. The absence of statistically significant differences can be explained by the fact that the educators of all the PEIs investigated believe that the problem of economic education of preschoolers is relevant and use almost the same system of methods and techniques to solve this problem. In all the PEIs, when testing the Program, they used a variety of methods and techniques to arouse interest, familiarize preschoolers with economics and finances, form economic abilities and skills (fiction literature for children about economics, cartoons, conversations, situation problems, riddles, crosswords).

The results of the study also showed that the effective pedagogical activities of PEIs in developing the preconditions of financial literacy can be achieved provided that parents support the interest of their children in the topics studied in the PEI. The low level of financial literacy of parents is a

problem since it does not make it possible to form the skills of managing finances, realize the system of positive attitudes which will allow children to make competent decisions in future. Figure 3 presents a diagram of forms of work with parents, which were used during the approbation of the Program in the experimental PEIs (see Figure 3).

When realizing the Program, the largest difficulties were found to be associated with the low economic literacy of parents in the field of finances.

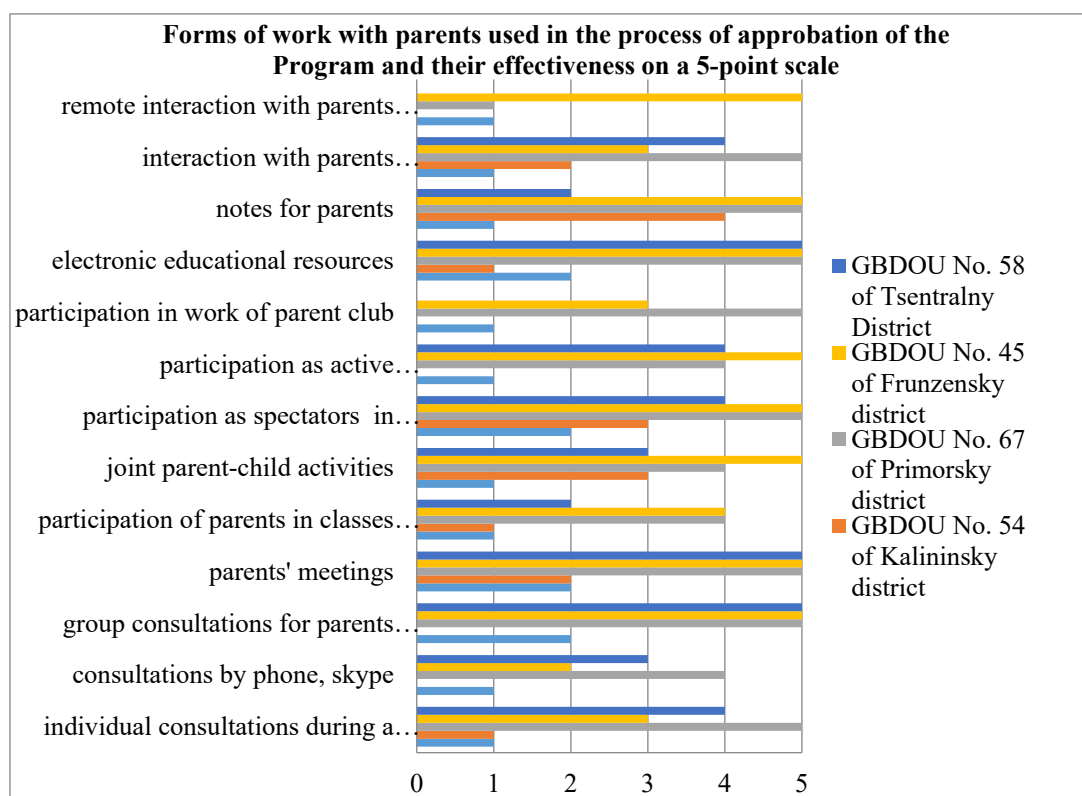


Figure 3. Diagram of effectiveness of forms of work with parents of preschoolers in experimental PEIs, used in process of the Program approbation (GBDOU=State Budgetary Preschool Educational Institution)

The implementation of the Program in PEIs is possible if the following conditions are created: the consideration of age and individual capabilities of children; the participation of parents in the development of the Program and the creation of an object-space environment; the use of modern innovative educational technologies; material and technical base.

So, based on the research results, we proved that the effective pedagogical activities of PEIs to form preconditions of financial literacy is possible only when parents are able to support the interest of their children in the topics studied in PEIs. The low level of parents' financial literacy interferes with the formation of skills of financial management, the realization of the system of positive attitudes which will allow children to make competent decisions in the future. Such a conclusion was made by the educators which took part in the Program approbation. Economic education requires an integrated approach: the creation of an appropriate object-space environment, the direct participation of parents in the educational

process. Following the Program realization, senior preschoolers develop a stable base of economic ideas which will help them to form the economic thinking in the future.

7. Conclusion

The conducted research allowed us to make the following conclusions:

- Different forms and ways for explaining financial concepts, using them in various kinds of children's activities, pedagogical conditions specially created in PEIs help to develop economic culture in preschoolers and form preconditions of financial literacy;
- Approbation of the Program due to which children of preschool age can master preconditions of financial literacy provides an opportunity to create a single "economic" space for preschoolers, and a positive contribution to the implementation of *Strategy for Socioeconomic Development of Saint Petersburg for the Period up to 2035* aimed at sustainable improvement of citizens' life quality;
- Effective pedagogical activities of PEIs to form preconditions of financial literacy are possible only when parents are involved in these activities.

References

- Bridgers, S., Buchsbaum, D., Seiver, E., Griffiths, T., & Gopnik, A. (2016). Children's causal inferences from conflicting testimony and observations. *Developmental Psychology*, 52(1), 9-18. <https://doi.org/10.1037/a0039830>
- Bassok D., Dee T. S., & Latham S. (2019). The Effects of Accountability Incentives in Early Childhood Education. *Journal of Policy Analysis and Management*, 38(4), 838-866. <https://doi.org/10.1002/pam.22149>
- Chelysheva, I. V. (2017). Basic Approaches to Media Education in Russia: Sociocultural and Methodological Aspects / I.V. Chelysheva, G.V. Mikhaleva // *International Journal of Media and Information Literacy*, 2(1(1)), 3-8. <https://doi.org/10.13187/ijmil.2017.1.3>
- Donina, I. A., Pevzner, M. N. Petryakov, P. A., & Shaydorova, N. A. (2018). Pedagogical Approach to Information Diversity Management. *ICLEL Conferences Sakarya University Faculty of Education*, 787-794.
- Gorelova J., & Khilko N. (2020). Organizational Forms of Implementation of Pedagogical Technologies in the Media Education System // *International Journal of Media and Information Literacy*, 5(1), 31-36. <https://doi.org/10.13187/ijmil.2020.1.31>
- Jenkins, J. M., Whitaker, A. A., Nguyen, T., & Yu, W. (2019). Distinctions Without a Difference? Preschool Curricula and Children's Development. *Journal of Research on Educational Effectiveness*, 12(3), 514-549. <https://doi.org/10.1080/19345747.2019.1631420>
- Klim-Klimaszewska, A (2014a). Introducing the preschooler into the world of values. Edited by Chova, L.G., Martinez, A.L., Torres, I.C. *7Th international conference of education, research and innovation*, 740-745.
- Klim-Klimaszewska, A. (2014b). The role of computers in the life of preschoolers. *7Th international conference of education, research and innovation*, 735-739.
- McDonald, R. M., & Eisenhardt, K. M. (2019). Parallel Play: Startups, Nascent Markets, and Effective Business-model Design. *Administrative Science Quarterly*, 65(2), 483-523. <https://doi.org/10.1177/0001839219852349>
- Sepetliev, D. A. (1968). *Statisticheskiye metody v nauchnykh meditsinskikh issledovaniyakh* [Statistical methods in medical scientific research]. Meditsina.

- Sergeeva, M. G. (2011). Nepreryvnoye ekonomicheskoye obrazovaniye v usloviyach paritetnosti obrazovaniya i ekonomiki v obnovlyayushcheysya Rossii [Continuous economic education in the conditions of parity of education and economy in the renovating Russia]. *Etap: ekonomicheskaya teoriya, analiz, praktika* [Stage: Economic Theory, Analysis, Practice], 5, 117-126.
- Shatova, A. D. (2005). Ekonomicheskoye vospitaniye doshkol'nikov: uchebno-metodicheskoye posobiye [Economic education of preschool children: teaching aid]. *Pedagogicheskoye obshchestvo Rossii*.
- Sidyakina, E. A. (2012) Istoriko-pedagogicheskiiy analiz problem formirovaniya ekonomicheskikh predstavleniy u detey doshkol'nogo vozrasta v Rossii i za rubezhom [Historical and pedagogical analysis of the problem of the formation of economic ideas in preschool children in Russia and abroad]. *Vektor nauki TGU. [TSU (Togliatti State University) Science Vector]*, 4(11), 272-275.
- Tyunin, A. I. (2017) *Sovremennoye sostoyaniye problem nepreryvnogo ekonomicheskogo obrazovaniya v usloviyakh obshcheobrazovatel'noy shkoly: monografiya* [The current state of the problem of continuous economic education in the context of a comprehensive school: monograph]. Tsitsero.
- Xiaoyan, J., Traverso, L., & Xiaosong, G. (2020). Examining the Effectiveness of Group Games in Enhancing Inhibitory Control in Preschoolers. *Early Education and Development*, 32(5), 741-763. <https://doi.org/10.1080/10409289.2020.1802972>
- Zadornaya, M. S. (2019) Stanovleniye i razvitiye pedagogov doshkol'noy obrazovatel'noy organizatsii v protsesse nepreryvnogo obucheniya [Formation and development of teachers of a preschool educational organization in the process of lifelong learning]. *Uchenyye zapiski universiteta imeni P. F. Lesgafta* [Scientific Notes of the P.F. Lesgaft National State University of Physical Education, Sport and Health], 2(168), 138-142.