

# Cooperation with Parents on Environmental Education of Preschool Children with Speech Disorders

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**Abstract:** This article presents a comprehensive pedagogical technology for correctional and developmental work with parents and their preschool children with speech disorders. The purpose of this article is also to consider the change in parents' attitude to the environmental education of a child with speech disorders. The project is designed to involve parents and increase their interest in the environmental education of preschoolers with speech disorders. It is investigated to what extent the involvement of parents and teachers in joint research projects increases competencies in terms of knowledge, abilities, and attitudes to educational processes. The article uses several methods of synthesis and analysis in research. The descriptive method and the experimental method were also used. The hypothesis is that using a comprehensive program involving parents for research and experimental activities in environmental education of preschool children with speech disorders promotes the more successful acquisition of knowledge about nature, improves therapy, and strengthens family relationships. In technology, attention is paid to the actual educational activities and the reflection of teachers' and parents' internal structures of competencies. The presented technology systematizes the instrumental-methodical, expressive (behavioral) aspects of teaching and raising a child with speech disorders and provides a universal basis for any intervention program to change attitudes and involve parents in educational work.

**Keywords:** Tolerance, values, psycho-pedagogical model, speech-language pathologists, elementary school.

## INTRODUCTION

In modern pedagogy, the concept of pedagogical technology is popular [1-5]. Cognitive processes (attention, perception, memory, imagination, and thinking) are integral to any human activity, including speech, and provide the necessary information [6-11]. The approach to cooperation occurs in environmental education and is an experimental research model that involves implementing future research in this area. The researched model in the future can be used as an additional tool for further experimental research, as it combines the theoretical principles and educational goals of humanitarian programs to strengthen tolerant cooperation within educational programs on environmental education and work with preschoolers. Recently, much attention is paid to correctional and developmental work with preschool children with various disorders in the cognitive and speech spheres. Aspects are related to the areas of such correctional and developmental work with preschoolers: one of the areas is related to the interest of parents in

environmental education of the child, and the other – to provide teachers with additional tools to improve the effectiveness of corrective and developmental work with children with disabilities. In such developments, attention is paid not only to the actual educational activities but also to the reflection of the internal structures of the competencies of teachers and parents [12-16].

The purpose of the study is to consider the effectiveness of involving integrated pedagogical technology in environmental education to enhance parental involvement in the upbringing and education of preschool children with speech disorders [17, 18]. It is also important to identify changes in parents' attitudes to environmental education, increase parental involvement and increase interest in environmental education of preschool children with speech disorders. Efficiency, an increase of competence in the educational process due to complex work in joint educational and research projects of parents, pedagogical workers, branch experts are defined. Problems of ecological education ways research and its introduction in the educational process became a subject of the modern European community [5]. Theoretical and methodological principles on such

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issues belong to and are formulated in the research of many scientists [19-23].

Recently, there has been an increase in the number of preschoolers with speech disorders [24]. Most of them do not have complex speech defects and, therefore, such children do not need enrollment in special groups. However, more attention should be paid to the development of their speech skills. The solution is to develop special techniques of integrated educational technology introduced during their stay in preschool institutions. The organization of such comprehensive care requires the involvement of a team: a teacher-speech therapist, a teacher-psychologist, a specialist educator, and parents.

## **MATERIALS AND METHODS**

In order to consider the problem comprehensively, the authors used a comprehensive approach in this research. The article uses inductive and deductive methods to form goals, objectives, and research results while working with theoretical material. The method of interdisciplinary approach was used during the integrated application of sociology (organization of groups of preschoolers and their parents, teachers), pedagogy (organization and conduct of teachers, specialists, and educators of the educational process at the appropriate methodological level) [25-30]. The descriptive method was used for systematic fixation of experimental materials, coverage and streamlining of the experiment, consistent publication of conditions, and experiment results. In the study, the method of the experiment is the main one (pedagogical experiment). It encourages parents to participate in the environmental education of preschool children, identifies the features of techniques and forms of work with children with speech disorders in environmental education [31-35], and allows determining the effectiveness of technology in terms of qualitative and quantitative characteristics in terms of active involvement of parents in the educational process.

The experiment also involved the use of testing, questionnaires, observations, and so on. In this research, statistical methods are also used, which made it possible to evaluate the experiment results. The pedagogical experiment lasted for 36 weeks in 2019/2020. Preschool institutions were involved in the work: Preschool educational institution (nursery-kindergarten) of the combined type #284 "Rosinka" (Zaporizhzhya, Ukraine), Kharkiv private preschool educational institution "Dekart" (Kharkiv), kindergarten

"Malen'ka Rybka" (Kharkiv) supported by the Kharkiv State Academy of Arts (Ukraine) and Zaporizhzhya Polytechnic National University (Ukraine) [36-38]. The experiment involved 2 groups of middle-aged preschoolers (4-5 years) in each preschool institution. The experimental group (G1) consisted of 18 children, and the control group (G2) had 18 participants as well (a total of 108 children and 165 parents). In three different preschool institutions of Ukraine, there were 2 groups in each institution, and their parents agreed to participate in the experiment. Preschool children with speech disorders were respondents, as well as their parents [39]. Their educational and training program provides for the environmental education measures implementation. All participants in the experiment (teachers, educators, and parents) voluntarily agreed to participate. A group of researchers formed all control materials and questionnaires and ensured to maintain respect for the dignity and privacy of all participants. The introduction of the complex pedagogical technology of the educational and methodical complex presented in the research did not undergo non-invasive interventions; such actions and measures were not used to affect the honesty and objectivity of the results of the participants [40-44].

We will consider that game research pedagogical technology is an algorithm of actions of the organizer of the game on a sample, preparation of materials, means and conditions for the implementation of the activity, involvement of all participants in-game activity, carrying out researches and supervision in the form of the game and consecutive summarizing activities. This corresponds to the understanding of technology as a consistent task-structured set of actions, procedures, and stages that provide a specific visual result in a constantly changing environment. The attitude of parents and teachers to play technologies within the environmental education of children is quite different [45-47]. Some believe that they should be used quite actively; others believe that the methods and forms of classical teaching are acceptable.

## **RESULTS**

A survey was conducted among parents and teachers of the control and experimental groups on the feasibility of using teaching methods during environmental education courses. At the introductory stage before the experiment, preference was given to traditional forms, and at the last final stage of the experiments, the respondents already gave priority to games, observation of experiments. Questionnaire of

**Table 1: Rating of Methods in the Experimental Group of Parents during the Experiment**

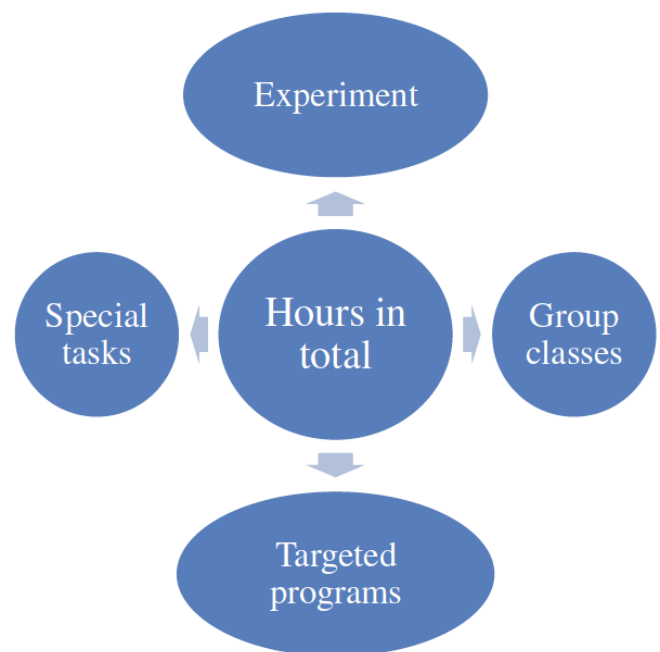
Methods	Start experiment, %	Experiment middle, %	End of the experiment, %
Discussion	30	30	25
Conversation	36	32	30
Observation	49	45	45
Game	20	24	30
Working with material	35	35	35
Experiment	20	23	28
Exercises	15	20	20

parents on the methods of implementing environmental education for preschool children with speech disorders [48-52]. Respondents are presented with a list of methods to choose from. Questionnaire: What teaching methods are you willing to engage with your child in environmental education? (Table 1).

Among the factors that contribute to increasing interest in the educational process and attitude to subjects, respondents identified the following: methods of education (54%), interest in the subject (38%), the personality of the educator (30%), the content of the subject (29%) [53-57]. According to the received data, most parents chose traditional methods at the beginning of the experiment: conversation (36%), discussion (30%), but at the end of the work, the parents were also interested in game forms, such as game (increased by 10%), experiment (increased by 8%), exercises (increased by 5%). Game technologies are used actively in working with preschool children with speech disorders. The main tasks set during the formation of the course on environmental education are as follows: to create an environment of mental support in the family for children with speech defects. To help and facilitate the processes of language correction by activating the cognitive sphere of a preschooler with a speech disorder. To adopt a child with speech disorders to life in society through his/her involvement in environmental education with peers and parents. The integrated approach included the following actions of the organizers: organizing work with parents and their children; determining forms and methods of work in groups with the involvement of parents (Figure 1) [58].

At all stages of this experiment, research was conducted on the effectiveness of involving parents in the environmental education of preschoolers with speech defects. Measurements of the level of formation of ecological knowledge were carried out. Indicators

slightly increased in the final stage (Tables 2 and 3) [59-61].



**Figure 1: Calculation of elements in the structure of the training course "Environmental Education".**

A separate area of work on implementing the new program is to work with specialists on their willingness to work with parents in environmental education. A high level of mastery of the material and extensive experience in methodological and practical work with parents and preschoolers with speech disorders is required (Table 4) [62, 63].

In addition, an important indicator of the program's effectiveness was the work to involve parents in the implementation of environmental education as an element of active acceptance of the family of a child with disabilities participating in educational processes. Before starting the experiment and at the final stage, parents were asked about their attitudes to different teaching strategies and those that are interesting to

**Table 2: The Level of Formation of Environmental Knowledge in the Experimental Group 2**

Stage	High level, %	Average, %	Low level, %
The initial stage	15	58	23
The final stage	20	60	20

**Table 3: The Level of Formation of Environmental Knowledge in the Control Group 2**

Stage	High-level %	Average %	Low-level %
The initial stage	22	68	10
The final stage	20	70	10

**Table 4: Results of Diagnostics of Teachers before the Introduction of Ecological Education**

Stage	High level, %	Average, %	Low level, %
The initial stage	70	30	0
The final stage	80	20	0

them, and parents are willing to get involved in this area of work with children (Tables 5 and 6).

## DISCUSSION

Among psychologists, teachers, and linguists, the preconditions for a comprehensive approach to solving

speech development problems of preschoolers were created. This is primarily a collective study in the field of modern pedagogy [64-68], special work on the study of multicultural environmental education programs [59, 69-72], psychological and pedagogical models of tolerance [73]. Researchers have long identified logo psychological constants of the language interaction and

**Table 5: The Results of Parents' Attitudes Towards their Involvement in the Process of Environmental Education of the Child**

Teaching strategies	Values and attitudes defined by parents	Involvement level, %
Descriptive, illustrative, and explanatory quiz	Awareness of the difference between the studied phenomena and processes	60
Problem statement through the game	Tolerance to phenomena, ways of thinking	24
Cooperation in the cognitive process	Personalization and self-realization	56
Algorithmic experiments	Volitional and positive self-regulation of participation in learning	60
Research-based strategy	Self-censorship, analysis, and self-analysis of relationships with others	30

**Table 6: The Level of Parents' Involvement in Environmental Education of a Child with Speech Disorders**

Teaching strategies	Values and attitudes defined by parents	Involvement level, (%)	
		beginning	End
Descriptive, illustrative, and explanatory	Awareness of the difference between the studied phenomena and processes	10	20
Formulation of the problem	Tolerance to phenomena, ways of thinking	20	50
Cooperation in the cognitive process	Personalization and self-realization	20	50
Algorithmic experiments	Volitional and positive self-regulation of participation in learning	0	15
Research-based strategy	Self-censorship, analysis, and self-analysis of relationships with others	20	50

general psychological manifestations: cognitive, personal, behavioral sphere [74-79].

Practical developments on the experience of involving parents, students, problem groups in the pedagogical process also are known and are actively implemented in the world's modern educational process. It is also a study of children's educational competencies formation processes using innovative approaches to practical tasks [80, 81], conducting training through research and scientific activities [1, 22, 82], developing a tolerant approach in education taking into account socio-cultural and multicultural features of the educational environment [83].

Problematic aspects of involving parents in integrated work with children with inclusion relate to the construction of competencies, particularly the component of the attitude to the need for environmental education, participation in education, and child's upbringing [84, 85]. A fair version of the three-dimensional attitude structure (cognitive, affective, and behavioral) requires a comprehensive approach when the intention is to change it. It is an effective part of such a comprehensive approach to involve parents in playful, interactive forms of environmental education [86]. Several researchers [33, 34] presented psychosocial theories of attitude change and theories of persuasion to identify strategies and methods of educational work that are the most effective active participation and persuasive communication techniques. They are role-playing methods, interpersonal contact, encounter behavioral contact, and choice. It is important to correctly identify the target group, content, cultural affiliation, and guidelines in changing attitudes. The only involvement of a set of interactive learning tools is acceptable and effective in environmental education. It also provides an opportunity to involve parents in working with preschool children with speech disorders.

The study of the program's content of the initial educational cycle and its feasibility was carried out in the works of several European researchers [20, 26]. Their work emphasizes such disciplines as language and communication, music and movement, foreign languages, religion, physical education, civic education, and environmental education [9, 16]. Understanding the importance of environmental education for the modern child is a distinctive feature of European education aimed at the future of civilization [3-5, 15]. Every family should be aware of the importance of

environmental issues as proper use of natural resources.

## CONCLUSIONS

Problematic aspects of involving parents in integrated work with children with inclusion relate to the construction of competencies, particularly the component of the attitude to the need for environmental education, participation in education, and child upbringing. A fair version of the three-dimensional attitude structure (cognitive, affective, and behavioral) requires a comprehensive approach when the intention is to change it. It is an effective part of such a comprehensive approach to involve parents in playful, interactive forms of environmental education.

In the experimental group, 2 (20%) middle-aged children showed a high level of environmental knowledge; 6 (60%) – average level; 2 (20%) – low level. In the control group, the results are similar: 2 (20%) middle-aged children showed a high level of environmental knowledge; 7 (70%) – average level; 1 (10%) – low level. Children, parents, and educators who participated in the experiment significantly increased the level of knowledge about objects and phenomena of inanimate and animate nature (compared with their peers from the control group). Diagnosis of kindergarten teachers showed that a high level of professional knowledge and skills and readiness for environmental education of children have 8 (80%) educators; average level – 4 (20%) educators. A survey of parents showed that most of them were not engaged in environmental education and preschool education at the beginning of the experiment. After the experiment, parents changed their attitudes toward environmental education in children with speech disorders. The increase was approximately 25%. After conducting an experiment, which states with preschoolers from the experimental group (in comparison with preschoolers in the control group), it is planned to conduct a formative experiment, which is a series of experiments and experiments involving parents of preschool children with speech disorders.

## ACKNOWLEDGEMENT

None.

## SUPPLEMENTAL MATERIALS

The supplemental materials can be downloaded from the journal website along with the article.

## REFERENCES

- [1] Ko J, Sammons P, Bakkum L. Effective teaching: a review of research and evidence. Reading: CfBT Education Trust 2013.
- [2] Barrett M. How schools can promote the intercultural competence of young people. *European Psychologist* 2018; 23: 93-104. <https://doi.org/10.1027/1016-9040/a000308>
- [3] Boghian I. Methodological guidelines for elaborating the curriculum of intercultural education with a focus on the values of tolerance. *Revista Romaneasca pentru Educatie Multidimensionala* 2018; 10(4): 249-264. <https://doi.org/10.18662/rrem/86>
- [4] Boghian I. Empowering teachers to deal with classroom diversity. *Revista Romaneasca Pentru Educatie Multidimensionala* 2019; 11(3): 1-10. <https://doi.org/10.18662/rrem/134>
- [5] The Future of Jobs Report WEF 2020. [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs\\_2020.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf).
- [6] Damian SI, Ilescu DB, Rohozneanu A, Glodeanu A, Diac M, David S, Hunea I. The role of educational measures for juvenile offenders in forensic psychiatry. *Revista Românească pentru Educație Multidimensională* 2017; 9(3): 140-155. <https://doi.org/10.18662/rrem/2017.0903.09>
- [7] Čuhlová R. Intercultural adaptation process and its determinants. *International Journal of Economics, Finance and Management Sciences* 2019; 7(6): 215-221. <https://doi.org/10.11648/j.ijefm.20190706.16>
- [8] Bolman LG, Deal TE. Reframing organizations: Artistry, choice, and leadership. San Francisco: Jossey-Bass 2008.
- [9] Cojocariu V-M. Is there an axiological background favoring the initial training in the didactic career for the primary and preschool didactic career? *Social and Behavioral Sciences* 2014; 137: 100-104. <https://doi.org/10.1016/j.sbspro.2014.05.259>
- [10] Dzvinchuk D, Radchenko O, Kachmar O, Myskiv I, Dolinska N. Analysis of platforms and tools of open study in the conditions of postmodern education. *Revista Romaneasca Pentru Educatie Multidimensionala* 2020; 12(3): 125-143. <https://doi.org/10.18662/rrem/12.3/313>
- [11] Fritz W, Mollenberg A, Chen GM. Measuring intercultural sensitivity in a different cultural context. *Intercultural Communication Studies* 2002; 11(2): 165-176.
- [12] Guțu V, Boghian I. A bidimensional psycho-pedagogical model for tolerance education. *Revista Romaneasca pentru Educatie Multidimensionala* 2019; 11(4): 01-16. <https://doi.org/10.18662/rrem/153>
- [13] Harding-Esch E, Riley Ph. The bilingual family. A handbook for parents. Cambridge: Cambridge University Press 2003. <https://doi.org/10.1017/CBO9780511667213>
- [14] Holovaty M. Multiculturalism as a means of nations and countries interethnic unity achieving. *Economic Annals-XXI* 2014; 11-12: 15-18.
- [15] Kiki-Papadakis K, Chaimala F. The embedment of responsible research and innovation aspects in European science curricula. *Revista Romaneasca pentru Educatie Multidimensionala* 2016; 8(2): 71-87. <https://doi.org/10.18662/rrem/2016.0802.06>
- [16] Köktürk Ş. Forms and multifunctionality of interruptions and simultaneous speaking in the ordinary talk – proposal of a universal model for the evaluation of interruptive speech sequences. *International Journal of Linguistics* 2012; 4(3): 551-571. <https://doi.org/10.5296/ijl.v4i3.2137>
- [17] Kritsonis WA. Ways of knowing through the six realms of meaning: a philosophy for selecting curriculum for general education. Houston: National Forum Journals 2007.
- [18] Leontiev D. Formation of activity psychology. Early work. Moscow: Smysl 2003.
- [19] Mason R. Learning technologies for adult continuing education. *Studies in Continuing Education* 2006; 28(2): 121-133. <https://doi.org/10.1080/01580370600751039>
- [20] Popovych V, Ragimov F, Kornienko V, Ivanova I, Buryk Z. Development of social and communicative paradigm of public administration in the field of social networks. *International Journal of Data and Network Science* 2020; 4(3): 2-10. <http://doi.org/10.5267/ij.djns>
- [21] Rababah I. The reality of using modern teaching methods in teaching Arabic for speakers of other languages from teachers' perspective. *Journal of Social Sciences (COES&RJ-JSS)* 2020. <https://doi.org/10.25255/jss.2020.9.1.58.94>
- [22] Salgur SA. The importance of the teacher in intercultural education. *International Journal of Global Education* 2013; 2(1): 1-5.
- [23] Savu E. The 'intercultural' teacher – a new response to the teaching career. *Social and Behavioral Sciences* 2014; 128: 111-116. <https://doi.org/10.1016/j.sbspro.2014.03.127>
- [24] Sebalo L, Teslenko T. Future teacher training for self-education activity in physical education at elementary school. *Revista Romaneasca Pentru Educatie Multidimensionala* 2020; 12(1): 105-119. <https://doi.org/10.18662/rrem/202>
- [25] Rakhmetova RU, Abenova KA. The main demographic trends of rural and urban populations of Kazakhstan. *World Applied Sciences Journal* 2013; 27(13A): 273-277.
- [26] Vorobets D, Banyra O, Stroy A, Shulyak A. Our experience in the treatment of priapism. *Central European Journal of Urology* 2011; 64(2): 80-83. <https://doi.org/10.5173/cej.2011.02.art6>
- [27] Romashin OV, Liadov KV, Makarova MR, Koneva ES, Preobrazhenskii VI, Chudimov VF. The development of physical education as a basic instrument of rehabilitative treatment, remedial medicine, and goal-oriented health promotion for the benefit of man. *Voprosy Kurortologii, Fizioterapii, i Lechebnoi Fizicheskoi Kultury* 2013; 1: 39-43.
- [28] Nagima S, Rakhmetova RU, Musulmankulova AA, Abenova KA, Akmaral K. Socio-economic sustainable development of the regions of Kazakhstan: Research of demographic potential. *Journal of Environmental Management and Tourism* 2019; 10(5): 1124-1134.
- [29] Koneva ES. The effectiveness of gait rehabilitation in the patients following endoprosthetic hip replacement by means of the biofeedback-based hardware video reconstruction of the walking stereotype. *Voprosy Kurortologii, Fizioterapii, i Lechebnoi Fizicheskoi Kultury* 2015; 92(6): 23-29. <https://doi.org/10.17116/kurort2015623-29>
- [30] Shulyak A, Gorpynchenko I, Drannik G, Poroshina T, Savchenko V, Nurimanov K. The effectiveness of the combination of rectal electrostimulation and an antidepressant in the treatment of chronic abacterial prostatitis. *Central European Journal of Urology* 2019; 72(1): 66-70.
- [31] Tokareva N, Zykova S, Talismanov V. The relationship of psychological, clinical and biological components in epilepsy. *E3S Web of Conferences* 2020; 217: 08006. <https://doi.org/10.1051/e3sconf/202021708006>
- [32] Parisi GF, Cutello S, Di Dio G, Rotolo N, La Rosa M, Leonardi S. Phenotypic expression of the p.Leu1077Pro CFTR mutation in Sicilian cystic fibrosis patients. *BMC Research Notes* 2013; 6(1): 461. <https://doi.org/10.1186/1756-0500-6-461>
- [33] Portnova T. Artistic heritage of V. Nijinsky. *Information (Japan)* 2017; 20(7): 4775-4782.

- [34] Kartushina NV. Application of total quality management mechanism for students of higher education institutions. *Asia Life Sciences* 2020; 22(2): 273-286.
- [35] Zashchirinskaia O. Post-traumatic experience of road accident victims. *Transportation Research Procedia* 2018; 36: 826-832.  
<https://doi.org/10.1016/j.trpro.2018.12.070>
- [36] Galyaveeva AR, Vasileva US, Khaerzamanova AI, Rasin AN, Kislyy P, Allanina LM, Koneva ES. The problem of increasing the number of myocardial infarction deaths in densely populated cities. *International Journal of Pharmaceutical Research* 2020; 12(4): 806-813.  
<https://doi.org/10.31838/ijpr/2020.12.04.139>
- [37] Manuilov GV, Gorelova GG, Rylskaya EA, Morozova SV, Vasyagina NN. Reflective processes and social orientation at different stages of professionalization (on the example of preparation for medical activity). *Obrazovanie I Nauka* 2020; 22(4): 43-63.  
<https://doi.org/10.17853/1994-5639-2020-4-43-63>
- [38] Zashchirinskaia OV. Specific features of the comprehension of texts and story pictures by adolescents with intellectual disturbances. *Acta Neuropsychologica* 2020; 18(2): 221-231.  
<https://doi.org/10.5604/01.3001.0014.1404>
- [39] Romanov EV. Institutional traps in the scientific and educational sphere: nature and mechanism of elimination. *Obrazovanie i Nauka* 2020; 22(9): 107-147.  
<https://doi.org/10.17853/1994-5639-2020-9-107-147>
- [40] Portnova TV. Structural features of theatrical excursions (Methodology based on theatre museum expositions). *Mathematics Education* 2016; 11(8): 2963-2973.
- [41] Khenner EK, Frieze C, Zane O. IT education as a factor to influence gender imbalances in computing: Comparing Russian and American experience. *Obrazovanie I Nauka* 2020; 22(8): 189-206.  
<https://doi.org/10.17853/1994-5639-2020-8-189-206>
- [42] Anamova RR, Bykov LV, Kozorez DA. Algorithm for designing professional retraining programs based on a competency approach. *Education Sciences* 2020; 10(8): 1-9.  
<https://doi.org/10.3390/educsci10080191>
- [43] Saifnazarov I, Abdullahanova G, Alimatova N, Kudratova U. The main trends of increasing the role of the teacher in the innovative development of Uzbekistan. *International Journal of Advanced Science and Technology* 2020; 29(5): 1771-1773.
- [44] Anamova RR, Leonova SA, Nartova LG, Tereshchenko VP. Digital spatial models in technology as a development tool of the intellectual creative aspect within education. *TEM Journal* 2020; 9(3): 1186-1193.  
<https://doi.org/10.18421/TEM93-45>
- [45] Nasledov AD, Miroshnikov SA, Zashchirinskaya OV, Tkacheva LO. Differential diagnostics of cognitive and psychomotor development of 4-year-old children. *Psikhologicheskii Zhurnal* 2018; 39(6): 59-75.  
<https://doi.org/10.31857/S020595920000832-1>
- [46] Zashchirinskaia O, Nikolaeva E, Udo H. Features of the perception and understanding of emoji by adolescents with different levels of intelligence. *Mediterranean Journal of Clinical Psychology* 2020; 8(2): 1-17.
- [47] Portnova T. Information technologies in art monuments educational management and the new cultural environment for the art historian. *TEM Journal* 2019; 8(1): 189-194.
- [48] Portnova TV. Principles and opportunities of the study of pictorial heritage in the practice of choreographic education. *Journal of Siberian Federal University - Humanities and Social Sciences* 2018; 11(12): 2043-2055.  
<https://doi.org/10.17516/1997-1370-0372>
- [49] Saifnazarov IS. Innovative methods of forming spiritual immunity of youth (on an example of Tashkent State University of economics experience). *Astra Salvensis* 2019; 1: 355-362.
- [50] Zinchenko AS. Project-focused personnel management approach of higher educational institutions. *Asia Life Sciences* 2020; 22(2): 243-256.
- [51] Yessenbayeva AM, Yelikbayev BK, Abdrahman GK, Makulova LT, Serdali BK. Investigating the communicative functions of interrogative sentences in dialogue texts. *Media Watch* 2020; 11(3): 488-501.  
<https://doi.org/10.15655/mw/2020/v11i3/202934>
- [52] Kisiolek A, Karyy O, Halkiv L. Comparative analysis of the practice of internet use in the marketing activities of higher education institutions in Poland and Ukraine. *Comparative Economic Research* 2020; 23(2): 87-102.  
<https://doi.org/10.18778/1508-2008.23.14>
- [53] Serdali BK, Ashirbekova GS, Isaeva Z, Adieva PM. Newspaper headings as a means of presenting priority and secondary information. *International Journal of Environmental and Science Education* 2016; 11(11): 4729-4738.
- [54] Portnova TV. Historical aspects of project technologies development and opportunities for their use in scenic arts. *Space and Culture, India* 2018; 6(4): 48-56.
- [55] Zholmakhanova AB, Tuyakbaev GA, Abdrazakov K, Oralova GS, Serdali BK. Kazakh emigration and historical significance of memories of Mustafa Shokay. *Utopia y Praxis Latinoamericana* 2018; 23(82): 111-120.
- [56] Portnova TV. Art technologization in the context of theatrical science development. *Astra Salvensis* 2020; 1: 701-729.
- [57] Portnova TV. Self-determination of the personality of creative beginning in the choreographic context. *Space and Culture, India* 2019; 7(2): 143-158.  
<https://doi.org/10.20896/saci.v7i2.452>
- [58] Portnova T. Giants against Gods (regarding the plastic nature of sculpture and theater by the example of the exhibition and installation of the Pergamon Altar in the Pushkin state museum of fine arts). *European Research Studies Journal* 2015; 18(4): 189-196.  
<https://doi.org/10.35808/ersj/491>
- [59] Nagymzhanova K, Bapaeva MK, Koksheeva ZT, Kystaubayeva Z, Shakhmetova DS. Psychological peculiarities of occupational choice by high school students. *Education in the Knowledge Society* 2019; 20: 1-10.  
[https://doi.org/10.14201/eks2019\\_20\\_a2](https://doi.org/10.14201/eks2019_20_a2)
- [60] Kisiolek A, Karyy O, Halkiv L. The utilization of Internet marketing communication tools by higher education institutions (on the example of Poland and Ukraine). *International Journal of Educational Management* 2021; 35(4): 754-767.  
<https://doi.org/10.1108/IJEM-07-2020-0345>
- [61] Kisiolek A. The market of flooring systems in Poland. *Innovative Marketing* 2018; 14(1): 13-22.  
[https://doi.org/10.21511/im.14\(1\).2018.02](https://doi.org/10.21511/im.14(1).2018.02)
- [62] Ashilova MS, Begalinov AS, Begalinova KK. About the impact of digitalization of society on education in Kazakhstan. *Science for Education Today* 2019; 9(6): 40-51.  
<https://doi.org/10.15293/2658-6762.1906.03>
- [63] Bayanov DI, Novitskaya LY, Panina SA, Paznikova ZI, Martynenko EV, Ilkevich KB, Karpenko VL, Allalyev RM. Digital technology: Risks or benefits in student training? *Journal of Environmental Treatment Techniques* 2019; 7(4): 659-663.
- [64] Smeijers D, Benbouriche M, Garofalo C. The association between emotion, social information processing, and aggressive behavior: a systematic review. *European Psychologist* 2020; 25(2): 81-91.  
<https://doi.org/10.1027/1016-9040/a000395>
- [65] Bogachov S, Kwilinski A, Miethlich B, Bartosova V, Gurnak A. Artificial intelligence components and fuzzy regulators in entrepreneurship development. *Entrepreneurship and Sustainability Issues* 2020; 8(2): 487-499.  
[https://doi.org/10.9770/jesi.2020.8.2\(29\)](https://doi.org/10.9770/jesi.2020.8.2(29))

- [66] Miethlich B, Kvitka S, Ermakova M, Bozhko L, Dvoryankin O, Shemshurina S, Kalyakina I. Correlation of educational level, labor potential and digital economy development in Slovakian, Ukrainian and Russian experience. *TEM Journal* 2020; 9(4): 1597-1605. <https://doi.org/10.18421/TEM94-35>
- [67] Miethlich B, Šlahor L. Creating shared value through implementing vocational rehabilitation in the corporate social responsibility strategy: A literature review. In: Proceedings of the 32nd International Business Information Management Association Conference, IBIMA 2018 - Vision 2020: Sustainable Economic Development and Application of Innovation Management from Regional expansion to Global Growth (pp. 1444-1460). 15-16 November, Seville, Spain. <https://doi.org/10.33543/16001.14441460>
- [68] Shmelev IM, Petrovsky VA. Formalizing the use of training methods in developing a career path. *Journal of Community Psychology* 2021; 1: 1-10.
- [69] Nagymzhanova KM, Aikenova R, Dzhanbubekova MZ, Magavin SS, Irgebaeva NM. The importance of educational quality management in improving student's capital. *Espacios* 2018; 39(30): 1-8.
- [70] Parisi GF, Leonardi S, Ciprandi G, Corsico A, Licari A, Miraglia del Giudice M, Peroni D, Salpietro C, Marseglia GL. Antihistamines in children and adolescents: A practical update. *Allergologia et Immunopathologia* 2020; 48(6): 753-762. <https://doi.org/10.1016/j.aller.2020.02.005>
- [71] Nagymzhanova K. Formation of creative thinking of teachers in educational environment of higher education institute. *Life Science Journal* 2013; 10(Spl. Issue 12): 439-443.
- [72] Ibraev ZG, Yerkebaeva NA, Mirzakulova BA, Nazarkulova LT, Buribayev YA, Khamzina ZA. Social rights, family, and child guarantees in the context of the implementation of a new social course in the Republic of Kazakhstan. *Journal of Legal, Ethical and Regulatory Issues* 2017; 20(1): 1-8.
- [73] Parisi GF, Leonardi S, Ciprandi G, Corsico A, Licari A, Miraglia Del Giudice M, Peroni D, Salpietro C, Marseglia GL. Cetirizine use in childhood: An update of a friendly 30-year drug. *Clinical and Molecular Allergy* 2020; 18(1): 1-6. <https://doi.org/10.1186/s12948-020-00118-5>
- [74] Bogaevskaya O, Batrakova I, Slyusar O, Talismanov V. Pharmacogenetic testing: Effectiveness of the use of the indirect anticoagulant warfarin. *Journal of Global Pharma Technology* 2020; 12: 160-169.
- [75] Khamzina ZA, Buribayev YA, Oryntayev ZK, Kuttygalieva A. Problems of overcoming poverty in the Republic of Kazakhstan. *Mediterranean Journal of Social Sciences* 2015; 6(3): 169-176. <https://doi.org/10.5901/mjss.2015.v6n3s5p169>
- [76] Buribayev Y, Khamzina Z, Belkhozhayeva D, Meirbekova G, Kadirkulova G, Bogatyreva L. Human dignity – The basis of human rights to social protection. *Wisdom* 2020; 16(3): 143-155. <https://doi.org/10.24234/wisdom.v16i3.404>
- [77] Bongiovanni A, Parisi GF, Scuderi MG, Licari A, Brambilla I, Marseglia GL, Leonardi S. Gastroesophageal reflux and respiratory diseases: Does a real link exist? *Minerva Pediatrica* 2019; 71(6): 515-523. <https://doi.org/10.23736/S0026-4946.19.05531-2>
- [78] Ushakov D, Akhmetova SG, Nevskaya LV. Economic growth and environmental performance: correlation issues and future priorities. *International Journal of Ecological Economics and Statistics* 2017; 38(4): 164-172.
- [79] Arkhipov A, Ushakov D. Functional effectiveness and modern mechanisms for national urban systems globalization: The case of Russia. *E-Planning and Collaboration: Concepts, Methodologies, Tools, and Applications* 2018; 2-3: 799-817. <https://doi.org/10.4018/978-1-5225-5646-6.ch039>
- [80] Zykova SS, Tsaplin GV, Talismanov VS, Bulatov IP, Popkov SV, Karmanova O. Antioxidant activity and acute toxicity of new n4-substituted5-(1,2,4-triazole-1-ylmethyl)-1,2,4-triazole-3-thiones and s-derivatives. *International Journal of Pharmaceutical Research* 2021; 13(1): 309-313. <https://doi.org/10.31838/ijpr/2021.13.01.056>
- [81] Shulyak A, Banyra O. Radical or simple nephrectomy in localized renal cell carcinoma: What is a choice? *Central European Journal of Urology* 2011; 64(3): 152-155. <https://doi.org/10.5173/cej.2011.03.art12>
- [82] Leonardi S, Barone P, Gravina G, Parisi GF, Di Stefano V, Sciacca P, La Rosa M. Severe Kawasaki disease in a 3-month-old patient: A case report. *BMC Research Notes* 2013; 6(1): 500. <https://doi.org/10.1186/1756-0500-6-500>
- [83] Pappalardo MG, Parisi GF, Tardino L, Savasta S, Brambilla I, Marseglia GL, Licari A, Leonardi S. Measurement of nitric oxide and assessment of airway diseases in children: An update. *Minerva Pediatrica* 2019; 71(6): 524-532. <https://doi.org/10.23736/S0026-4946.19.05513-0>
- [84] Kharchenko NV, Mysan IV. Psycholinguistic study of the speech of older preschool children: Specific features of understanding the figurative meaning of phrases and their use in spontaneous speech. *Scientific Bulletin of Mukachevo State University. Series "Pedagogy and Psychology"* 2021; 7(2): 25-37. [https://doi.org/10.52534/msu-pp.7\(2\).2021.25-37](https://doi.org/10.52534/msu-pp.7(2).2021.25-37)
- [85] Demianenko SD. Integration of the preschool children's speech and motor development in-game activity. *Scientific Bulletin of Mukachevo State University. Series "Pedagogy and Psychology"* 2020; 1(11): 125-128. [https://doi.org/10.31339/2413-3329-2020-1\(11\)-125-218](https://doi.org/10.31339/2413-3329-2020-1(11)-125-218)
- [86] Khoma OM, Almashiy EV. Methodological features of the study of an adverb as part of speech at the lessons of the Ukrainian language in elementary school. *Bulletin of Mukachevo State University. Series "Pedagogy and Psychology"* 2019; 1(9): 188-191. [https://doi.org/10.31339/2413-3329-2019-1\(9\)-188-191](https://doi.org/10.31339/2413-3329-2019-1(9)-188-191)