# Innovative Pedagogy of Froebel through the Online Platform "Prezi" in Ukraine

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**Abstract**: The article studies the use of principles of Friedrich Froebel's pedagogy in the context of digital technologies implemented in the post-Soviet countries, in particular, in Ukraine. It also presents student opinions on the effectiveness of Frobel's didactic materials aimed at developing children's ability to participate in productive activity, which is of particular importance today. Besides, the article provides recommendations on the use of the author's word-based games in Ukrainian and English. These games were prepared by a team of teachers from Lutsk Pedagogical College (Ukraine) in a mini textbook, titled "Froebel's Ideas in Action: Theory and Practice of the Present". The article shows how the cloud-based online service 'Prezi' can be used to master ways of using the Froebel gifts when working with children of preschool and younger school age. Finally, the article proves that information technologies can help one to create educational materials to improve the use of the Froebel gifts in preschools, as well as in the New Ukrainian school.

**Keywords:** *the Froebel gifts, multimedia, multimedia services, cloud services, online services, 'Prezi', word-based games, future specialists, modern children.*

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## Introduction

Rapid changes in today's society have led to significant shifts in the daily life and professional activities of teachers. Education informatization is the main prerequisite for training competent teachers who can work in a constantly changing environment due to globalization and integration processes (Bakhmat et al., 2019; Komogorova et al., 2021; Palamarchuk et al., 2020; Sheremet et al., 2019). One can ensure the effectiveness of such training by implementing the online platform "Prezi". This service strengthens the applied educational component in the system of teacher training. It is especially related to the use of innovative pedagogical technologies, in particular, Friedrich Froebel's pedagogical heritage.

His theory was evaluated and criticized, put into practice, and banned in European countries, as well as in Russia and Ukraine. His educational play materials (the Froebel gifts) were of interest to many scholars (Anisimova, 2013; Bondarenko, 2018; Polievikova, 2012; Stasiuk, 2019).

All the scholars state that Froebel (1974) prioritized self-development, embedded in nature and human, that somehow prompts one to manifest oneself in external actions (imaginative, cognitive, linguistic, physical). Froebel (1974) believed that development is a continuous manifestation of one's inner strength which reflects the main stages of spiritual development of previous generations. However, as the child develops, he or she follows the previous generations in amateur activity, namely, in speech, drawings, games. The child learns the world empirically through his or her movements and sense organs. Human is a creative being, and, therefore, it is essential to educate a worker. It is activity and creativity that form and develop strengths and abilities harmoniously (Froebel, 1974).

Ukraine now strives to reach a qualitatively new level of pedagogical development. It is with this strategy that one needs to correlate the ideas of Froebel's pedagogy (1974) and educational values, aimed at developing ICT competency in modern teachers. Thus, creating presentations on Froebel's ideas (1974), adapted to modern conditions, with Prezi will create a favourable educational environment for new generations.

The article aims to find out whether students are ready to implement the Froebel gifts in the educational process via the cloud and online services and use Prezi as an alternative and effective tool to create presentations based on the concept of the outstanding educator.

As part of this research, one can assume that it is quite possible and effective to use the latest computer programmes (Google Slides, Prezi,

Keynote, PowToon, Canva, Emaze, ZohoShow and more) within Froebel's pedagogy. However, propaedeutic observations on university teachers in the post-Soviet countries indicate that they mostly use Microsoft PowerPoint as a visual aid. However, there are alternatives to this programme. Indeed, the new platform 'Prezi' allows one to operate data and effectively demonstrate educational information, including that on the use of the Froebel gifts in practice.

Therefore, the working hypothesis is that teacher students may be inclined and ready to implement the key positions of Froebel's pedagogy by using ICT. A sociological survey of these students was conducted to verify this hypothesis.

Teacher students were chosen as the main group of subjects representing several relevant variables. In particular, they are students from Lutsk Pedagogical College (45 respondents), Sambir Pedagogical College named after Ivan Fylypchak (53 respondents), Vinnytsia Humanitarian Pedagogical College (50 respondents) and Bakhmut Pedagogical College (25 respondents). Regarding the gender-based ratio, the study involved 145 male students and 148 female students. All the respondents agreed to participate in it voluntarily and were informed about the use of its results in the article.

Accordingly, the main research method is a survey with a limited number of questions related to readiness to implement Froebel's pedagogical heritage (1974) and priorities when selecting presentation software for this purpose. The authors of the article followed Froebel's principles to incorporate Prezi into educational work based on the survey results through pedagogical modelling and relevant software.

**Froebel's Pedagogy in the Context of Current Pedagogical Research**

Nowadays, the pedagogical ideas of Friedrich Froebel (1974) are extremely relevant to the theory and practice of preschool and primary education. One can see how Froebel's pedagogical heritage correlates with contemporary conceptual provisions of educational systems, which can be further strengthened by ICT. In turn, it allows one to create effective ways of information demonstration and use them in lectures and practical classes in higher education institutions.

ICT competency is defined as a set of knowledge and skills teachers need to carry out various activities related to information and communication. This competency is directly associated with teacher's professional activities and is a component of professional competence. Besides, ICT competency acts as another stage in the development of teacher's information culture, and literacy. Such a new vision of teacher's

ICT competency enables one to teacher's new worldview, which is in line with Froebel's ideals.

It was revolutionary critical pedagogy and relativistic pedagogy of postmodernism that revived Froebel's ideas of creative progressive pedagogy (1974), as well as his concept of early childhood integrity. McNair & Powell (2020) metaphorically summarize Froebel's main idea as follows: "learning at school is a ritual action". This rituality is a child's and, at the same time, serious game, a movement towards something immanent and mature by mastering educational and life laws. The game-based principle combines Froebel's ideas with the conditional educational reality offered by ICT today.

Dar (2018) conducted a thorough historiographical study of available sources on Froebel's educational philosophy and analyzed original sources of the outstanding educator. He states that Froebel's main principles can be represented by the following pedagogical postulates:

1. School education should be individualized to develop pupils' practical competencies for a full life in an isomorphic society.

2. The life of a child/person is "sacred and inviolable"; therefore, pedagogy should aim to realize such an authentic and independent existence.

3. The teacher's task is to develop pupils' research-oriented, critical, and adequate attitude towards life so that they can judge events and phenomena without bias (Dar, 2018).

As can be seen from the above, Froebel's main ideas are extremely congruent to an anthropocentric paradigm of human education in the globalized world.

Watts (2021) uses interpolation and extrapolation to identify Froebel's five dogmas on education, society, and the place of the child in them:

1. *Environmental friendliness and naturalness*. Every child should feel the purpose, meaning, and joy of activity, as well as the unity with society and the world. It is possible by developing the unique potential of each child as an individual.

2. *Subjectivity and self-resourcefulness*. Learning "should begin with the child", who, being active and inquisitive, must establish the links and patterns of the world around him or her. At the same time, routine, and coercion limit cognition.

3. *Autonomy*. Children should not be forced to solve didactic and life challenges spontaneously and at once. They should be able to solve such tasks independently at their own pace. The main tools are observation, synthesis, individual and joint playing, collective reflection.

4. *Freedom under guidance*. Children should learn nature under wise guidance, although it means not only that of teachers. Freedom under guidance allows children to acquire key abilities (creative, linguistic, mathematical, musical, aesthetic, scientific, physical, social, moral, cultural, and spiritual).

5. *The importance of the family*. The teacher acts as a catalyst and mediator between spontaneous parenting and education. Parents should work with teachers and ensure free access to natural and cultural materials to fully develop the child's potential (Watts, 2021).

Weida (2019) studies the possibility of using digital resources and mobile applications along with the classical principles of Froebel and other prominent educators. However, the scholar states that the issue of broader and universal use of such practices remains open.

Werth (2018) indicates that Froebel's pedagogy represents the principles permeating his entire educational philosophy and personal activities. The researcher identifies the four most valuable practices of early childhood education. They are the following: a) the Gifts and Occupations and the Mother's songs pedagogical resources and tools; b) outdoor learning (in unity with the natural environment); c) the importance (Werth, 2018).

Quinn & Parker (2018) examine how contemporary teacher trainees support Froebelian principles and are ready to combine them with the latest educational trends. The obtained results allow introducing relevant educational modules for future primary and secondary school teachers. It must be noted that similar studies have not yet been conducted in the post-Soviet countries, which adds relevance to this article.

Hoskins & Smedley (2018) interviewed the students who attended Froebel College in the 1950s and 1960s to consider how this experience "impacted on their pedagogical beliefs, perspectives and practices". The results show that the respondents still use Froebel's pedagogical ideas in the postmodern era, which highlights their significant influence on learning, family communication, and early teaching practices. There is currently a lack of reflections on a narrow pedagogical application of Froebel's ideas in the post-secular era of the 21st century.

However, it would be rather unconstructive to emphasize only the positive aspects of Froebel's ideas. Bilewicz-Kuźnia (2018) indicates that some of Froebel's educational concepts are overused and overestimated: excessive respect for an infantile personality; perception of the game as the only incentive for action. The researcher emphasizes that it is essential to conduct comprehensive and large-scale research that would provide a better understanding of Froebel's educational philosophy, verify hypotheses on the

uniqueness or obsolescence of such an educational approach, and reveal the truth of Froebel's concepts, dimensions, and values (Bilewicz-Kuźnia, 2018). Therefore, this article attempts to determine such a value for online pedagogical technologies today.

**Studying Students' Readiness to use Froebel's ideas through Prezi**

Teacher students must be able to integrate the information on ICT they have acquired along with the pedagogy of using Froebel's ideas into a single system. After all, the boundaries between these disciplines are rather conditional, and most of the important problems (both practical and theoretical) cannot be solved universally.

As noted by Somenko (2015), one of the possible solutions lies in "reflecting" acquired knowledge and skills onto a specific problematic area to compare and unite them. In this regard, ICTs are of interest to representatives of various pedagogical fields since they can form an appropriate basis for it.

Therefore, it was essential to identify current levels of teachers' ICT competency to find out whether they are ready to implement the ideas of Froebel's pedagogy (1974) in professional activities. It became possible via the above-mentioned survey of Ukrainian teacher students based on two key questions.

The answers to the question "*Are you prepared to implement Froebel's pedagogy in your future professional activities?*" indicate that out of 173 students, 43.07% are fully prepared, 25.32% are not prepared, 31.6% of students selected "find it difficult to answer" (see Fig. 1).
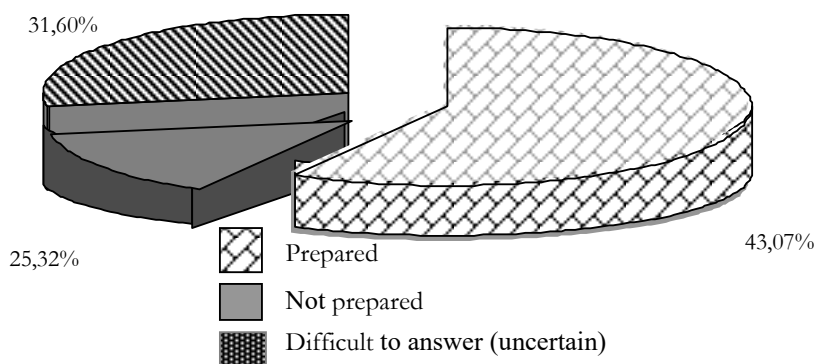


31,60%

25,32%

43,07%

Prepared

Not prepared

Difficult to answer (uncertain)

**Fig. 1**. *How well teacher students are prepared to implement Froebel's pedagogy in their future professional activities*

The study also shows that 73.4% of the respondents wish to improve their knowledge of Froebel's pedagogy and be able to create an appropriate "informational and educational environment". At the same time, 65.8% of the respondents claim that using multimedia presentations increases learning efficacy; 69.6% of them believe that it helps to remove territorial barriers in using the Froebel gifts in practice; 71.8% assume that multimedia learning tools help one to memorize the word-based games required to implement Froebel's pedagogy. Interestingly, 86.7% of the respondents suppose that multimedia learning tools simplify the strategy of using the Froebel gifts in practice in different age groups of preschool and primary school children. Besides, 68.4% of them are convinced that information technologies can help them to create educational materials to improve the implementation of the Froebel gifts in the educational environment.

Besides, it was essential to analyze students' opinions regarding the use of the latest computer programmes within Froebel's pedagogy. Thus, the answers to the question *Which presentation software do you consider most effective when implementing the Froebel's gifts?'* are the following: 44.62% of the respondents preferred PowerPoint; 26.96% of them chose Prezi; 7.58% – GoogleSlides; 9.17% – Sparkol Videoscribe; 7.62% – Creately; 4.05% – Infogram (see Table 1).

Figure 2 clearly illustrates this indicator.

Given the students' interest in Froebel's pedagogical ideas, the authors of the article developed a methodical textbook, titled "Froebel's Ideas in Action: Theory and Practice of the Present". This textbook teaches students to apply the word-based games following the Froebel gifts (No 1, 2, 3). The platform "Prezi" was used for better understanding and memorization of these games since it is rather popular among teacher students and offers many opportunities for material visualization.

**Table 1.** *The results of the survey regarding the best presentation software*

| Answers | An overall score (%) | Pedagogical colleges | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lutsk Pedagogical College | | Sambir Pedagogical College named after Ivan Fylypchak | | Vinnytsia Humanitarian Pedagogical College | | Bakhmut Pedagogical College | |
| | | 45 respondents | % | 53 respondents | % | 50 respondents | % | 25 respondents | % |
| PowerPoint | 44.62 | 16 | 35.6 | 27 | 50.9 | 24 | 48.0 | 11 | 44.0 |
| Prezi | 26.96 | 15 | 33.3 | 13 | 24.5 | 15 | 30,0 | 5 | 20.0 |
| Google Slides | 7.58 | 4 | 8.9 | 5 | 9.4 | 2 | 4.0 | 2 | 8,0 |

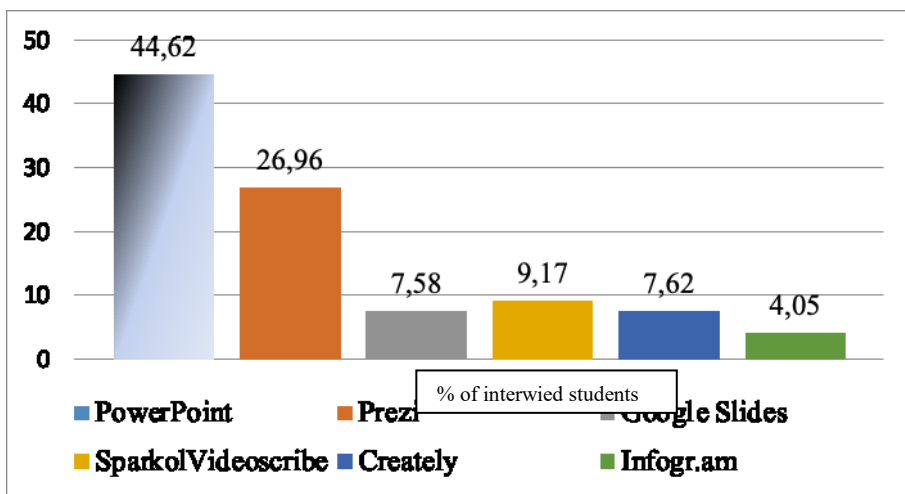| SparkolVideoscribe | 9.17 | 5 | 11.1 | 4 | 7.6 | 3 | 6.0 | 3 | 12.0 |
| Creately | 7.62 | 3 | 6.7 | 2 | 3.8 | 4 | 8.0 | 3 | 12.0 |
| Infogram | 4.05 | 2 | 4.4 | 2 | 3.8 | 2 | 4.0 | 1 | 4.0 |



**Fig. 2**. *Presentation software teacher students use when implementing the Froebel's gifts (%)*

The authors of the article found that Prezi occupies the second position in the ranking after PowerPoint. After that, they attempted to use Prezi for Froebel's pedagogy. Below are their views on this matter.

The term "Prezi" can be translated from Hungarian as a shortened form of the word "presentation". The platform's motto is "ideas matter". Prezi.com is a web service that allows one to create interactive multimedia presentations with a non-linear structure. This service offers many opportunities to demonstrate material using graphics, text blocks, stickers, geometric shapes, pictures, videos, or soundtracks (Bondarenko, 2018).

One needs to press the New Prezi button to create a new presentation. After that, a new browser tab opens and suggests choosing one of many templates. The option "Start blank Prezi" was used to create the author's presentations that reflected the ideas of Froebel's pedagogy (all figures were developed by the authors) (see Fig. 3).
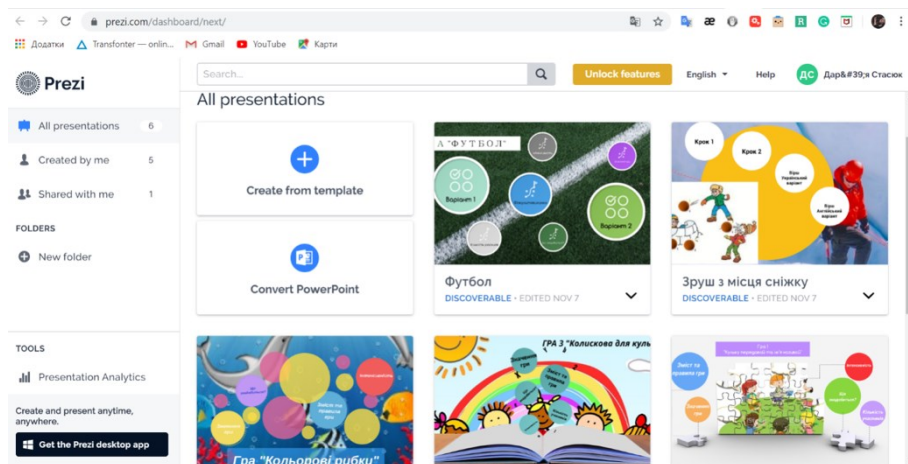
**Fig. 3.** *A homepage of the existing user*

After choosing the right template and adapting it to a certain Froebel Gift, the authors of the article adhered to the following algorithm: game's value; game mode; the number of participants; the required materials (electronic facilities; a picture of a specific Froebel gift); step-by-step rules of the game, explained by the teacher in Ukrainian and English; music and videos (if needed).

The Present button allowed the authors to review the results of activities at each stage of work. It must be noted that Prezi automatically saves files with corrections made.

Importantly, Prezi offers wider options for saving files than standard presentation software, which is rather convenient for teachers. Firstly, there is a link to the presentation page. Secondly, there is an opportunity to make online presentations for long-distance learning students. Thirdly, it is possible to generate a special page that works for a limited time and invite students of particular degree programmes (physical education; preschool and primary education), small groups. Fourth, all presentations are saved in PDF format. Fifth, one can download a standalone presentation on one's computer for use when it is not connected to the Internet.

**Conclusions**

Thus, information technologies, multimedia tools, and various online services significantly expand the boundaries of the educational process and provide new ways to present information. Besides, they create opportunities to test ideas and projects and promote better perception and acquisition of

knowledge. Importantly, presentation software has partially taken over the function of textbooks and manuals, which greatly simplifies teacher training today.

The use of computers in education has created a new generation of educational information technologies. Consequently, it has made it possible to improve learning, create new means of influence, and enhance interaction between teachers and students.

The conducted survey on the use of Prezi as an effective tool to create thought-provoking educational presentations shows the following scientific results. In particular, 73.4% of the respondents are willing to improve their skills in using Frobel's methods if educational institutions provide appropriate "informational and educational conditions". At the same time, 71.8% of the respondents believe that multimedia helps one better understand and memorize word-based games that are required when applying Froebel's pedagogy in practice. The survey also indicates that 26.96% of the respondents consider Prezi as an alternative and effective way of creating presentations which they believe promotes better realization of Froebel's pedagogical heritage in the educational space.

In perspective, the authors of the article plan to expand didactic materials based on the Froebel gifts (No 2, 3, 4, 5) within the online platform "Prezi".

Therefore, the introduction of Froebel's pedagogy in teacher training through the online platform "Prezi" provides new ways of presenting information and individualizes learning.

## References

Anisimova, O. (2013). Metodolohichni osnovy pedahohichnoi systemy F. Frebelia [Methodological principles of Froebel's pedagogical system]. *Pedahohika vyshchoi ta serednoi shkoly* [Pedagogy of Higher and Secondary Education], *37*, 424–427. http://nbuv.gov.ua/UJRN/PVSSh_2013_37_94

Bakhmat, N., Maksymchuk, B., Voloshyna, O., Kuzmenko, V., Matviichuk, T., Kovalchuk, A., Martynets, L., Uchytel, I., Solovyov, V., Manzhos, E., Sheian, M., Alieksieiev, O., Slyusarenko, N., Zhorova, I., & Maksymchuk, I. (2019). Designing cloud-oriented university environment in teacher training of future physical education teachers. *Journal of Physical Education and Sport*, *19*(4), 1323–1332. http://efsupit.ro/images/stories/august2019/Art%20192.pdf

Bilewicz-Kuźnia, B. (2018). Uniwersalne wartości pedagogiki Friedricha Froebla w poglądach polskich Froeblistów [Universal values of Friedrich Froebel's

pedagogy in the views of Polish Froeblists]. *Prima Educatione* [Primary Education], *2*, 67–75. https://journals.umcs.pl/pe/article/view/7609

Bondarenko, T. (2018). Osoblyvosti vykorystannia prohramnoho zasobu Prezi u protsesi rozrobky navchalnykh prezentatsii [Features of using the Prezi software to create educational presentations]. *Informatsiini tekhnolohii i zasoby navchannia* [Information Technologies and Teaching Aids], *1*(63), 1–11. https://journal.iitta.gov.ua/index.php/itlt/article/download/1907/1302/

Dar, R. A. (2018). Educational thought of Friedrich August Froebel. *International Journal of Advanced Multidisciplinary Scientific Research (IJAMSR), 1*(9), 36–42. https://doi.org/10.31426/ijamsr.2018.1.9.914

Froebel, F. (1974). Vospitanie cheloveka [Educating a person]. In N. B. Mchedlidze, A. A. Lebedenko, & Ye. A. Grebenshchikova (Eds.), *Istoriya doshkolnoy i zarubezhnoy pedagogiki* [The History of Preschool and Foreign Pedagogy] (pp. 190–207). Prosveshchenye.

Hoskins, K., & Smedley, S. (2018). The experiences and pedagogical beliefs, perspectives and practices of students at Froebel College. In T. Bruce, P. Elfer, S. Powell, & L. Werth (Eds.), *The Routledge International Handbook of Froebel and Early Childhood Practice* (pp. 183–186). Routledge.https://doi.org/10.4324/9781315562421

Komogorova, M., Maksymchuk, B., Bernatska, O., Lukianchuk, S., Gerasymova, I., Popova, O., Matviichuk, T., Solovyov, V., Kalashnik, N., Davydenko, H., Stoliarenko, O., Stoliarenko, O., & Maksymchuk, I. (2021). Pedagogical consolidation of pupil-athletes knowledge of humanities. *Revista Romaneasca Pentru Educatie Multidimensionala, 13*(1), 168–187. https://doi.org/10.18662/rrem/13.1/367

McNair, L. J., & Powell, S. (2020). Friedrich Froebel: a path least trodden. *Early Child Development and Care*, *191*, (7-8), 1175-1185. https://doi.org/10.1080/03004430.2020.1803299

Palamarchuk, O., Gurevych, R., Maksymchuk, B., Gerasymova, I., Fushtey, O., Logutina, N., Kalashnik, N., Kylivnyk, A., Haba, I., Matviichuk, T., Solovyov, V., & Maksymchuk, I. (2020). Studying innovation as the factor in professional self-development of specialists in physical education and sport. *Revista Romaneasca Pentru Educatie Multidimensionala*, *12*(4), 118–136. https://doi.org/10.18662/rrem/12.4/337

Polievikova, O. (2012). F. Frobel: obgruntuvannia neobkhidnosti suspilnoho doshkilnoho vykhovannia [Froebel: justifying the need for public preschool education]. *Integration of modern educational systems of Europe and the world in the context of implementation of pedagogical ideas of F. Frobel: international scientific-practical seminar* (pp. 10-12). Kherson. http://ekhsuir.kspu.edu/xmlui/handle/123456789/3137

Quinn, S. F., & Parker, L. (2018). How do twenty-first century teacher trainees connect their practice to Froebel's pedagogic principles? A case study of early childhood specialists at the University of Roehampton, Froebel College, 2011–2015. In T. Bruce, P. Elfer, S. Powell, & L. Werth (Eds.), *The Routledge International Handbook of Froebel and Early Childhood Practice* (pp. 191–200). Routledge. https://doi.org/10.4324/9781315562421

Sheremet, M., Leniv, Z., Loboda, V., & Maksymchuk, B. (2019). Stan sformovanosti smart-informatsiynoho kryteriyu hotovnosti fakhivtsiv do realizatsiyi inklyuziyi v osviti [The development level of smart information criterion for specialists' readiness for inclusion implementation in education]. *Informatsiyni tekhnolohiyi i zasoby navchannya* [Information Technologies and Learning Tools]*, 72*(4), 273–285. https://journal.iitta.gov.ua/index.php/itlt/article/view/2561

Somenko, D. (2015). *Rozvytok piznavalnoi aktyvnosti studentiv pedahohichnykh universytetiv u protsesi navchannia fizyky z vykorystanniam informatsiino-komunikatsiinykh tekhnolohii* [Developing cognitive activity in teacher students in physics lessons via ICT]. [PhD thesis. Volodymyr Vynnychenko Kirovohrad State Pedagogical University, Kirovohrad]. https://phm.cuspu.edu.ua/images/avtoreferats/49_aref_%D0%A1%D0%BE%D0%BC%D0%B5%D0%BD%D0%BA%D0%BE_%D0%94%D0%92.pdf

Stasiuk, D. (2019). Darunky F. Frebelia yak alternatyvna lohopedychna tekhnolohiia u podolanni movlennievykh rozladiv u ditei doshkilnoho viku [The Froebel Gifts as alternative speech therapy in overcoming speech disorders in preschool children]. *Materialy VII Vseukrainskoi naukovo-praktychnoi koferentsii "Vektor poshuku u suchasnomu osvitnomu prostori"* [Proceedings of the 7th All-Ukrainian Scientific-Practical Conference on "The Search Vector in Educational Space Today]. Lutsk Pedagogical College. http://lpk.ucoz.ua/load/naukovi_publikaciji/zbirniki_materialiv_konferencij/vektor_poshuku_v_suchasnomu_osvitnomu_prostori_zbirnik_materialiv_v_vseukrajinskoji_naukovo_praktichnoji_konferenciji/197-1-0-417

Watts, M. (2021). *Friedrich Froebel: interpolation, extrapolation. Early Child Development and Care , 191*(7-8), 1186-1195. https://doi.org/10.1080/03004430.2021.1881077

Weida, C. L. (2019). Froebel Facebook, Mobile Montessori, Virtual Reality Reggio, and Web Waldorf: digital resources, art education philosophies, and inclusive teaching. In R. L. Garner (Ed.), *Exploring Digital Technologies for Art-Based Special Education* (pp. 28–36).Routledge. https://doi.org/10.4324/9781351067928

Werth, L. (2018). Froebel's contributions to early childhood pedagogy. In T. Bruce, P. Elfer, S. Powell, & L. Werth (Eds.), *The Routledge International Handbook of*

*Froebel and Early Childhood Practice* (pp. 33–45). Routledge.
https://doi.org/10.4324/9781315562421