



UDC 37.013.3:07

DOI 10.35433/pedagogy.1(112).2023.29-38

DEEPENING THE PRINCIPLES OF MEDIA EDUCATION BASED ON THE GENERAL SYSTEMS THEORY

O. V. Voznyuk*

The purpose of the article is to generalize and deepen the principles of media education (as a system-building basis for creating the theory and practice of media education) based on Yu.A. Urmantsev's general systems theory. To achieve the goal, the following methodological tools are used: the philosophical principle of the unity of the world as the methodological basis of the research; the method of theoretical analysis of the problem field of the research; the general systems theory, which made it possible to generalize and deepen some principles of media education.

In the article, the principles of the Concept of implementing media education in Ukraine were generalized and somewhat deepened, that is, they received a systemic meaning being based on certain meaningful elements of the general systems theory. This made it possible to carry out a systematic correlation of the principles of media education and some pedagogical phenomena based on meaningful elements of the general systems theory.

It is shown that the principles of media education, the elements of the model of a school as a social institution, and the elements of the model of a man as a subject of psychology are in system-correlation relations, which realizes the philosophical principle of the unity of the world and testifies to the fact that the procedure of systematic generalization of the principles of media education is adequate to the theoretical and methodological principles both the general systems theory, and the pedagogical teaching about the school as a social institution and about media education as its essential aspect.

The table developed by the author "Systemic correlation of the principles of media education and some pedagogical phenomena being based on the meaningful elements of the general theory of systems" allows to deepen the formulation of such principle of media education as "aesthetic elevation in the context of media education".

The task of systematic analysis and deepening each of the seven systemically presented principles of media education belongs to the promising areas of development of the principles of media education.

Keywords: media education; principles of media education; media literacy; general systems theory; school as a social institution; man as a subject of psychology.

* Doctor of Sciences (Pedagogy), Professor
(Zhytomyr Ivan Franko State University)
alexvoz@ukr.net
ORCID: 0000-0002-4458-2386

СИСТЕМАТИЗАЦІЯ ПРИНЦИПІВ МЕДІАОСВІТИ НА ОСНОВІ ЗАГАЛЬНОЇ ТЕОРІЇ СИСТЕМ

О. В. Вознюк

Метою статті є узагальнення та поглиблення принципів медіаосвіти (як системотвірних основ побудови теорії і практики медіаосвіти) на основі загальної теорії систем Ю.А. Урманцева. Для досягнення мети використовується такий методичний інструментарій: філософський принцип єдності світу у якості методологічного підґрунтя дослідження, метод теоретичного аналізу проблемного поля дослідження, загальна теорія систем, що дозволило узагальнити та поглибити деякі принципи медіаосвіти.

У статті принципи Концепції впровадження медіаосвіти в Україні були узагальнені та децю поглиблені, тобто отримали системний сенс на основі певних смислових елементів загальної теорії систем. Це дозволило провести системну кореляцію принципів медіаосвіти та деяких педагогічних феноменів на основі смислових елементів загальної теорії систем.

Показано, що принципи медіаосвіти, елементи моделі школи як суспільного інституту та елементи моделі людини як предмету психології знаходяться у системно-кореляційних відношеннях, що реалізує філософський принцип єдності світу та свідчить про те, що процедура системного узагальнення принципів медіаосвіти є адекватною теоретико-методологічним засадам як загальної теорії систем, так і педагогічному вченню про школу як суспільного інституту та про медіаосвіту як її суттєвого аспекту.

Розроблена автором таблиця "Системна кореляція принципів медіаосвіти та деяких педагогічних феноменів на основі смислових елементів загальної теорії систем" дозволяє поглибити формулювання такого принципу медіаосвіти, як "естетична наснаженість у контексті медіаосвіти".

До перспективних напрямів розробки принципів медіаосвіти належить завдання щодо системного аналізу та поглиблення кожного з семи системно презентованих принципів медіаосвіти.

Ключові слова: медіаосвіта; принципи медіаосвіти; медіаграмотність; загальна теорія систем; школа як суспільний інститут; людина як предмет психології.

Introduction of the issue. Cornerstone transformations of world civilization caused by globalization processes give a new meaning to informatization and digitalization of public space and significantly strengthen the "fourth estate" (or "forth power"), which is the epithet for mass media as an influential phenomenon of modern society. At the same time, mass media, due to the virtualization of its mechanisms, has recently significantly expanded the sphere of penetration into the educational sphere, that affects the rapid development of media education, which is increasingly becoming the centre of scientific attention of teachers of both secondary and higher education institutions.

Moreover, in the context of the information boom and the rather high saturation of the media space with virtual phenomena, the development of digital and media educational skills in the use of digital technologies among children and young people, who are becoming more and more open to various methods of cyber

manipulation through the content of media messages on the Internet, is extremely relevant. At the same time, about 90% of young people use the Internet in their entertainment, educational, professional, and social activities.

Current state of the issue. Under such conditions, theoretical and practical developments in the field of media education acquire particular importance, in particular in the context of its theoretical and methodological, interdisciplinary foundations, which have been developed and are being developed by such foreign scientists as D. Buckingham, T. Jolls, L. Masterman, W. Potter, J. Piette, L. Giroux, J. Pungente, R. Hobbs, E. Thoman, N. Chomsky, C. Wilson and others [18-22].

In Ukraine, the problems of the media education from the point of view of its interdisciplinary foundations are considered by such scientists as O. Baryshpolets, O. Volosheniuk, H. Golovchenko, V. Ivanov, O. Karpenko, I. Kolesnikova, L. Kulchynska,

L. Naidyonova, H. Onkovich,
B. Potyatynnyk, N. Prykhodkina, and
others [1; 7; 8; 10; 11; 14-17].

Media education as a relatively new branch of education sphere being cornerstone social institution is based on the Grunewald Declaration on Media Education, 1982 as well as on the activities of the Global Alliance for Partnerships on Media and Information Literacy (GAPMIL), founded in 2013. A key role in the spread of media education belongs to The United Nations Educational, Scientific and Cultural Organization (UNESCO), which recognizes the current status of mass media as "tools for active participation of citizens in public life." Therefore, the main provisions of the Media Education Concept derive from the tasks that were formulated in the Paris agenda or 12 recommendations for media education for UNESCO (2007), in the Media literacy in a digital world European Parliament resolution on media literacy in a digital world (2008), in UNESCO Fez declaration on media and information literacy (2011), in UNESCO Paris Declaration on Media and Information Literacy in the Digital Age (2014).

At the same time, it is important to note that in the resolution of the UN General Assembly "Transforming our World: The 2030 Agenda for Sustainable Development" (2015), a special attention was paid to the multifaceted problems of media education and the development of informational media competences among children and youth.

Ukraine is taking the first steps in the field of media education, but it has certain rather significant achievements, which are indicated in a number of documents. Thus, the Concept of the Implementation of Media Education in Ukraine, approved by the Presidium of the National Academy of Sciences of Ukraine in 2016, outlines the key stages of its implementation until 2025.

Under such conditions, media education is currently in a state of development and deepening the conceptual apparatus and its principles (which derive from certain pedagogical

axioms, as well as from laws and regularities of the development of media education and education in general), which indicates that there is a certain uncertainty regarding some aspects of it terminological apparatus. Thus, in the USA, the terms "media literacy" and "media education" are used synonymously in scientific literature.

At the same time, we can reveal certain contradictions between the significant social demand and socio-economic requirements for the development of media literacy in various segments of the population and a certain inability of the education system of our country to fully satisfy new needs; between the growth of didactic requirements for media education and the lack of a systemic approach to the development and formulation of its principles.

The aim of the research.

Accordingly, the purpose of the article is to generalize and deepen the principles of media education (as a system-building basis for creating the theory and practice of media education) based on the general systems theory.

Research methods. To achieve the goal, the philosophical principle of the unity of the world is applied as the methodological basis of the research; the method of theoretical analysis of the problem field of research is used, as well as the general systems theory covering all the systemic entities of the world, which made it possible to generalize and deepen some principles of media education, to fill them with new content.

Results and discussion. The principles of pedagogy can be understood as "knowledge about the goals, essence, content, structure of education, expressed in a form that makes it possible to use them as regulatory norms of practice" [9: 101].

The basic principles of media education in the most complete form were formulated in the materials of the Ontario Association for Media Literacy (AML) in 1989, which contained the key concepts of media education:

– all messages in the media sphere are certain constructions being certain

material from which a person builds his/her reality;

– therefore, the media construct reality, crystallizing a certain picture of the world;

– under such conditions, media messages have an ideological, social and political colour and reveal/mould certain social values;

– on the other hand, the media have a commercial purpose, when the factor of commercialization can influence the process of forming value orientations of society in general and specific people who perceive the same media message differently;

– the audience/society has the opportunity to express their point of view through media, in which the form and content are closely connected,

– mass media reveal a unique aesthetic form and are characterized by their own grammar and encode reality according to the latter; media messages creatively use a peculiar language with its own rules,

– media education as an aspect of culture and means of socialization requires the active participation of all members in the educational process and the development of critical thinking skills,

– expands the horizons of functional education (ability to read and write), developing the skills in the students to deepen background knowledge about the world, the ability to reflect on and actively participate in the democratic processes of society [20; 22].

Len Masterman, one of the developers of media education, believes that:

"1. Media Education is a serious and significant endeavour. At stake in it is the empowerment of majorities and the strengthening of society's democratic structures.

2. The central unifying concept of Media Education is that of representation. The media mediate. They do not reflect reality but re-present it. The media, that is, are symbolic or sign systems. Without this principle no media education is possible. From it, all else flows.

3. Media Education is a lifelong process. High student motivation, therefore, must become a primary objective.

4. Media Education aims to foster not simply critical intelligence, but critical autonomy.

5. Media Education is investigative. It does not seek to impose specific cultural values.

6. Media Education is topical and opportunistic. It seeks to illuminate the life-situations of the learners. In doing so it may place the "here-and-now" in the context of wider historic and ideological issues.

7. Media Education's key concepts are analytical tools rather than an alternative content.

8. Content, in Media Education, is a means to an end. That end is the development of transferable analytical tools rather than an alternative content.

9. The effectiveness of Media Education can be evaluated by just two criteria:

– the ability of students to apply their critical thinking to new situations, and

– the amount of commitment and motivation displayed by students.

10. Ideally, evaluation in Media Education means student self-evaluation, both formative and summative.

11. Media Education attempts to change the relationship between teacher and taught by offering both objects for reflection and dialogue.

12. Media Education carries out its investigations via dialogue rather than discussion.

13. Media Education is essentially active and participatory, fostering the development of more open and democratic pedagogies. It encourages students to take more responsibility for and control over their own learning, to engage in joint planning of the syllabus, and to take longer-term perspectives on their own learning. In short, Media Education is as much about new ways of working as it is about the introduction of a new subject area.

14. Media Education involves collaborative learning. It is group focused. It assumes that individual learning is

enhanced not through competition but through access to the insights and resources of the whole group.

15. Media Education consists of both practical criticism and critical practice. It affirms the primacy of cultural criticism over cultural reproduction.

16. Media Education is a holistic process. Ideally it means forging relationships with parents, media professionals and teacher-colleagues.

17. Media Education is committed to the principle of continuous change. It must develop in tandem with a continuously changing reality.

18. Underpinning Media Education is a distinctive epistemology. Existing knowledge is not simply transmitted by teachers or "discovered" by students. It is not an end but a beginning. It is the subject of critical investigation and dialogue out of which new knowledge is actively created by students and teachers" [18].

On the basis of the principles of media education developed by foreign scientists, Ukrainian researchers have formulated a number of principles [12], which we summarized on the basis of certain meaningful elements of the general systems theory developed by Yu.A. Urmantsev [23]. Let us consider these principles.

1. A personality socio-psychological approach, which presupposes focusing on the actual media needs of all participants in the educational/media educational process, as well as taking into account various features (age, individual, socio-psychological media cultural features, certain media preferences).

2. Permanent updating the content of media education based on modern media technologies, information and communication technologies, on certain changes in the field of mass media and media culture of society, its separate layers, youth subculture, as well as changes in the context of current information precedents and media phenomena. At the same time, the implementation of this principle requires a certain balance between the current state of society and its historical heritage.

3. The priority of national, social, universal moral and ethical values, which is supported through the protection of public morality and universal value norms, in particular the value/positive attitude of the participants in the educational process towards their socio-natural environment – towards the society, state, people, nature, art, labour and themselves. Under such conditions, the development of national culture, respect for national traditions, consideration of the national and ethnolinguistic specificity of the media needs of students and teachers, and the growth of the prestige of Ukrainian-language communication in Ukraine and the world, take place.

4. Civic orientation and patriotism, as media education becomes an essential factor in the formation of the political culture of society, the conscious civic patriotic position of a personality, his/her patriotic feelings, patriotic outlook, the consolidation of the Ukrainian people, the development of civil society (based on the potential of public unions and associations, other public movements), formation and strengthening of national identity.

5. Aesthetic elevation in the context of media education involves the wide use of the best/progressive achievements of various forms of modern art and aesthetic education of the participants in the educational/media educational process by means of fine arts, music, fiction, cinema, folklore practices, taking into account the potential of institutions and separate projects of an artistic profile existing in society in general and at the local level.

6. Productive motivation of the participants in the educational/media educational process involves creative perception of media effects and the development of the ability of children and youth to create their own media products for the purpose of using them in society, which contributes to the formation of productive motivation of all participants in the media-educational process.

7. Critical thinking of the participants in the educational/media educational process presupposes the formation of instrumental skills of critical perception, analytical processing of media information, assessment of its reliability and objectivity, as well as the creation of new – progressive – meanings in the students.

Let us consider the general systems theory, which is based on the law of system rearrangements, according to which any object as a system entity is rearranged due to seven ways: by changing three basic characteristics of the

world – quantity, quality, relationships between elements or one of the possible connections of these features (isomers).

If the presented features are marked as A (quality), B (relationships), C (quantity), then we get four additional connections: AB, AC, BC, ABC.

So, there are only seven ways of forming systems (to which all system formations of the world obey): A, B, C, AB, AC, BC, ABC.

In graphic form, this procedure implements the universal system base of the system formations of the Universe.

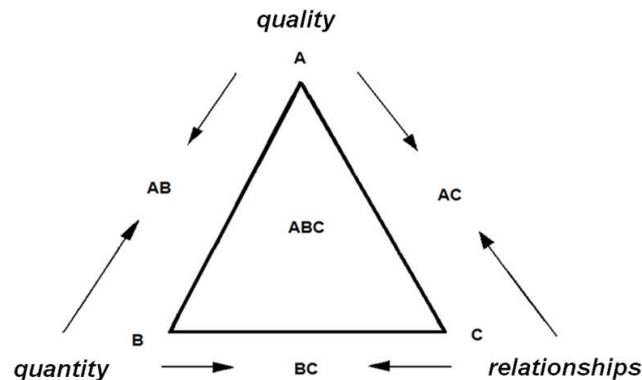


Fig. 1. Graphic expression of the general systems theory, according to Yu.A. Urmantsev

Let us show the systematic correlation of some educational and pedagogical categories in accordance with the general systems theory, which we widely apply during the analysis of pedagogical

reality, being represented in monographic publications, specialized journals, conference proceedings [2-6; 24; 25]:

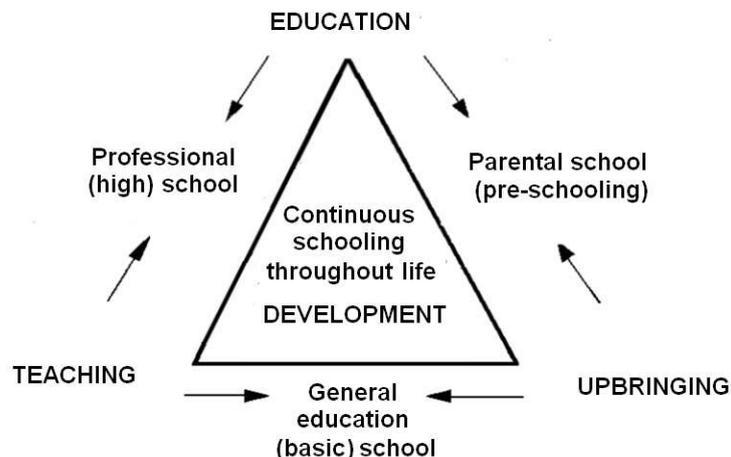


Fig. 2. The model of the school as a social institution (source: author's research)

The represented structure corresponds to the model of a person as a subject of psychology, the structure of

which is taken from various sources devoted to the study of the analysis of a person as a subject of psychology.

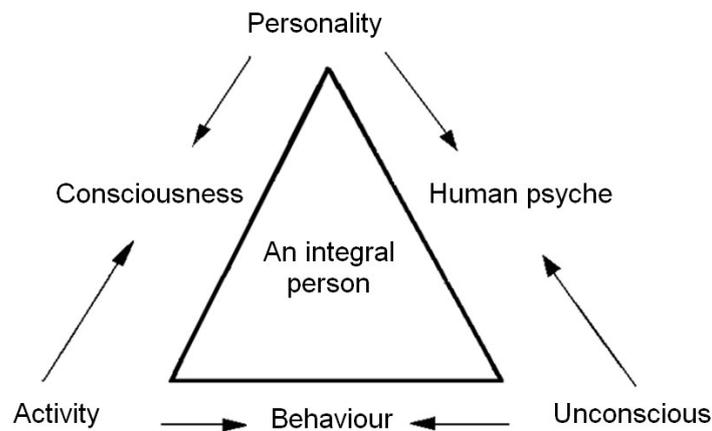


Fig. 3. Model of a person as a subject of psychology (source: author's research)

In this regard, the psychological structure of the personality developed by H.S. Kostyuk is of great interest for us [13]. It consists of the following elements:

- sphere of consciousness;
- mental qualities;
- sphere of education or acquired knowledge;
- motivational sphere (needs and interests, views and beliefs, spiritual requests);

- a subsystem of behavioural characteristics;
- a subsystem of the individual uniqueness of the mental composition of the personality and character.

If we transform this structure in accordance with the general systems theory, we get the following model of the human personality structure.

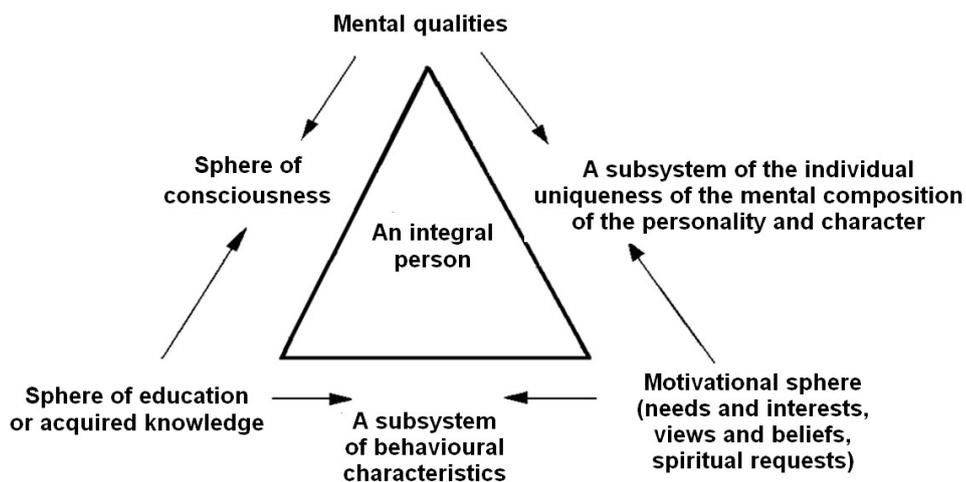


Fig. 4. Psychological structure of the personality according to the general systems theory (source: author's research)

We summarized the principles of media education (as well as some pedagogical phenomena) based on the

semantic elements of the general systems theory.

Table 1

**System correlation of the principles of media education and some pedagogical phenomena based on the meaningful elements of the general systems theory
(source: author's research)**

Principles of media education	Elements of the model of the school as a social institution	Elements of the model of human being as a subject of psychology
Personal socio-psychological approach	Education	Personality
Permanent updating the content of media education	Continuous schooling throughout life	An integral person
The priority of national, social, universal moral and ethical values	Parental (pre-schooling) school	Human psyche
Civic orientation and patriotism	Upbringing	Unconscious
Aesthetic elevation in the context of media education	General education (basic) school	Behaviour
Productive motivation of the participants in the educational / media educational process	Teaching	Activity
Critical thinking of the participants in the educational / media educational process	Professional (high) school	Consciousness

Conclusions and research perspectives.

Despite the fact that media education has recently received strong development in the world and in Ukraine, the conceptual principles of media education are in a state of development and deepening, as evidenced by the formulation of the main principles of media education by Ukrainian researchers based on the analysis of the principles of media education developed by foreign scientists, when some aspects of the latter were not included in the Ukrainian Concept of Media Education, while some principles of the mentioned Concept are original ones not being reflected in the principles/fundamentals of media education developed by foreign scientists.

In our article, the principles of the Concept of implementing media education in Ukraine were generalized and somewhat deepened (received a systemic meaning) based on certain meaningful elements of the general systems theory. This made it possible to carry out a systematic correlation of the principles of media education, some

pedagogical phenomena based on the meaningful elements of the general systems theory.

Thus, it is shown that the principles of media education, the elements of the model of the school as a social institution, and the elements of the model of the human being as a subject of psychology are in system-correlation position, which testifies, firstly, to the triumph of the philosophical principle of the unity of the world, and, secondly, to that that the procedure of systematic generalization of the principles of media education is adequate to the theoretical and methodological foundations of both the general systems theory and the pedagogical teaching about the school (as a social institution) and media education as an essential aspect of the latter.

The table developed by the author "Systemic correlation of the principles of media education, some pedagogical phenomena based on the meaningful elements of the general systems theory" allows to deepen the formulation of such principle of media education as

"Aesthetic elevation in the context of media education", since this principle corresponds to such an element of the school (as a social institution) as "general education (basic) school". It is proposed to formulate this principle as follows: "Aesthetic elevation and expansion of the horizon of knowledge of the participants in the media education process." Thus, this principle affirms the unity of the aesthetic (right-hemisphere) and knowledge (left-hemisphere) aspects of the activities of the institutions of general education, which should take place within the framework of these institutions, since their activities stem from the parental school (within the framework of preschool education institutions), in the activities of which education and upbringing of children

mainly implement the functions of the right hemisphere of the human brain. That is, in the institutions of general education, the aesthetic (right-hemisphere, creatively-centred) elevation should not be inhibited, but should be supported along with the development of the knowledge (left-hemisphere, abstract-logical) aspect. Such an approach makes it possible to overcome the paradoxical meaning of the Japanese proverb: "a child is a genius at five years old, a child is talented at twelve, and at twenty – it is an ordinary person."

The task of systemic analysis and deepening each of the seven systemically presented principles of media education can be considered the perspective areas of development of the principles of media education.

REFERENCES (TRANSLATED & TRANSLITERATED)

1. Baryshpolets, O. (2014). *Ukrainskyi slovnyk mediakultury [Ukrainian dictionary of media culture]*. Kyiv: Milenium. 196 [in Ukrainian].
2. Vozniuk, O.V. (2015). Zahalna teoriia system ta yii pedahohichni proektsii [General theory of systems and its pedagogical projections]. *Profesiina pedahohichna osvita: systemni doslidzhennia – Professional pedagogical education: systematic studies: monohrafiia / za red. O.A. Dubaseniuk*. Zhytomyr: Vyd-vo ZhDU im. I. Franka, 29-67 [in Ukrainian].
3. Vozniuk, O.V. (2016). Systemno-tsilovyi aspekt kholistychnoi paradyhmy osvity [The system-target aspect of the holistic paradigm of education]. *Pedahohichna osvita: Teoriia i praktyka. Psykholohiia. Pedahohika – Pedagogical education: theory and practice. Psychology. Pedagogy*. Kyiv: Kyiv. un-t im. B. Hrinchenka, 25, 4-10 [in Ukrainian].
4. Vozniuk, O.V. (2017). Systema tsilovykh oriientyriv suchasnoi osvity [System of target orientations of modern education]. *Visnyk Kyivskoho natsionalnoho universytetu imeni Tarasa Shevchenka – Bulletin of Taras Shevchenko national university of Kyiv*, 2 (5), 18-24 [in Ukrainian].
5. Vozniuk, O.V. (2021). Fraktalne modeliuвання systemy kompetentnosti suchasnoho vchytelia [Fractal modeling of the modern teacher's competence system]. *Rozvytok profesiinoi kompetentnosti pedahohichnykh pratsivnykiv Novoi Ukrainskoi Shkoly v umovakh pislidyplomnoi osvity – Development of professional competence of teaching staff of the New Ukrainian School in the conditions of postgraduate education: zb. materialiv Vseukr. nauk.-prakt. internet-konf. Zhytomyr*, 37-41 [in Ukrainian].
6. Vozniuk, O.V. (2021). Fraktalnii analiz ontolohycheskoi y sotsyalno-pedahohycheskoi realnosti [Fractal analysis of ontological and socio-pedagogical reality]. *Abstract Book of the 9th International Conference on Social Sciences May 2-4, 2021. Al Farabi Journal*. Nakhchivan University, Azerbaijan, 793-802 [in russian].
7. Holovchenko, H.O. (2020). Analiz diialnosti tsentriv mediaosvity v Ukraini [Analysis of media education centers in Ukraine]. *Visnyk Cherkaskoho universytetu imeni Bohdana Khmelnytskoho – Bulletin of the Cherkasy Bohdan Khmelnytsky national university*, 2, 118-123 [in Ukrainian].
8. Holovchenko, H.O. (2020). Mediaosvitnia diialnist v Ukraini: analiz normatyvno-pravovoho zabezpechennia [Media-educational activity in Ukraine: analysis of regulatory and legal support]. *Osvitohichnyi dyskurs – Educological discourse*. Kyiv, 3 (30), 19-36 [in Ukrainian].
9. Honcharenko, S. (2012). *Pedahohichni zakony, zakhonomirnosti, pryntsyipy: Suchasne tlumachennia [Pedagogical laws, regularities, principles: Modern interpretation]*. Rivne: Volynski oberehy. 192 [in Ukrainian].

10. Dubaseniuk, O.A., Vozniuk, O.V., & Marchenko, H.V. (2023). Perspektivni napriamy rozvytku mediaosvity maibutnykh uchyteliv pochatkovoї shkoly u zakladakh vyshchoї osvity Ukrainy protsesu [Prospective directions for the development of media education of future primary school teachers in higher education institutions of Ukraine]. *Tsyfrova transformatsiia ta dydzhytal tekhnolohii dlia staloho rozvytku vsikh haluzei suchasnoi osvity, nauky i praktyky – Digital transformation and digital technology for the sustainable development of all branches of modern education, science and practice: materialy mizhnar. nauk.-prakt. konf. / Mizhnarodna Akademiia Prykladnykh Nauk (Respublika Polshcha); Derzhavnyi biotekhnolohichniy universytet (Ukraina). Lomzha, Polshcha, 1, 312-316 [in Ukrainian].*
11. Ivanov, V., & Volosheniuk, O. (2012). *Mediaosvita ta mediahramotnist [Media education and media literacy]*. Kyiv: Tsentrlilnoi presy, 352 [in Ukrainian].
12. *Kontseptsiiia vprovadzheniia mediaosvity v Ukraini (nova redaktsiia) [Concept of implementation of media education in Ukraine (new edition)] / za red. L.A. Naidonovoi, M.M. Sliusarevskoho. (2016). Kyiv, 16 [in Ukrainian].*
13. Kostiuk, H.S. (1989). *Navchalno-vykhovnyi protses i psykhychnyi rozvytok osobystosti [Educational process and mental development of personality]*. Kyiv: Rad. shkola, 460 [in Ukrainian].
14. *Mediakultura osobystosti: sotsialno-psykholohichniy [Media education and media literacy: textbook] / Baryshpolets, O., Naidonova, L., Myronenko, H., & in. (2009). Kyiv: Milenium, 440 [in Ukrainian].*
15. *Mediaosvita ta mediahramotnist: pidruchnyk [Media education and media literacy: textbook] / red.-upor. V.F. Ivanov, O.V. Volosheniuk; za nauk. red. V.V. Rizuna. (2012). Kyiv: Tsentrlilnoi presy, 352 [in Ukrainian].*
16. Prykhodkina, N. (2020). *Mediaosvita u shkilyntstvi anhlovnykh krain [Media education in schooling in English-speaking countries]*. Kyiv–Ternopil: Krok, 412 [in Ukrainian].
17. Karpenko, O. (2017). Media Education as a Component of Reforming Higher Education in Ukraine. *Media4u Magazine: Proceedings of 10th International Research Electronic Conference Media and Education. Special Issue, 59-63 [in English]*.
18. Masterman, L. (1985). *Teaching the Media*. London: Comedia publishing Group, 341 [in English].
19. Potter, W.J. (2001). *Media Literacy. Thousand Oaks*. London: Sage Publication, 423 [in English].
20. Pungente, J. (2018). *Canada's key concepts of media literacy. Center for Media Literacy*. Retrieved from: <https://cutt.ly/yxZApWJ> [in English].
21. *The Handbook of Media Education Research. (2021). Editor(s): D. Frau-Meigs, S. Kotilainen, M. Pathak-Shelat, M. Hoehsmann, S.R. Poyntz. New York: John Wiley & Sons, Inc. DOI:10.1002/9781119166900 [in English]*.
22. Thoman, E. (1999). Skills and Strategies for Media Education. *Educational Leadership, 56(5), 50-54 [in English]*.
23. Urmantsev, Yu.A. (1986). Symmetry of System and System of Symmetry. *Computers and Mathematics with Applications, vol. 12, is. 1-2, part B, January–April 1986, 379-405. DOI:10.1016/0898-1221(86)90160-4 [in English]*.
24. Vozniuk, O.V. (2018). Universal matrixes of knowledge as interdisciplinary instruments of scientific research and students' teaching means. *Zhytomyr Ivan Franko State University Journal. Pedagogical Sciences, 2(93), 5-12 [in English]*.
26. Vozniuk, O.V., & Dubaseniuk, O.A. (2020). To the question of building the universal model of the development of world pedagogy and education. *Zhytomyr Ivan Franko State University Journal. Pedagogical Sciences, 1(100), 5-14. DOI: 10.35433/pedagogy.1(100).2020.5-14 [in English]*.

Received: March 14, 2023

Accepted: April 05, 2023