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**SYNERGISTIC AND INFORMATION APPROACH AS A
METHODOLOGICAL TOOL OF STUDYING OPEN ADULT EDUCATION**

The formation of information society, in which the main strategic resource is information and knowledge, is a natural and evolutionary stage of the development of human civilization. According to V. Pozhuev, the development of the world globalization and the unprecedented transparency of national borders make information and knowledge significant strategic factors in the international competition of its positive sides and in the minimization of negative consequences of the global transformation of the humanity [13, p. 12]. Today, the formation of the information society in Ukraine is an essential precondition of the country's steady development and its full-scale entrance to the world economy and educational space.

Among the characteristic features of the information society is its openness, which is reflected in the openness to the world, openness of people, openness of the processes of their cognition and education. A trend toward expanding the access to education and making it more available for various strata of society, especially now, when Ukraine integrates into the European community, determines the necessity to create an open educational space, which will become an important addition to the structure of the existing system of adult education and will give a possibility to realize the paradigm of the open education. According to L. Gorbunova, the search for the optimal organizational structure of the open education (especially in the field of adult education) and for the establishments that can ensure the transition from the principle of “the education for life” to the principle of “lifelong education” is the most important challenge of the 21st Century [4, p. 40]. Its resolution is connected

with the development of the theory and methodology of the open adult education, as well as with the selection of the proper methods of its research.

It is worthwhile to note that currently the study of such phenomena as the open world, open society, and open education is grounded predominantly on the traditional methodological approaches based on the classical science and philosophy of rationalism, whereas isolation and closedness are considered original and fundamental categories. Adequate and complete understanding of such phenomenon as openness is impossible without the post-non-classical methodological paradigm, which requires that a non-linear character, possible dependence, self-organization of such phenomena and processes be considered. Research into the open information society in general and open education in particular is to be carried out by means of new, improved theories, which embrace post-non-classical postulates and open prospects for complete and whole learning and world perception.

Thus, the analysis of the selection of methodological tools for the research into the phenomenon of open adult education is a relevant and urgent scientific task.

Today, scholars have a considerable arsenal of methodological tools. In scientific research, scholars use such philosophical and methodological approaches as phenomenological, historical and genetic, personality-oriented, activity and competency-based approaches. At the end of the 20th – the beginning of the 21st Centuries, the systems approach became the most popular and de-facto dominates the philosophy of rationality. However, this approach has a range of limitations in the research into such dynamic nonlinear and complex phenomenon as open education.

Recently, attempts have been made to modernize the systems approach, notably by means of various additions and modifications, among which we can consider the meta-systems approach (A. Karpov, T. Klimontova, V. Peskov, N. Yakovleva) and systems-synergistic approach (V. Arshynov, Y. Danylov, B. Kadomtsev, S. Kapitsa, O. Kniazeva, S. Kurdiumov, I. Prygozhyn, I. Stengers, H. Haken, I. Khashchanskyi). The proponents of the afore-mentioned approaches were indeed able to reveal individual, unknown before, aspects of the systems approach potential. However, these additions and modifications fail to ensure an

adequate study of dynamic and changing structures, phenomena, and events, especially those that are characterized by openness, infinity, nonlinear nature, such as the open world, open society, and open education.

Hence, *the scientific task* of this article is to analyze philosophical and methodological tools and choose post-non-classical methodology in order to study the phenomenon of the open adult education.

The study of any phenomenon or event is to be started with the selection of a philosophical methodology to be based on. In this context, we agree with V. Shapoval's statement that, in determining the philosophical tools for studying various phenomena, three absolutely different variants can be used: 1) the study of a phenomenon can be satisfied with one method, which will allow for well-grounded results; 2) it is necessary to use a complex of different methodologies, each of which helps reveal certain sides of the examined object; and 3) the philosophical study does not require any specific methodology in its pure form and is carried out with the logical devices, which demonstrate the author's personal position [18, p. 31 – 32]. Taking into account the fact that cognition is to be based on certain predetermined principles, the study of certain phenomena requires the selection of a single methodology to assist in achieving the hypostasized aims as soon as possible. Such approach has its own advantages: its application demonstrates the unity and integrity of the author's theoretical position; it increases chances of achieving positive scientific results. This approach is widely used in science, but just to study some simple objects possessing comparatively small number of internal and external relations. However, when it comes to the objects with a complex multi-level structure and various connections and relations or, moreover, if the objects of the nonmaterial world are studied, it is hardly possibly to speak about the application of "the only correct" methodology. The study of a phenomenon from various methodological positions allows for the consideration of, first and foremost, a diverse experience of studying this phenomenon in the history of philosophy and, secondly, plurality of modern philosophical discourse, which is multi-vector and multi-faceted. Doubtlessly, as V. Shapoval reasonably points out, this approach has its weak sides

as well. While analyzing different sides of the object of study by means of different methodological devices, it remains necessary to synthesize the obtained information, to construct a whole theoretical model, as any object is an entity. To do so, researchers have to either borrow some methodology or convincingly demonstrate his/her personal, unique methodological position, which will assure the synthesis [18, p. 31 – 32].

Studying the phenomenon of the open education, one can use phenomenological, historical and genetic, personality-oriented, activity, competency-based, and other philosophical and methodological approaches. However, it is the systems approach that has recently become the most popular and predominant in the philosophy of rationality. Within the systems approach based on the classical science and philosophy of rationalism, isolation, closedness, and systematization are considered original and fundamental categories. These categories are connected with such categories as determinism, linearity, balance, stability, reflectivity, etc. These lead to the conclusion that the systems approach as the methodological basis of the philosophy of the closed society. Introduction of such categories as open education, in-determinism, imbalance, instability within the systemic approach are dictated by the need to overcome the original closedness. Instead, as V. Yegorov reasonably notes, contemporary worldview, which corresponds to the post-non-classical science, is based on the openness as the original category of the open world [6, p. 34]. The world in its ultimate worldview meaning is the world manifestation. The concept of the world manifestation denotes the worldview approach considered from the standpoint of the world's openness, i.e., from objective positions. It is that ultimate abstract worldview level that reveals the absence of the world beginning and its infinity.

This modern understanding of the world is connected with openness and lies in the basis of the corresponding worldview, which is opposite to the rationalism as the worldview approach. It is the philosophy of the open world, the philosophy of openness, based on the new understanding of the world's openness and infinity, order and chaos, determinism and in-determinism, organization and self-organization,

linearity and non-linearity, stability and instability, one-vector and multi-vector nature of natural processes, fluctuation, bifurcation, informational nature of the individual, his/her cognitive abilities and needs.

Such researchers as A. Abdulaev, V. Vasyilkova, I. Dobronravova, I. Novyk, et al. point out the limitation of the systems approach at the modern post-non-classical stage of the development of science. V. Vasyilkova states that the ancient Indian and Chinese philosophies believed that nature is not an atomic complex of objects. It is a single, inseparable, live and organic, ideal and material reality, which is involved in motion [1, p. 18]. According to I. Dobronravova, the systems approach does not only correspond to the evolutionary approach of the new paradigm, but contradicts quantum and relativistic principles proper [5, p. 347]. According to the scholars A. Abdulaev and I. Novyk, the developed conceptual arsenal of the classical general systems theory and cybernetics appears to be sufficient only to describe the systems that are unchangeable over time, linear by the organizational structure, and determined [10, p. 4].

An attempt to overcome the limitations of the systems approach to the study of the phenomena characterized by openness can be found in the works by the proponents of the meta-systems approach A. Karpov [7], T. Klimontova [8], V. Peskov [12], and N. Yakovleva [18].

The logics of the meta-systems approach sees any system as a system interacting with some external to it system. In this interaction it obtains its qualitative distinctness and specificity and can be adequately understood and studied only if this interaction is taken into consideration. The meta-systems approach postulates that any system is included into a meta-system and interacts with it at the meta-systemic level. According to the classical representation of the systems approach, the object taken in a relatively independent form obtains its qualitative distinctness. However, being taken in the context of the real meta-system to which it is related, it obtains its genuine “inner systems being”, its qualitative specificity [8, p. 158 – 159].

According to the definition of the author of the meta-systems approach A. Karpov, this approach enables the study of more complicated and specific systems

in a more adequate and complete way. The most important and unique feature of this type of systems is its ability to attain a new and specific quality – ability to functionally include meaningful features and characteristics of that meta-system they are part of [7, p. 55].

This analysis reveals that, trying to improve the systems approach, the proponents of meta-systems approach focus their attention on the specific kind of interaction between the object and the environment, the object and the meta-system at the meta-level.

Another modification of the systems methodology is an approach that combines the ideas of systematization and synergy in its basis. The potential for the use of the ideas of synergetics within the systems-synergistic approach is covered in the works by V. Arshinov, Yu. Danylov, B. Kadomtsev, S. Kapitsa, O. Kniazeva and S. Kurdiumova [9], I. Prygozhyna and I. Stengers [15], H. Haken, I. Khashchanskyi [16]. According to I. Khashchanskyi, systems-synergistic approach is a combination of principles that determine the objective and the strategy of resolving complex problems; the method based on the concept of the object as a system, which requires, on the one hand, decomposing the problem into its components and analyzing these parts and, on the other hand, keeping the mentioned components in the integral entity. The main principle of the systems-synergistic approach is the principle of the ultimate objective. It implies that the system's functioning is directed at the achievement of the ultimate goal, while the aims of its sub-systems are considered intermediate results of this process [16, p. 490].

The origins of the systems-synergistic approach are rather time-honored and numerous; they can be traced in the works by P. Ricoeur, I. Kant, K. Jaspers, D. Bell, et al. Synergetics of I. Prygozhyn who addresses the problems of the self-organization of non-linear open systems. The scholar challenged all progressive ideas of social development and suggested the idea of stochastics as the leading one, i.e., the unpredictability of development at any of the history's bifurcation points [16, p. 490].

The afore-mentioned features of the systems-synergistic approach enable the study of such complex non-linear and non-determined phenomena as the open world in general and the open education in particular. Thus, the works by V. Andrieva, L. Zorina, and N. Talanchuk reveal synergistic laws of students' education and research. The systems-synergistic approach is based on the dominant in this kind of activity self-organization, self-education and means the stimulation of the subject's self-realization and self-improvement in the process of interaction with other individuals.

However, we consider synergistic-information approach the most adequate one. The synergistic-information approach, as well as the systems-synergistic one, implicates a non-linear development following the bifurcation scenario, i.e., a new quality of the individual or society is not the result of the regular gradual development, but a result of the choice of one of many possible developmental variants under the influence of collective and individual interactions, which cardinally change not only the direction of social changes, but also the essence of the individual. Synergistic-information approach as a modern worldview that is inseparably connected with the world manifestation, leads from the objective (nature), but not from the subjective (Man). In this interpretation, the world outlook, according to M. Scheler, absorbs the essence of physical, psychic, and ideal things regardless the way of their perception.

It is synergistic-information approach that allows for an adequate conceptualization of such integral categories as openness, information, responsibility, freedom within the open education. To explain this idea, we will employ the research into the correlation between such categories as systematization and openness, systematization and information.

It should be noted that the categories "systematization" and "openness" are considered as mutually exclusive ones, i.e., are the logical contradiction. Systematization as a category is connected with a certain degree of boundedness, completeness, closedness, and order. At that, openness, which, according to the systems approach, is expressed by the exchange of either matter or energy between

the system and other systems or the environment, is not original, but a derivational phenomenon. In fact, the original openness is the open world and the idea of the material and the ideal as the original entity. At that, the original closedness is a circularity, subordination of the material (nature) and the ideal (human being, his/her mind, and consciousness). Hence, openness, which is connected with the original openness and original closedness, cannot characterize the concept of system. Its fundamental principle is the original synergy of the material and ideal origins that expresses the level of the world perception achieved by human being. The human being, who is created by nature and who embraces the essential features of the world at a macro-level, is also open by his/her essence and of information nature.

Systems approach seems quite limited in the explanation of the information nature of the individual. Information, unlike energy, is reduced neither to matter nor to the idea as to natural matters of a more common level. It represents an independent and deeper natural matter. Under these conditions, according to V. Pozhuev, information, which is seen as a global discourse of nature and has a case-specific way of manifestation and perception, is given priority [14, p. 7]. V. Yegorov reasonably points out that the nature of information lacks systems closedness and, as such, is a language of nature common for the space in general, not only for the Solar system or our galaxy [6, p. 7]. Information has no boundaries, is not connected with the speed of light in vacuum, spreads instantly, and is generally available and universal. These very qualities of information turn the energy individual into the information individual and information – into the major strategic resource of the modern society.

According to N. Wiener, information is “the content received from the outside world” [3, p. 31]. It is the information that relays ideal meanings of natural connections and relations to the deepest and the most general ones, in particular to those that are beyond human understanding. This understanding of information was formulated by N. Wiener, C. Shannon, and W. Ashby in the middle of the 20th Century and pushed turning information into the major strategic resource of the post-industrial, information society.

As a non-material matter, information is non-systemic. Unlike material systems of different levels, which are characterized by certain relations and power interaction between their structural elements, the concept of systematization is inadequate for information. Information characterizes a fundamentally new way of interaction, i.e., non-power. Thus, information turns into a fundamental notion, which expresses the infinity of the world in a more adequate way. Information is neither matter nor energy; it is not limited by discretion connected with them and, consequently, by the systemic idea of the world's boundaries. Information is a new independent matter, which expresses a fundamentally new worldview level in comparison with the material and the ideal.

The world manifestation is realized through information. The human being, having received and processed information from the outside world, gets the objective idea about the essence of processes that take place at the level of more concrete phenomena and systems. For this reason V. Vernadsky in his work "Two Syntheses of the Space" wrote that the phenomenon of life and inorganic nature is a manifestation of the same process [2, p. 12]. In fact, the discovery of information has revealed a common informational nature of the inorganic and organic, inanimate and animate, material matter and human being. To support this idea, the researcher R. Passé points out that "information replaced energy as the locomotive of development. The present stage of the development of humanity has information, not energy, as the driving force of its development. It is a gigantic revolution" [11, p. 61 – 62].

This leads to the conclusion about the informational nature of human beings. It is the human informational nature that determines constant development of cognitive ability, "increase in human intelligence". The idea of the development of human beings as the development of their intelligence does not fit either the concept of the material, as it is grounded in the ideal, or the ideal, as the development of human intelligence is considered the function of the development of nature, human self-knowledge and self-comprehension, but not as the result of God's creation. Besides, the non-material nature of information allows the assumption about the infinite

development of human cognitive abilities, which is of particular importance for the designing of theoretical and methodological foundations of the open adult education. And it is the synergistic-information approach that gives an opportunity to reveal the essence of information in a more complete and adequate way, its role and potential in establishing the open information society.

Therefore, the open adult education is a phenomenon based on the openness as the original category of the open world, as well as on the informational nature of human beings. Adequate and comprehensive understanding of the phenomenon of the open adult education requires the use of the post-non-classical methodological paradigm, which fits the philosophy of openness. The synergistic-information approach seems the most appropriate methodology. It is the synergistic-information approach that provides an adequate reflection of the modern worldview, which is opposite to rationalism, and gives an opportunity to conceptualize such categories as “openness” and “information” within the phenomenon of the open adult education.

It is planned that further research will develop theoretical and methodological foundations of the open adult education on the basis of the synergistic-information approach.

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Прийма С. М. Синергійно-інформаційний підхід як методологічний інструментарій дослідження відкритої освіти дорослих

У статті здійснено аналіз сучасного філософсько-методологічного інструментарію з метою вибору методології для дослідження феномену відкритої освіти дорослих. Показано, що панівний у філософії раціоналізму системний підхід має низку обмежень у плані вивчення таких складних динамічних і нелінійних феноменів, як відкритий світ і відкрита освіта. Зроблено висновок про те, що найбільш адекватною постнекласичною методологією для розробки теоретико-методологічних засад відкритої освіти дорослих є синергійно-інформаційний підхід. Доведено, що саме цей підхід дає змогу повно та всебічно розкрити сучасне світорозуміння й концептуалізувати в рамках феномену відкритої освіти дорослих такі категорії, як „відкритість” та „інформація”.

Ключові слова: відкритість, інформація, відкрита освіта дорослих, системний підхід, синергійно-інформаційний підхід.

Прийма С. Н. Синергично-информационный подход как методологический инструментарий исследования открытого образования взрослых

В статье осуществлен анализ современного философско-методологического инструментария с целью выбора методологии для изучения феномена открытого образования взрослых. Показано, что доминирующий в философии рационализма системный подход имеет ряд ограничений с точки зрения исследования таких сложных, динамичных и нелинейных явлений, как открытый мир и открытое образование. Сделан вывод о том, что наиболее адекватной постнеклассической методологией для разработки теоретико-методологических основ открытого образования взрослых является синергично-информационный подход. Доказано, что именно этот подход позволяет нам полно и всесторонне отражать современное миропонимание и концептуализировать в рамках феномена открытого образования взрослых такие категории, как „открытость” и „информация”.

Ключевые слова: открытость, информация, открытое образование взрослых, системный подход, синергично-информационный подход.

Pryima S. M. Synergistic and Information Approach as a Methodological Tool of Studying Open Adult Education

The article contains the analysis of contemporary philosophical and methodological tools aimed at the selection of the methodology for studying the phenomenon of the open adult education.

The systems approach, which is the dominant one in the philosophy of rationalism, is characterized by a range of restrictions in studying such complicated, dynamic, and non-linear phenomena, as open world and open education. It was concluded that the most adequate post-non-classical methodology for the development of theoretical and methodological foundations of the open adult education is the synergistic and information approach.

Synergistic and information approach deals with a non-linear development as in the case of bifurcation, i.e., when a new personal or social quality is not a result of natural slow development, but is a consequence of a choice of one of the variants of development under the influence of collective and individual relations, which radically changes the direction of not only social phenomena, but human nature as well. It is proved that it is the synergistic and information approach that completely and thoroughly embraces the modern world outlook and enables the conceptualization within the concept of the open adult education of such categories as “openness” and “information”.

Key words: openness, information, open adult education, systems approach, synergistic and information approach.

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