

**УДК 37.01:001.9**

**UNITY OF KNOWLEDGE AND SCIENCE IN THE  
CONTEXT OF MODERN EDUCATION**

O. Kyvlyuk

*The unity of knowledge is a fundamental problem of philosophy and education. However, the nature of such unity, its form, conditionality and prospects of development differed dramatically throughout the history of philosophical and pedagogical thought.*

*Education significantly determines the future format of society and especially its meaningful parameters, which results in a personal qualities of individuals, their knowledge, skills, abilities, worldview and behavioral priorities. Thus, in the ultimate outcome education sets the capacity of socio-economic, spiritua- and cultural potential of a separate individual as well as society, civilization as a whole.*

*Modern scientific knowledge, combining scientific and educational information spaces acts as a basis of development of information civilization.*

**Keywords:** *knowledge, scientific knowledge, types of knowledge, philosophy of science, philosophy of education, innovation process.*

Problem definition. One of the key problems of the dynamical-ly changing world is the need for special training of a modern human for life in the information and knowledge society. The formation of such a society, which is often called a «society that learns» directly linked to growing needs of every citizen in constant training, updating of knowledge, learning new types of activities. A special place is occupied with the information - communication technologies that offer unprecedented possibilities of access to information and knowledge and allow each person to realize their potential and improve their lives. The main tool of such self-realization and self-improving is education available at - any stage of life and occupation.

The international community has experienced many social and cultural revolutions, albeit catastrophic, but local, ie within the scale of those countries

in which they occurred. Humanity has also experienced at least three revolutions of global character that changed the underlying fundamentals of human culture, created new macro-sociological systems, namely: 1) neopolitical revolution that took place in the technological field and defined new relationships between the socium and nature, creating qualitatively new social structures; 2) in the cognitive field there has been a decline of the «we – consciousness» and the birth of «self – consciousness» that led to the emergence of rational thinking, rational comprehension. This revolution has defined a new attitude towards reality: the world has become an object of cognitive and converting activity and even aggression; 3) scientific - technological revolution created the world - artifact. The emergence of the world of technology has created the alienation of a human from nature. Syndrome of postmodernism indicates that humanity is on the brink of the fourth global revolution.

Postmodern views of the world as a chaos, growth of entropy trends do not indicate the end of the world that is approaching at all. It is a sign of the new laws of thinking, a new attitude towards reality, new ontological paradigm.

Value capability of scientific knowledge itself has been the subject of analysis of L. Andryuhin, V. Byelov, M. Burgin, N. Burukovska, V. Vyzgin, N. Vitchenko, O. Gasyak, O. Ivin, V. Kelle, S. Krymsky, T. Kuhn, Y. Mamchur, M. Marchuk, R. Merton, R. Nugayev, H. Rickert, Y. Rozin, M. Sydorenko, V. Styopin, L. Fesenkova.

**Main material presentation.** Comprehension of the paradigm shifts in the sphere of unity of knowledge is possible only if the historical changes related to its institutionalization, sovereignty of scientific - educational activities, its internal structure and differentiation are taken into account with the search for effective ways to attract knowledge to practical activity. The issue of the unity of knowledge is updated, especially in the context and as a result of the acquisition of special social status by the science and its distancing from the everyday experience of people as well as improving its impact on practical livelihoods.

Aspect of unity of knowledge stepped out on the priority positions in the era of Modern age, when separating and processing of knowledge subsystems took place in the society and there was need to understand the interactions between these components. In this context mention of classical interpretation of knowledge as a process of obtaining objective knowledge, separated from the everyday and ideological interests, subjectivity and voluntarism is steady. More precisely, the aspect of unity of knowledge is related to the prospects of answer to the question about the possibility of obtaining, reproduction and use of such objectivist knowledge. Thus, classic type, which focuses on specific cognitive standards of comprehensive activity and its products is highlighted.

The philosophy has a generalized model of the object and subject of comprehension, and knowledge is interpreted as the result of use of generalized logic - methodological procedures. The unity of knowledge in this context means that any - objects that are included in scientific knowledge, reveal its importance in the process of application of the same procedures - that is, the subject unity of knowledge is due to epistemological and logical - methodological apparatus of philosophy.

For a long time such understanding of the unity of knowledge has been reinforced by references to scientific justification. Mechanics was considered as the most authoritative science which specified clear and transparent principles of obtaining objective knowledge.

The rapid development of social sciences and humanities refuted philosophical concept of abstract human and subject of comprehension with his knowledge standards, interpreted in the spirit of philosophical and natural - scientific rationalism. Knowledge was increasingly associated with the tangible and spiritual activities of people, with the implementation of their intentions and aspirations. The empirical material on the diversity of ideological pictures of the world, which is inherent in various cultural - civilizational paradigms reflected the difference between so-called everyday methodologies with which people

operate as an important tools of being at the level of everyday interactions and interactive exchange.

Against this background, the idea of the unity of knowledge receded. It began to be interpreted as a relic of classics, and its presence manifested itself only in methodological concepts that are modeled on the natural - scientific knowledge - thereby in its classical (physical or mechanical) version.

Since the second quarter of the twentieth century philosophical issues about the subject, object and the unity of knowledge returned in the methodology of knowledge. However, such return was not in the traditional classical form, but in forms caused by peculiarities of the worldview practices of the twentieth century. Methodology of knowledge faced with the impossibility of replacing a subject as work with complex objects points to the crucial role of subject's efforts, to its theoretical equipment of both the phase of detection of such objects, and when handling them, studying them.

The concept of the object returned to the methodology of knowledge in the new role: it is not an object - thing that represents a «logic of things», but the object - system which is not only commensurate to the subject, but in some aspects it prevails in sophistication. This object has specific forms of existence and forces the subject to build a logic of interaction with him.

Variety of the world stimulates the movement of science and education to the symmetric variety of methodologies. As a result - concepts of differentiation of knowledge on the science of the nature and the science of culture (of spirit), social science - on social sciences and humanities have emerged. These have been the dualistic models methodology, which naturally transformed into pluralistic in the early twentieth century. Variety of the world in the classical period has not been a problem for philosophy, science or practice.

The elementary forms of knowledge can not provide distanced in space and time fragments of sociality, but without them it is impossible to design and implement more complex forms of human interactions. The lack of basic knowledge forms largely does not preclude the use of new knowledge, but it

creates major problems to the implementation of this knowledge at the level of social interaction - particularly in the sphere of education, science and management. Use modern technical means is especially dangerous in this situation. This problem field sets a new context, in which operates a theme of unity of knowledge.

As a form of social dynamics, knowledge implements direct and indirect connections between people, their attitude toward objectivity and self-reflection. In historical terms, it is a condition of coexistence of individuals, their activity and experience. In ontogenetic sense knowledge initially coincides with the activity of the individual, and then becomes an internal form of personal development, as well as an external form of human and subject contacts.

Moreover, its various aspects (individual, subject, intentional, communicative and interactive) are genetically linked to each other: personalized knowledge apriori provides a common knowledge as a prerequisite and also as a result; subject knowledge enables indirect communication, and subject self-realization is a condition of accumulation and transmission of knowledge.

According to S. Lippman, «Two important goals of education has always been the transfer of knowledge and the cultivation of wisdom. In traditional societies with high levels of stability advantage was the first of these goals. Knowledge that was comprehended in such societies as a collection of truths, has been transferred from the older generation to the younger. It was perceived as a series of eternal values, acceptability in the constant world of which is beyond any doubt» [2, p. 45].

The classic interpretation of knowledge is limited not because people no longer have the need for immediate display of objects. The problem lies elsewhere: classics that brings knowledge to the display, leaves it in the world of things, resulting in unacceptable situation: during the studying of society the way towards identifying the connections that are implemented outside direct relationships and interactions between people and things is blocked. During the

studying of the nature this way turns out to be a dead end because it has no access to the objects, which are not things, or which do not fit into stereotypism of human experience.

Scientific knowledge differ significantly from the everyday knowledge and pre-scientific. They include «not only a statement of facts and their description, but the explanation, proving, comprehension according to their entire system of concepts of a specific science .Everyday knowledge perfunctory states, how an event takes place. Science not only provides an answer to the question «how?», but to the question «why». The essence of science lies not only in the proven, reliable generalization of facts, but also in the fact that in random things it sees necessary and natural, and in single things it sees general. This is where it becomes a person's worldview - a scientific worldview, which among other things provides for the development of events, phenomena and processes» [1, p. 44].

Science's dive into the world of everyday life leads to many effects and new world-view - methodological challenges. In particular, positions of scientific rationality critics who insist on «direct experience of life here - and – now» become stronger. Even more important is the specification of scientific views on everyday life. When in the middle of this world, scientific knowledge has different means of recording and depiction of life; in the process of its immersion into everyday life it reflects the diversity of the world, its heterogeneity and the inability to reduce to some abstract feature of everyday life.

Scientific knowledge is: a) essential - in the sense that it reveals a set of stable features of the object; b) generalized - it describes the object not only as a representative of a class, defining the established features common to all objects of class; c ) justified; d) systematically organized - in the sense that it creates an ordered set of concepts, etc; e) has its own language, in the basis of which there is a categorical apparatus of science (with respect to each category the rules of logic have to be triggered). Among the essential features of scientific knowledge we can distinguish: focused character, presence of a special object of study, the

use of special tools, unambiguity of terms. According to this science is an area of human activity, which function is elaboration and theoretical systematization of objective knowledge about reality.

The task of science is to identify, generate, store, cultivate and verify knowledge. Among the identification features of scientific-investigating activities are distinguished: 1) the nature of the goal - cognitive; 2) identification of special areas of research; 3) the use of special means of knowledge; 4) unambiguous terminology. The main vocation of pedagogical research is obtaining new significant knowledge about the processes of learning and education, disclosure of their nature (internal structure, occurrence, operation and development), disclosure of objective and natural connections between pedagogical phenomena.

The highest form in which there is scientific knowledge, is the theory of how to regulate the system of concepts of science, in which knowledge is reflected and secured. This system of high degree knowledge generalization that focus on explanation of some aspects of reality form the basis of practical actions. Theory is the result and a means of scientific research. Although scientific research is not confined to its theoretical knowledge and includes other necessary steps, but theoretical knowledge is its core, the essence, without which knowledge is not scientific, that is it is not theory - systematically organized and logically linked set of concepts, laws, etc.

It is hard to argue against the thesis according to which «education is the mechanism that ensures the transfer of knowledge from one generation to another. However, knowledge is transmitted with another way - through experience, culture, and direct communication between humans. However, education - and this is its fundamental difference from other means of knowledge transfer, ensures this process with consistency and dedication. Simultaneously education brings a person's ability to use this knowledge, to build on their basis their own practical activities. Based on knowledge, education builds value world of the individual, teaches humans to live under the

laws of culture. Another thing is important here: education passes to the human mainly scientific knowledge and thus forms its scientific picture of the world» [1, p. 44].

Conclusions. Thus, science is a special kind of cognitive activity aimed at forming objective systematically - organized and justified knowledge about the world. Logic, validity, provability, reproducibility of cognitive outcomes are inherent in scientific knowledge.

According to S. Lippman, «Two important goals of education has always been the transfer of knowledge and the cultivation of wisdom. In traditional societies with high levels of stability advantage was the first of these goals. Knowledge that was comprehended in such societies as a collection of truths, has been transferred from the older generation to the younger. It was perceived as a series of eternal values, acceptability in the constant world of which is beyond any – doubt» [1, p.33].

The increasing of the role of knowledge in all areas of life is the most important pattern of modern stage of development of human society.

### References

1. Huberskiy L., Andrushchenko V. Philosophy as a theory and methodology of development of education / L. Huberskiy, V. Andruschenko. - К. "MP Lesya", 2008 - 516 p.
2. Lipman M. Critical thinking: what can it be?/ M. Lipman // Postmetodyka, 2005. - No 2 (60). - P 33 - 41.

### **ЄДНІСТЬ ЗНАННЯ І НАУКИ В КОНТЕКСТІ СУЧАСНОЇ ОСВІТИ**

О.П. Кивлюк

Єдність знання є фундаментальною проблемою філософії і освіти. Щоправда, характер такої єдності, її форми, зумовленість і перспективи розвитку кардинально відрізнялися впродовж усієї історії філософської та педагогічної думки.

Освіта істотно визначає, детермінує майбутній формат суспільства і насамперед його змістовні параметри, зумовлюючи собою особистісні якості індивідів, їхні знання, вміння, навички, світоглядні й поведінкові пріоритети. Таким чином, в кінцевому результаті освіта задає потужність соціально-економічного та



---

духовно-культурного потенціалу як окремого індивіда, так і суспільства, цивілізації в цілому.

Сучасне наукове знання, поєднуючи науковий і освітній інформаційні простори, виступає основою розвитку інформаційної цивілізації.

**Ключові слова:** знання, наукове знання, типи знання, філософія науки, філософія освіти, інноваційний процес.

## **ЕДИНСТВО ЗНАНИЯ И НАУКИ В КОНТЕКСТЕ СОВРЕМЕННОГО ОБРАЗОВАНИЯ**

О.П. Кивлюк

Единство знания является фундаментальной проблемой философии и образования. Правда, характер такого единства, его формы, обусловленность и перспективы развития, кардинально отличались на протяжении всей истории философской и педагогической мысли. Образование существенно определяет, детерминирует будущий формат общества и в первую очередь его содержательные параметры, предопределяя собой личностные качества индивидов, их знания, умения, навыки, мировоззренческие и поведенческие приоритеты. Таким образом, в конечном результате образование задает мощность социально-экономического и духовно-культурного потенциалу, как отдельного индивида, так и общества, цивилизации в целом.

Современное научное знание, совмещая научное и образовательное информационные пространства, выступает основой развития информационной цивилизации.

**Ключевые слова:** знание, научное знание, типы знания, философия науки, философия образования, инновационный процесс.

---