
MODERNISATION OF THE GENERAL SECONDARY EDUCATION CONTENT AS THE BASIS OF REFORMING THE UKRAINIAN SCHOOL



To cite this article:

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Liashenko, O. (2019). Modernisation of the general secondary education content as the basis of reforming the Ukrainian school. *Education: Modern Discourses*, 2, 126-133.

<https://doi.org/10.32405/2617-3107-2019-1-15>

Abstract. *The article covers the peculiarities of the general secondary education content modernisation, which is taken place in the Ukrainian school. The current update of the content of education is a continuation of the processes initiated in the first years of the Ukrainian independence. At the beginning of the 21st century a mechanism for the standardization of education as a factor of preserving a single educational space was introduced. Due to it two generations of the educational standards in the Ukrainian school were implemented (2001-2004; 2011). The current education content modernisation is a competence-oriented one. It is based on the key competences proposed by EU and have been properly reflected in the Ukrainian legislation. The changes in the content of general secondary education are driven by the essence of the modern education paradigm, which integrates personality-oriented, activity and competence-based approaches to learning. Education content should be aimed at the individual development of a child as a personality and his/her successful socialization. The methodology for improving education content considers models of educational activity, the recognition of each student's uniqueness and the possibility of having a personalized educational trajectory in accordance with life needs. The new Educational Standard (2018) outlines the content of education according to the competence potential of each educational field to form relevant core competencies. Each of them is characterized by specific learning outcomes that each student should achieve upon completion of an education level (or cycle). The content of each educational field is structured along content lines that reflect their epistemological essence. Key competences can be subject-specific (for example, mathematical) or cross-cutting, referring to no specific subject and acquired through studying different subjects in the course of studying (e.g., ability to learn). In addition, it should be borne in mind that compulsory learning outcomes can be achieved either by "traditional" teaching of individual subjects, or by integrating the content of different subjects into a single course, as well as by other integrated forms of educational activity. This is determined by the curriculum, which is developed by an educational institution in accordance with their students' learning needs and interests. This approach implies that learning outcomes are characterized not by the amount of specific knowledge or skills, but by the dynamics of cognitive processes regarding their application. Therefore,*

subject division of education content, which is inherent in the knowledge-oriented paradigm, is transforming into the sectoral one, which is inherent in the competence-based (activity) paradigm.

Key words: *content; educational field; general secondary education; key competence; modernisation.*

INTRODUCTION. PROBLEM STATEMENT

During the years of independence, a new content of primary and general secondary education has been formed in Ukraine. It has generally met the needs of the Ukrainian society and the state. Updating education content has been carried out in accordance with the democratic goals and values, ensuring students' personal development and educating them as citizens of Ukraine. This, in turn, required certain individualization of the educational process in order to meet the learner's educational needs.

A positive role in shaping the modern content of school education was played by the education standardization mechanism introduced at the beginning of the century. Since 2001, the Ukrainian school two generations of the educational standards for primary and general secondary education has been implemented. It has largely ensured the achievement of these goals. However, the analysis of the school education content (Kremen (ed.) et al., 2015) revealed that the current state standard, curricula and textbooks have significant deficiencies and require improvement.

First, the idea of a competence-oriented learning is not sufficiently realized in the current content of general secondary education. It is now mainly focused on the giving knowledge and forming subject-specific competencies. Meanwhile, other competencies, such as the ability to learn, entrepreneurship and innovation, economic awareness and financial literacy, the ability to live a healthy lifestyle, etc., remain out of scope. In terms of learning outcomes, the standard does not contain a criterion basis for evaluating students' educational outcomes. This leads to difficulties in determining the level of their educational achievements. Students are overloaded, particularly in high school, which is caused by poor selection of content and abundance of secondary information. Quite often, the selection of educational material does not consider students' age and cognitive abilities, the peculiarities of their mental development.

All this necessitates an update of the content, revision of its basic structuring principles. There is a need to bring the content of education closer to life practices, to familiarize students with ways to apply knowledge in different life situations.

The transformational processes that are currently taking place in Ukrainian education envisage the modernisation of primary and general secondary education content based on a competence approach (Nova ukrainska shkola, 2016). It is based on the core competencies that characterize a person as a successful individual today. The eight core competencies (European Commission, 2018) recommended by the EU and UNESCO have received the following interpretation in the Law of Ukraine "On Education": being fluent in the state (official) language; ability to speak one's mother tongue (in case it is different from the state language) and foreign languages; mathematical competence; competence in natural sciences, engineering and technology; innovation; environmental competence; information and communication (digital) competence; lifelong learning; civic and social competences related to the ideas of democracy, justice, equality, human rights, well-being and a healthy lifestyle, an awareness of equal rights and opportunities; cultural competence; entrepreneurship and financial literacy (Zakon Ukrainy pro osvitu, 2017). They are complemented by cross-cutting skills needed for a successful life: reading-comprehension, ability to express one's opinion verbally and in writing, critical and systematic thinking, the ability to logically justify one's point of view and cooperate with others, creativity, initiative, decision-making, and problem-solving.

That is why the Ukrainian school is tasked with generating these key competences and cross-cutting skills in every high school student. Then they will become competitive in today's globalized world. This can only be achieved through a radical reconstruction of the educational process and the modernisation of educational content.

LITERATURE REVIEW

Recently, the content of school education has been criticized by the public (parents, teachers, employers, students themselves) and in the publications of the scientific community. All of them complained about the content failing to meet the needs of modern society and quality education, pointed to the students being overloaded with information of secondary importance, ignoring children's interests, age-specific features of their development in the process of obtaining education. The study on the state of the Ukrainian education and the prospects of its development has been reflected in many scientific publications. The most substantive of these are the National Reports on the State and Prospects for the Development of Education in Ukraine, published in 2011 and 2016 (Kremen, 2011; Kremen, 2016). These studies, based on statistics and scientific generalizations, objectively describe the state of the national education, as well as factors affecting the quality of education, the ways of its development in the context of world education trends.

In 2015, the researchers of the National Academy of Educational Sciences of Ukraine conducted the analysis of the content of general secondary education in the analytical report "On the Content of General Secondary Education" (Kremen (ed.) et al., 2015). The researchers analysed the general characteristics of the primary and general secondary education content, the content of education in all educational fields, carried out psychological expert evaluation of school textbooks concerning the implementation of a competence-based approach to teaching in them, revealed the negative factors affecting children's health depending on the organization of educational process and the selection of educational content.

Based on the analysis, the scholars have made recommendations on the improvement of the content of the general secondary education, suggested steps to modernize the content of school education in order to address the challenges that the Ukrainian school is facing (Kremen (ed.) et al., 2015: p. 117). The introduction of a competence approach to education is the most important of these.

RESEARCH METHODOLOGY

Updating the content of education is always subordinated to the essence of the educational paradigms dominating the educational community and society at the time. In the course of its historical development, education has used different educational paradigms corresponding to ideas, principles or views on the essence of the educational process (Tovozhnianskyi et al., 2005). Thus, the knowledge-based learning, which prevailed in the recent past, was focused on delivering knowledge, as it was believed that a child's intellectual development depended on the amount of knowledge acquired. The modern education paradigm emphasizes a person's ability to apply the knowledge acquired. It recognizes the importance of being able to obtain the necessary information for solving problems in education, professional activities, everyday life, etc. (Schleicher, 2018).

Based on the Finnish experience of educational reform P. Sahlberg wrote that the improvement of education content should promote the development of a child as an integral personality and be directed towards bringing them closer to his/her life needs (Sahlberg, 2017: p. 44).

Renowned American psychologist and educator J. Bruner (Bruner, 2006) concluded that cognitive styles of educational activities can be reduced to the following three main models.

1. *Learning as imitation.* In this model, an adult demonstrates to a child certain patterns or behaviours that they are repeating while reproducing the actions of their mentor teacher. The teacher acts as a role model. As a result, actions, norms of morality, guidelines and rules of behaviour in society, practical skills and life skills are formed.

2. *Learning as transmission of social experience gained by humanity.* This model implies that learning is an organized process of transferring the established knowledge and methods of activity to students; students should learn them and be able to use them in their activity. In the process of teaching, the teacher delivers specially selected facts, ideas, rules, principles, laws, etc. and organizes activities to apply them in simple cognitive situations. The teacher acts as a source of information or its interpreter. The result of such learning is knowledge, skills and competencies formed by students at the level of reproduction and application in standard (known) situations.

3. *Learning as shaping a child's thinking process.* In this model of learning, the student becomes an active subject of cognitive activity. Unlike the previous method of teaching activity, the student actively cooperates with the teacher in acquiring new knowledge or developing new skills, applying them in standard situations. He or she enriches his/her intellect with a system of knowledge, skills and ways of using them in different life situations. The teacher organizes students' educational and cognitive activities, encouraging them to become independent. The result of such training is the students' ability to perform cognitive activity within the framework of externally determined factors (educational standards, curricula and programs, textbooks, etc.). The child gains some cognitive experience and necessary mental abilities, but they are limited by the curriculum requirements. A student's personal experience does not force him or her to apply their knowledge in life.

These three patterns of educational activities are historically predetermined, but they do not represent a sequence. Learning by imitation is still used today, particularly for preserving cultural heritage or skill imitating (for example, teaching Petrykivka painting) or when acquiring professional skills (for example, in building). The education paradigm focused on shaping students' thinking does not in any way deny the paradigm of transferring social experience in learning.

Admittedly, there have been attempts in the history of pedagogy to combine these models into one. Reflecting on further education development, J. Bruner tends to believe that the modern education paradigm combines several different models of educational activities (Bruner, 2006). For example, the current reform of the Ukrainian school is based on the integration of three approaches – personally oriented, activity and competence-based one.

Therefore, planned modernisation of education content takes place in compliance with these three approaches, organically combined in updating the content (Nova ukrainska shkola, 2016; Liashenko & Maliovanyi, 2017). It determines personal orientation of the educational material in accordance with students' educational needs, as well as enhancing activity and creativity. Due to this, students will be able to use their knowledge, skills, conscious views and values in various life situations, that is, they acquire relevant competencies.

MAIN RESULTS

The current modernisation of school education content is based on different basic approaches determined by the essence of the modern education paradigm. A person-centred approach to learning, as a didactic basis for the implementation of the learning process, ensures that students' educational needs are met according to their cognitive interests and the characteristics of their intellectual, emotional and physical development. The activity approach, as the psychological basis for the organized educational process, provides mechanisms for gaining social experience through adequate techniques and methods of learning. The competence-based approach, as the epistemological basis of education, ensures the development of values and

students' readiness to apply the experience gained in solving various life problems (Liashenko & Maliovanyi, 2017: p. 8).

Certainly, the competencies approach for construction of the education content takes the central place in this triad. Educational standards that are now being introduced into the school practice are different from the previous ones (2001; 2004; 2011), primarily by focusing on core competencies in content structuring. The competence-based approach was also used in the previous education standards. However, those were based on the subject competencies, which outlined the content and requirements for learning outcomes in specific educational fields: linguistic, literary, social sciences, mathematics, science, art, technology and physical education. Accordingly, each of them contained a set list of "classical" subjects (Ukrainian language, Ukrainian and foreign literature, foreign language, Ukrainian history and world history, algebra, geometry, biology, physics, chemistry, etc.).

The new Standard of Education (2018) is based on a different principle. The content of education is determined by its competence potential, which reveals the contribution of each educational field to the formation of relevant key competencies. Each of them is characterized by specific learning outcomes that each student should achieve upon the completion of a particular level of education (or cycle). The content of each educational field is structured along content lines that reflect the epistemological essence of the respective area. For example, in science education, the following competencies are crucial: the ability to explore the nature, the ability to use scientific knowledge to explain natural phenomena and technological processes, environmental awareness of the consequences of human activity, worldview values of natural science knowledge and attitudes to the acquired experience.

Competences that are clearly related to specific fields of knowledge/skills (e.g. mathematical and natural sciences, reading, writing and numeracy, communication in mother tongue or foreign languages, etc.) are among the key competencies. That is, they are subject-oriented and, as a rule, they have correspondents in the form of school subjects (mathematics, foreign language, history, physics, etc.). At the same time, there are those competencies that do not have a clearly defined subject correspondence and are formed in the process of learning different subjects (for example, entrepreneurship and innovation, the ability to learn, interact with others, etc.).

In addition, we should note that that the compulsory result, defined by the state standard, can be achieved in different ways: either by "traditional" teaching of individual subjects, or by integrating the content of teaching different subjects into a single course or in other integrated forms of educational activities. The ways to achieve the standard results will be determined by the curriculum developed by the educational institution in accordance with students' needs and interests. It can be based on a typical curriculum developed by the Ministry of Education and Science, or the unique curricula created by the educational institution itself. In the latter case, it has to undergo an expert evaluation and be approved and accredited by state agency.

The current modernisation of content implies greater use of the integration in structuring educational material. In the early stages of education, particularly in primary school, cross-field and cross-discipline integration takes up a large proportion of the pupils' workload. This is due to the peculiarities of a junior schoolchild's perception of the environment, their age-related cognitive abilities. At this age, they see the world, without distinguishing between its natural and social, material and spiritual, quantitative and qualitative aspects.

During the gymnasium period of studying, especially in grades 7-9, the influence of integration processes of content structuring is weakened. At this stage of training, the selection of content is carried out based on theoretical conceptual systems (scientific theories, systematic views and doctrines, other logical knowledge structures). As the child gradually acquires abstract thinking skills, there happens a differentiation of knowledge according to subject areas. Therefore,

in adolescence, subject-based learning begins to prevail, which makes it possible to teach the material more deeply and systematically.

Subsequently, during lyceum years, there is a need to generalize and systematize knowledge, as well as to understand the general laws of the world. This holistic worldview can be achieved through thematic and cross-field integration of knowledge. This is usually done in the form of integrated courses or through the cross-curricular integration of knowledge in the educational process. This does not exclude a subject approach to learning, but only diversifies ways of educational activity.

Content structuring at this level of education is conditioned by the pragmatic target guidance of students' life choices. In case knowledge and competence are the necessary foundation for professional qualification or further education, the corresponding system of knowledge is implemented by learning a separate subject, usually on an advanced level.

If it plays an worldview role, such as natural sciences for humanities majors or social sciences for naturalist majors, then a more integrated course would be more appropriate because it will reveal the integrity of scientific knowledge in explaining the surrounding world phenomena and is a prerequisite for understanding the environment.

Therefore, the educational standard should not strictly regulate the content of education. It should define only the framework mandatory requirements for the deliverables for each of the upper general secondary education levels (cycles). Such a standard gives academic freedom to educators, teachers and secondary education institutions to choose their educational policy and construct the appropriate trajectory to achieve these results.

In general, the choice of educational content is based on the definition of its purpose and the choice of an adequate learning model, corresponding to one or another paradigm. At present, they are aimed at a child's development and the formation of his or her personality knowledge. In such circumstances, the educational process aims to uncover the internal mechanisms of a child's development, his or her ability and willingness to use the acquired knowledge and experience in different life situations, to form a values-based attitude to the surrounding world.

Such learning is based on the recognition of each student's uniqueness and personification of his or her educational trajectory. In such an educational model, the student consciously acquires knowledge and cognitive skills with personal meanings and values, essential characteristics, ideas and images. This changes the role of a teacher. He or she becomes a manager of an educational environment, in which students, through their own activity and certain pedagogical technology, get to know the world. The result of such learning is the development of a student's abilities and talents that characterize him or her as a personality. The knowledge, skills and attitudes formed become his personal conscious experience, which is reflected in key subject-specific and general competencies as well as his or her worldview. Therefore, in the modern educational process, the content of education is a means of developing a person's abilities, his or her intellectual, spiritual and physical potential, and not simply acquiring knowledge or specific skills in a field.

CONCLUSIONS

Modernisation of the educational content as one of the main factors of reforming the Ukrainian school requires, primarily, updating the standards of general secondary education and making it competence-focused. It is based on the core competencies, the acquisition of which makes a person successful in modern society and capable of self-realization in accordance with his/her abilities and life goals.

In the history of education development, there have been several models of educational activity for the transmission of experience to younger generations. Each is based on a historically determined educational paradigm. Modern education paradigm integrates personality-oriented,

active and competency-based approaches to learning, which are already known in pedagogy and have been tested in educational practice. The dominant approach to learning is the latter – competence-based approach, which outlines the set of knowledge and skills, values and beliefs, ways of activity and qualities of the individual, the acquisition of which is a prerequisite for their individual development and successful socialization.

The competence-based education is focused on students' ability to apply knowledge and skills in a variety of life situations. Therefore, in the context of competency-oriented learning, it has a procedural character for the development of students' thinking. The main purpose of the educational process is to involve students in solving vital practical tasks, as well as analysing and evaluating the results obtained. Such activities allow students to acquire their own cognitive experience and form their personality knowledge, with their own logical constructs, meanings, values and attitudes.

Learning outcomes are characterized not by the amount of acquired subject-specific knowledge or skills (concepts, theories, established world views, etc.), but by the dynamics of cognitive processes regarding their application (to explain the phenomenon, to justify the decision made, to analyse and evaluate the event, to express the attitude, etc.). Therefore, the substantive division of education content, which is inherent in the knowledge-oriented paradigm, changes to the field one, typical of the paradigm, focused to activity and competence. Such division is also relative. However, it makes it possible to combine related areas of knowledge by identical ways of activity that are dominant in the acquisition of certain key competence. At the same time, it should be emphasized that the content of education is holistic and systematic, forming the whole set of key competencies. Therefore, each educational field has a specific potential for generating all key competencies and is responsible for their comprehensive acquisition by students.

Therefore, general secondary education content modernisation that currently taking place in the Ukrainian school is based on the integration of the personality-oriented, activity and competence-based approaches to learning, with the latter being the defining one. This requires an update of the educational standards for general secondary education and providing appropriate teaching and methodological support. At the same time, there is a need to transform the model of the educational process and learning technology, which should become activity-oriented, so that students can apply the acquired competencies in different life situations.

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