

**DEVELOPMENT OF EDUCATION AND HUMANISTIC SCIENCES IN THE CONTEXT OF
GLOBALIZATION
DEZVOLTAREA ȘTIINȚELOR EDUCAȚIEI ȘI UMANISTICE
ÎN CONTEXTUL GLOBALIZĂRII**

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**EDUCATION SYSTEM AT THE STAGE OF GLOBALIZATION
AS A SYSTEM-FORMING FACTOR STATES
СИСТЕМА ОБРАЗОВАНИЯ НА ЭТАПЕ ГЛОБАЛИЗАЦИИ
КАК СИСТЕМОФОРМИРУЮЩИЙ ФАКТОР ГОСУДАРСТВ
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Summary.

The development of the economy in the historical process as a sphere of activity to meet the needs of humanity through the production and distribution of material, cultural and spiritual values has led to: 1) the creation of an education system that provides these types of activities with personnel of appropriate qualifications; 2) the emergence of social institutions that establish norms of relationships between members of communities; 3) the formation of the state as a body for managing the life of the entire society.

The characteristic features of the current stage of economic development are: 1. High growth rate of the knowledge intensity of manufactured products. 2. Globalization is the process of uniting national states into a single economic, political and social entity in order to reduce production costs. 3. Replacement of financial capital, which played a leading role in the emergence and development of new industries, with human capital.

The need for an ever-increasing number of people capable of translating new knowledge into technology is transforming the education system from an element that serves the economy with personnel to an element that determines the creation and development of new sectors of the economy. The growing importance of human capital and the emergence of a “critical” number of people capable of translating their knowledge into technology, leads society to understand the need to change material values to moral ones as the basis for its survival.

As a result, in accordance with the laws of development of artificial systems, the education system becomes a system-forming factor in the development of the “state” system, increasing the level of its democratization and humanization and thereby changing its main function in the 21st century to provide each member of society with the most favorable conditions for life and development.

Key words: laws of development of artificial systems, society, economy, education system, human capital, moral values.

**СИСТЕМА ОБРАЗОВАНИЯ НА ЭТАПЕ ГЛОБАЛИЗАЦИИ
КАК СИСТЕМООБРАЗУЮЩИЙ ФАКТОР ГОСУДАРСТВА**

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Резюме

Развитие экономики в историческом процессе как сферы деятельности по удовлетворению потребностей человечества через производство и распределение материальных, культурных и духовных ценностей привело: 1) к созданию системы образования, обеспечивающей эти виды деятельности кадрами соответствующей квалификации; 2) появлению социальных институтов, устанавливающих нормы взаимоотношения между членами сообществ;

3) формированию государства как органа управления жизнедеятельностью всего социума.

Характерными чертами современного этапа развития экономики являются:

1. Высокий темп роста наукоемкости производимой продукции.
2. Глобализация – процесс объединения национальных государств в единое экономическое, политическое и социальное образование с целью сокращения затрат на производство продукции.
3. Замена финансового капитала, игравшего ведущую роль в появлении и развитии новых отраслей производства, на капитал человеческий.

Потребность во все возрастающем количестве людей, способных воплотить новые знания в технологии, переводит систему образования из элемента, обслуживающего экономику кадрами, в элемент, определяющий создание и развитие новых отраслей экономики. Растущее значение человеческого капитала и появление «критического» количества людей, способных воплотить свои знания в технологии, приводит социум к пониманию необходимости смены материальных ценностей на моральные как основу своего выживания.

В результате, в соответствии с законами развития искусственных систем, система образования становится системообразующим фактором развития системы «государство», повышая уровень его демократизации и гуманизации и тем самым меняя в XXI столетии его основную функцию на обеспечение каждому члену социума наиболее благоприятных условий для жизни и развития.

Ключевые слова: законы развития искусственных систем, социум, экономика, система образования, человеческий капитал, моральные ценности.

EDUCATION SYSTEM AT THE STAGE OF GLOBALIZATION AS A SYSTEM-FORMING FACTOR OF THE STATE

L.I. Shragina, M.I. Meerovich.

Formulation of the problem.

The high growth rate of knowledge-intensive products created by the modern economy leads to the replacement of financial capital, which played a leading role in the emergence and development of new industries, with human capital. However, the concept of the existing education system, the main function of which is to prepare personnel for the economy, is focused on the reproductive transfer of rapidly obsolete knowledge and the formation of competencies, does not correspond to this pace, and therefore is not able to satisfy this need, and requires a fundamentally new conceptual approach.

Object of the study: society as an artificial system.

Subject of the study: development of elements that make up the structure of society,

Purpose of the study: to identify the function of the education system at the stage of globalization of the economy in the structure of society.

Research hypothesis: economic development leads in society to a change in the function of the education system from auxiliary to primary, acting as a system-forming factor of the state.

Objectives of theoretical research:

1. Conduct an analysis of changes in the main function of the education system at various stages of economic development.
2. Formulate conceptual provisions that define the new function of the education system necessary for the economy at the stage of globalization.
3. Show that at the stage of globalization the education system plays the role of a system-forming factor of the state.

Conceptual framework of the study:

1. **The functional-system approach** is a method of cognition and a way of describing the emergence and development of artificial objects and phenomena.

2. **The theory of development of artificial systems (TDAS)** is a science that studies the objective laws of the creation and development of artificial and natural-artificial systems and develops a methodology for finding the most effective solution to problems that arise in this case, in the shortest way.

The basic law of TDAS: the development of an artificial system is subject to objective laws and is always directed towards increasing the level of its ideality - from the point of view of a person, the creator and user of this system [2; 4].

Methodological apparatus of the study:

An autonomous artificial system is a system that operates within specified parameters without external influence.

Composition of a minimal autonomous artificial system:

1. **working body** - an element that directly performs the main function (MF) of the entire system.

2. 3 elements that perform auxiliary functions in this system:

– **source of energy;**

– **transmission, which transfers energy to the working body;**

– **control body** [5].

Each of these elements is also a complex artificial system, which, while performing its main function, provides the working body with the opportunity to perform its main function.

Basic concepts used in the study.

Globalization is the process of economic and political integration of national states with the aim of reducing production costs.

The state is the governing body of a community, designed to protect its members, their territory of residence, economy and ideology.

An artificial system is a complex of interconnected elements designed to perform a basic function, realized through direct or indirect interaction with a person, and by its combination creates a new, systemic property that the constituent elements do not have.

The education system is a complex of elements designed to train new generations and retrain personnel for the purpose of their most effective participation in all spheres of society through the transfer of sociocultural experience accumulated by previous generations and the acquisition of new knowledge.

A system-forming factor is a subjective need (intention) that needs to be satisfied by creating a new artificial system.

Society is a group of people (community) of various sizes that establishes certain rules for relationships among themselves and with the world outside them.

Social institutions are formal and informal organizations that define for its elements certain rules of relationships within the organization and with the outside world.

Economics is the sphere of activity for the production and distribution of material, cultural and spiritual values necessary for a person for his reliable survival and development in the process of communication with other members of the community [5].

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Presentation of the main material.

At the dawn of their existence, primitive people, in order to provide themselves with more reliable conditions for survival among other living beings and in unfavorable climatic conditions, began to create artificial systems.

The need for tools for extracting and processing food and creating household items led to the emergence of the **economy** - a sphere of activity for the production and distribution of first material, and later cultural and spiritual values.

The need to develop faster through the transfer to new generations of already accumulated sociocultural experience in the form of professional knowledge and skills that meet the

requirements of the corresponding stage of the economy, and moral values that establish certain norms of relationships between members of society horizontally and vertically, led to the creation of an **education system**.

The need to establish and regulate the norms of relationships between members of the community vertically and horizontally led to the emergence of a **system of social institutions**, ideology, culture and its element – art.

The need to protect oneself and one’s territory leads to the need to create a “**state**” system.

The combination of these elements creates a qualitatively new minimal autonomous system - “**society**”, presented in Fig. 1, in which the selected elements are interconnected, interdependent and each performs **its own function**.

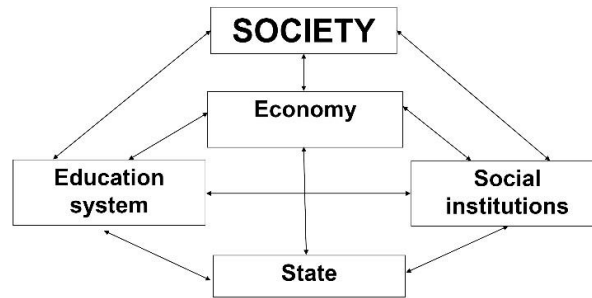


Fig. 1. Society like an artificial system

Let's consider the functions that each element performs in this system. Since the first main goal of humanity as a species was survival and development, the **main function - the function of a working organ - was performed by the economy**. The **education system**, providing the economy with the necessary personnel, served as a **source of energy**. **Social institutions** that emerged as development progressed (first of all, religion, and then associations of individual groups of the population according to social status, professions and other characteristics) performed **the function of forming norms of relations** between them vertically and horizontally. And as a **body of governance**, protection of the territory in which the population lived, economy and ideology, the body “**state**” was formed. The general minimal diagram of society as an artificial system with the functions of its elements is presented in Fig. 2.

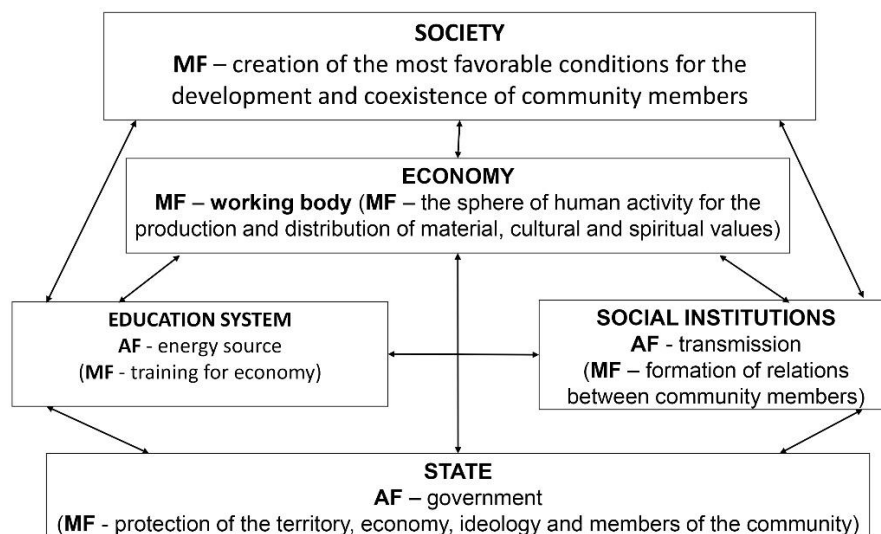


Fig. 2. Minimum scheme of society as an artificial system with the functions of its elements

Based on the purpose of our research, let us consider in more detail the structure of the education system, presented in Fig. 3, the main function of which is to prepare personnel for the economy at various stages of its functioning.

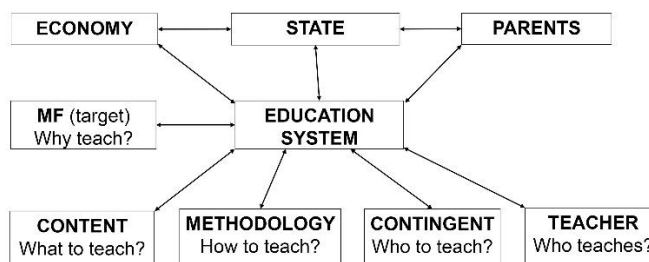


Fig. 3. The structure of the education system and its relationship with some elements of the «State» system

In the context of TRIS (the theory of the development of artificial systems), the main function of the education system – preparing new generations – was implemented (principle of action) through the use of a second signal system (speech) and writing through (design) the transfer to new generations of already accumulated sociocultural experience in the form of:

- **professional knowledge** that meets the requirements of each stage of the economy;
- **moral values** that establish at this stage certain norms of relationships between members of society horizontally and vertically.

However, the economy is constantly developing, new technologies are appearing, new production products are being created, and new requirements are being placed on the education system: to develop in a graduate qualities that ensure his ability to create and effectively maintain new technologies.

A contradiction arises: a discrepancy between the conceptual principles of the existing education system and the needs of the new economy. To resolve it, it is necessary to develop and implement a new, more effective concept of the education system.

To classify the stages of economic development, we use a generally accepted feature: the main product, the production of which employs the maximum number of the population. Based on this feature, human history can be divided into three technological stages:

1. Agricultural – food production.
2. Industrial (industrial) – production of machines and mechanisms.
3. Information – production of ideas and technologies.

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Since the main function of the education system as a need was to prepare personnel for the economy, then, accordingly, at various stages of economic development, the content of the function changed. Let us note that, in addition to purely technological processes associated with an increase in the knowledge intensity of manufactured products, large-scale organizational processes are simultaneously taking place aimed at reducing the cost of production, which are defined as globalization – this is the ever-deepening specialization of not only individual industries, but also large territories: the “world of factories” is turning into a “factory of the world”, tied into one common technological line.

Modern requirements of the economy and society for the education system at the information-globalization stage go beyond traditional teaching methods, **which provide for the transfer of a certain amount of knowledge** and, at best, the development of logical thinking. The ever-increasing importance of knowledge and, accordingly, human capital in the economy as a result of the need to increase labor productivity and ensure the most efficient functioning of this form of economy requires the **formation of creative qualities in the personality structure**. The economy requires the education system to develop in graduates **communication skills** as the ability to work in a group, **creativity** as the ability to put forward new ideas, and **learning ability** – the ability to quickly relearn and master new technologies

A contradiction arises: a discrepancy between the conceptual principles of the **specialized, including school**, education systems (transfer of competencies – knowledge) and the needs of the new economy and society (formation of the qualities of a creative personality).

Thus, if the basis of politics is determined by economics, then the **basis of modern economics is personality psychology!** The basic mechanism for the development of the individual and the entire society is the content of education, and above all, secondary, pre-professional education. And the concepts of specialized education in the form of transfer of competencies do not keep up with the growth rate of high-tech technologies and therefore **quickly become obsolete!**

Let us also take into account that the development of society will not stop: “The structural evolution of social productive forces occurs in one direction,” says V. E. Khmelko, and predicts the next stage – **human-creative**: “the production and reproduction of man as a creative personality”! [7]

And a natural question arises: what to teach? To solve the problem, which was already regarded as a **crisis in the education system** at the end of the twentieth century, a transition from **unreflective acquisition of knowledge to conscious mastery and mastery of mental techniques and operations is necessary.**

To prepare a “flexible” specialist of “tomorrow”, **OUTSTRIPPING PEDAGOGY** is needed – a system of intellectual and psychological development that forms stable components of a creative thinking style in a socialized personality [4].

The change in the main function of the education system at various stages of economic development, taking into account the forecast of the next stage, can be presented in the form of a table (Fig. 4), where the stages of economic development are shown horizontally, and the content of education, methods of its transmission (methodology) and the final result are shown vertically – “product” at the output: what qualities should a graduate of an educational institution have.

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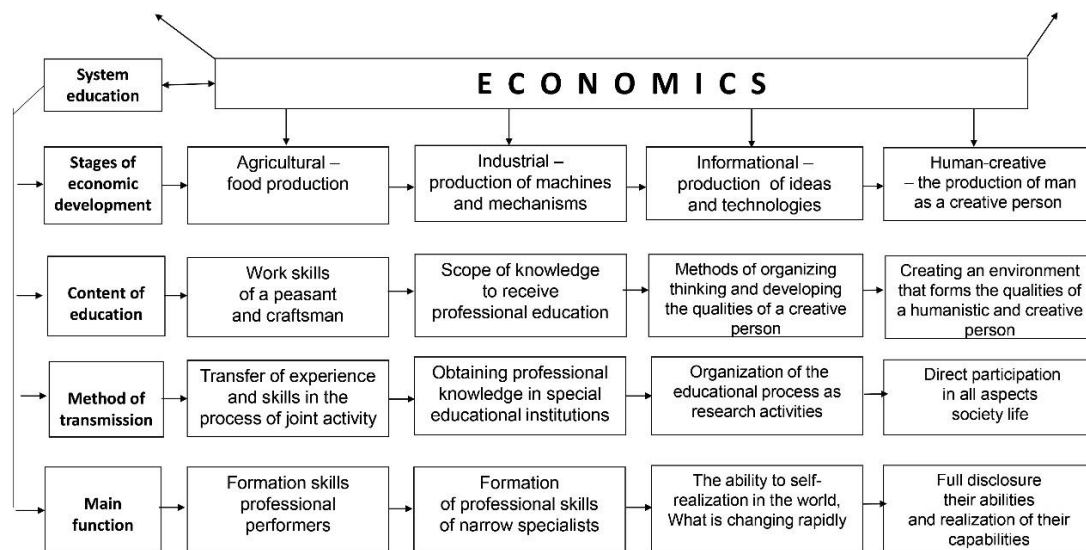


Fig. 4. Changing the main function of the education system at the next stage of development of society

The results of the analysis presented in the table show that there is an increase in the intellectualization of the product produced by the economy: from food at the agricultural stage to the opportunity to reveal one’s capabilities and realize one’s abilities at the human-creative stage (Fig. 5).

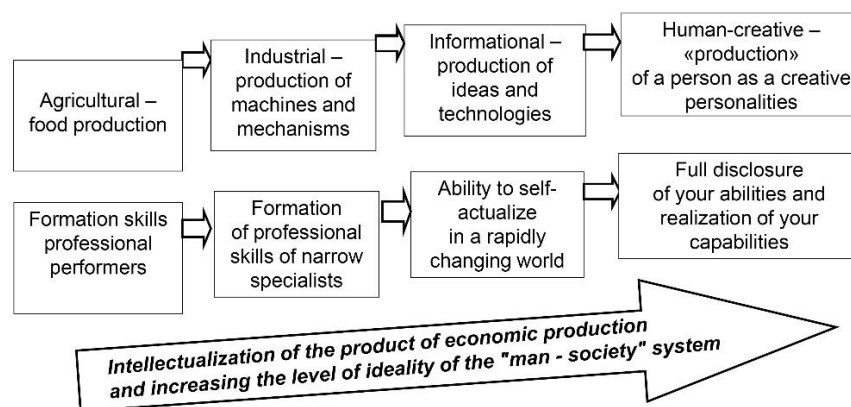


Fig. 5. Increasing the level of product intelligence, produced by the economy

And a dialectical contradiction arises in society: **if the state wants to survive, it must develop the economy. To develop the economy, you need to develop people. But a thinking person thinks not only about finding a solution to production problems - she also evaluates who controls her and how and how the product she produces is distributed.** And she chooses someone who treats her as an equal person...

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As a result of resolving the dialectical contradiction between interconnected processes in the economy and society along a chain of functional-system connections, a transformation of the value system occurs:

- from materialism – to postmaterialism;
- from the value of survival – to the value of self-expression and self-realization.

Scientific research confirms that long periods of economic prosperity encourage changes in values, and this leads to demand for a more liberal political order [1].

The social institutions of the modern market, built on the protection of private property - on the highest degree of rationality and calculation of net benefit, are destructive to the individual and have become a brake on economic development. L. Harrison obtained similar results when studying the influence of culture on economic development [7].

A change in the main function of the education system from the **transfer of knowledge to the formation of a creative personality** leads to a change in the functions of all elements of the “society” system: the **economy gives way to the education system as a working body**, which, in turn, leads to a change in social relations to more and more humanistic ones, and an element “state” – to an increasingly democratic one, as shown in Fig. 6.

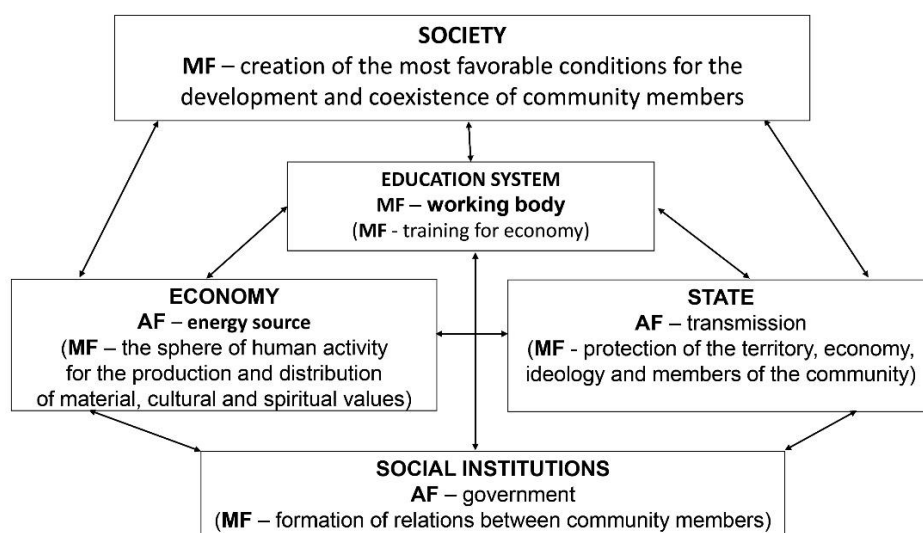


Fig. 6. Changing the functions of elements of the «society» system at the stage of globalization

Therefore, there is essentially no dilemma here - it is only a matter of time...

The key element of such an education system is the **Creative Teacher**: any educational reform and pedagogical technology are implemented in a school class or in a university auditorium, in which new generations are prepared for life in a particular society. And it is the Teacher who initiates the needs of this society - its economic and social formation.

The technology of creative thinking, **OUTSTRIPPING PEDAGOGY**, developed by the authors of this article, introduced into the education system and meeting the graduate requirements of the economy at the stage of globalization, offers

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a fundamentally different concept for constructing the educational process: not to transfer ready-made knowledge to students, but to **offer** it in classes on a given academic subject **problem situations**, in search of solutions to which students will create technologies for their search (learn to learn!), communicate with each other and develop their creative abilities.

Structurally, the technology includes two sets of exercises:

1. **The formation of systems thinking** is a series of diverse problem situations, during the search for solutions to which students “build” a universal algorithm that allows them to reach the strongest solutions in the shortest way.

2. **For the development of creative imagination** - this is a system of linguistic exercises for formulating definitions of objects, phenomena and processes and creating their images, performed using specially developed algorithms based on a functional-system approach.

As a methodology – a way to introduce this technology (“**How to teach?**”) it is proposed to organize the study of an academic subject as a **group research activity** to “obtain” new knowledge for students, orienting them to an **understanding of how the solution was obtained**. As a result, the student develops generalized ways of thinking that can be used to find solutions to problems of various types..

The role of the teacher in this form of the educational process is to systematically and purposefully organize problem situations based on the material of educational subjects, setting tasks for students and providing them with help, if necessary.

The introduction of a functional-system approach into the education system as a basic methodology for teaching academic subjects develops in students the skills of systems thinking when finding solutions to emerging problems and, thus, the creative personality qualities necessary for the modern economy and society [2; 3; 4; 5].

Conclusions.

The need for an ever-increasing number of people capable of translating new knowledge into technology is transforming the education system from an element with an auxiliary function that serves the economy with personnel, into a working body - an element that performs the main function in this system and thereby determines the creation and development of new sectors of the economy. And the growing importance of human capital and the emergence of a “critical” number of people capable of translating their knowledge into technology, leads society to understand the need to change material values to moral ones as the basis for its survival.

As a result, at the stage of globalization, a new concept of the education system, aimed at developing the qualities of a creative personality, becomes a subjective need of society and thus for the **“state” system – a system-forming factor**, increasing the level of its democratization and humanization and realizing its main function of providing each member of society with the most favorable conditions for life and development.

The laws of development of artificial systems are objective, and a radical reform of the education system is inevitable. **The effective future of any state lies in creating an education system that trains creative personnel, first of all, Creative Teachers!**

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