

# Foundations of the comprehensive concept of learning

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**Abstract.** The article is devoted to the problems of education in the Russian Federation. After the collapse of the Soviet Union, the Russian education system is in a systemic crisis, one of the reasons for which is the outdated concept of education, which is too focused on the transfer of a large amount of fundamental knowledge. On the basis of Moscow International University, the Integrated Research Institute of the Russian Academy of Sciences and the NP "Laboratory for Cognitive Research of Consciousness named after A.I. Said-Mahdikhon Sattorov", the authors developed a new comprehensive concept of learning aimed at harmonizing the educational process. It involves the distribution of school subjects (lessons and lectures) into four blocks (knowledge block, methodological block, skills block and responsibility block). A new version of the lesson schedule for elementary classes was developed in accordance with the comprehensive concept of education. The article outlines the basic principles of the comprehensive concept of education: pluralism; freedom of thought and choice; methodical doubt; practicality; responsibility; harmonious development of personality. The concept "learning" was defined as a purposeful activity related to the development of fundamental and applied knowledge, technologies and techniques of correct and creative thinking, practical skills and abilities, social and moral norms, the ultimate goal of which is to reveal student's personal potential, and the ultimate goal is social progress.

**Keywords:** education, training, pedagogy, school, university

## 1 Introduction

The quality of the education system is the most important indicator of the national development. After the collapse of the Soviet Union, the education system in Russia has faced a lot of problems and is currently in a crisis.

In December 2012, the Russian parliament adopted the Federal Law "On Education", which provided the following definition of the concept "education": "a single purposeful process of upbringing and education a socially significant good realized in the interests of the individual, family, society and the state, and a set of knowledge, skills, values, experiences and competences for the purposes of intellectual, spiritual, moral, creative, physical and (or) professional development of an individual, satisfaction of educational needs and interests" [1].

Among the main problems of modern Russian education are:

1. Low level of government education funding.
2. Excessive bureaucratization of the educational process.
3. Excessive orientation of learning to the translation and assimilation of knowledge.
4. Low level of learning motivation.

5. Lack of highly qualified teaching staff.

6. Unjustified pressure on educational institutions (bureaucratic pressure), low level of academic freedom, etc. [2–7].

Many countries have entered the stage of post-industrial development. This trend necessitates the modernization of the traditional education system inherited from the Soviet Union.

The accession of the Russian Federation to the Bologna Process in 2003 and the gradual integration of Russian education into the European space did not make it possible to solve the problem of modernizing education.

The root of the problem was not the implementation of bachelor's and master's degrees or the lack of a test system similar to the Unified State Examination, or Russian diplomas in Europe which are not recognized by Europe. It is the outdated learning process. Indeed, "the modern system of school and university education is focused only on the transmission and assimilation of knowledge. The main values are information and awareness, knowledge rather not understanding of human existence. Educational institutions are concerned about the search for new hours to fill the soul with ever-growing volumes of highly specialized knowledge. At the same time, the human soul is considered and

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evaluated as a reliable container for this information” [8].

Nikitin claims that the process of learning in Russia is reduced to the development of "purely mechanical abilities for assimilation and transmission of information."

The Federal Law “On Education” defines learning as “a purposeful process of organizing activities aimed to acquire knowledge, skills and competencies, to gain experience in applying knowledge and develop students’ motivation to receive education throughout the entire life” [1].

In this study, learning is understood as a purposeful activity related to the development of fundamental and applied knowledge, technologies and techniques of correct and creative thinking, practical skills and abilities, social and moral norms, the ultimate goal of which is to reveal the personal potential of the student, and the ultimate goal is social progress.

Thus, a student is a person who gains fundamental and applied knowledge, masters technologies of correct and creative thinking, practical skills and abilities, social and moral norms, and a teacher is a person who translates fundamental and applied knowledge, technologies of correct and creative thinking, practical skills and abilities, social and moral norms.

The activities of the teacher and the student are contributing to social progress: educated citizens are the engines of social progress.

On the basis of Moscow International University, the Integrated Research Institute of the Russian Academy of Sciences and the NP "Laboratory for Cognitive Research of Consciousness the authors developed the integrated concept of learning.

## 2 Materials and Methods

In the development of the comprehensive concept of learning, the modeling methods and the comparative historical method were used.

## 3 Results and Discussion

The concept of comprehensive learning is based on five basic principles.

1. pluralism
2. freedom of thought and choice
3. methodical doubt
4. Practicality
5. Responsibility
6. harmonious development of personality

Learning is the transmission of social experience. It consists of four complex blocks:

1. The knowledge block consists of lessons and lectures. This block includes fundamental knowledge about the laws of nature, the development of society, historical events, etc.

2. The methodological block includes various techniques for the development of non-standard thinking, technologies for critical work with information.

3. The block of practical skills and abilities includes practical skills: social (the ability to work in a team, to manage, to educate, etc.), cognitive (the ability to write texts, conduct research, fill out declarations, etc.), technical (the ability to repair, drive a vehicle, rearrange, etc.), etc.

4. The block of moral and civic responsibility involves the abilities to follow moral and legal norms, cultivating civic deeds and good deeds, values of goodness.

Each block has its own tasks.

The “knowledge” block transfers fundamental knowledge and is aimed at replenishing society with knowledgeable citizens (experts, erudites).

The methodological block is aimed at the development of correct and critical thinking in accordance with the laws of logic and creative abilities.

The block of practical skills gives the society highly qualified specialists, experts.

The block of moral and civic responsibility gives the society a responsible citizen.

**Table 1.** Features of learning blocks

Blocks	Basis	Composition	Task	Result for society
Block 1	Fundamental knowledge	Traditional school subjects	Translation of knowledge	Knowledgeable person (expert, erudite)
Block 2	Thinking and imagination	Simple and complex (non-standard) tasks	Development of correct and critical thinking; development of creative abilities	Thinking man, creative man
Block 3	Skill and proficiency	Writing texts and releases, project activities,	Transfer of practical skills and abilities	Skillful man
Block 4	Responsibility	Following moral and legal norms, civil acts, good deed, etc.	Raising Responsibility	Responsible man

All blocks are essential to the learning process.

Robots are gradually replacing humans in the sphere of routine production. They cope with any standardized operations. Robots (smart algorithms) are able to store huge amounts of information in their memory: the place of birth and the date of death of Leo Tolstoy, the plot of the play “At the Bottom”, they can perform operations with large numbers. But they are not capable of creative thinking and solving non-standard tasks.

Therefore, the methodological block is essential for the learning process.

In addition, computer machines do not bear any moral or legal responsibility for the results of their work. They are incapable of moral reflection. Whereas man is a reflective being. In the 20th century, homo sapiens created a weapon capable of destroying the entire planet. Only man can reflect on the consequences of nuclear

weapons. Therefore, the Responsibility Block is also important.

Traditionally, the education system in Russia is focused on the development of knowledge. The basis of learning is transmission and assimilation of knowledge.

In accordance with the integrated concept of learning, the educational process should be based on one lesson (1 lecture) for each of the four blocks.

Education in the Russian Federation (both general and vocational) is implemented at various levels:

1. Preschool education.
2. Elementary general education (grades 1–4).
3. Basic general education (grades 5–9).
4. Secondary general education (grades 10–11).

Levels of higher education:

1. Secondary vocational education.
2. Higher education – bachelor's degree.
3. Higher education – specialty, magistracy;
4. Higher education – training of highly qualified personnel.

Restructuring the learning process in accordance with the comprehensive concept of learning at the level of primary general education.

According to the Federal Law "On Education in the Russian Federation", "elementary general education is aimed at shaping personality, developing individual abilities, positive motivation and skills in educational activities (reading, writing, counting, basic learning skills, elements of theoretical thinking, the simplest skills of self-control, behavior and speech, basics of personal hygiene and a healthy lifestyle).

Requirements for mastering the main educational program of secondary (complete) education are also established in the Federal State Educational Standard.

The results of mastering the program are divided into three groups:

1. Personal results – the readiness and ability of students for self-development and personal self-determination, motivation for learning and purposeful cognitive activities, a system of significant social and interpersonal relationships, value-semantic attitudes that reflect personal and civic positions, social competencies, legal awareness, the ability to set goals and build life plans, to understand Russian identity in a multicultural society.

2. Meta-subject results (inter-subject concepts and universal educational activities) – the ability to use these results in educational, cognitive and social practice, independence in planning and implementing educational activities and organizing educational cooperation with teachers and peers, building an individual educational trajectory.

3. Subject results as skills specific to a given subject area, mastered in studying a subject, activities aimed to gain new knowledge, its transformation and application in educational, educational-design and social-project situations, development of a scientific type of thinking, scientific ideas about key theories, types of relationship, knowledge of scientific terminology, key concepts, methods and techniques.

Elementary education is the foundation for further basic general education.

The requirements for the schedule in general educational institutions are regulated by the Federal State Educational Standards and the Sanitary and Epidemiological Rules and Norms.

The maximum allowable workload for first grade students should not exceed four lessons per day. In accordance with the Sanitary and Epidemiological Rules, the weekly schedule must include at least three physical education classes.

In addition, the schedule is compiled in accordance with the scale of difficulty of subjects (the rank of difficulty is measured from 1 to 8). The scale of difficulties of subjects for grades 1–4 is presented in Table 2.

**Table 2.** Subject Difficulty Scale for grades 1–4

General education subjects	Number of points (rank of difficulty)
Mathematics	8
Russian (national) language	7
Natural history, computer science	6
Russian (national) literature	5
History	4
Drawing and music	3
Labor	2
Physical culture	1

Some subjects have two or three aspects, so they can be distributed into several blocks.

For example, mathematics is a three-aspect subject (mathematics is a universal subject). On the one hand, certain knowledge is given in mathematics lessons (block 1: defining the concepts of number, addition, division, etc.), and on the other hand, mathematics teaches you to count correctly and quickly (block 3), as well as to think logically (block 2).

Russian (national) literature is also three-dimensional: it gives knowledge about writers and their works (block 1), develops imagination (block 2) and contributes to the development of morality (block 4).

Russian language is a two-aspect subject: it gives knowledge about the language (block 1) and teaches how to write and pronounce sounds correctly (block 3).

Natural science and history are one-dimensional: they provide knowledge about nature and historical events (block 1).

Physical education classes teach to take care of our health. Therefore, physical culture is also a one-aspect subject (block 3).

There are additional aspects in some subjects: for example, an aspect related to the development of thinking in linguistics (block 2); in this case, linguistics will be a three-dimensional subject.

The selection of aspects is a debatable issue. The procedure for selecting aspects does not have any rigid (mathematical exact) criteria.

In addition, the selection of aspects depends on teachers who may not emphasize certain aspects.

The approximate distribution of the subjects in four blocks:

Block 1: mathematics (knowledge); Russian (national, foreign language); natural history; informatics

(knowledge); Russian (national) literature (knowledge); history; drawing and music (knowledge);

Block 2: mathematics (problem solving); Russian (national) literature (development of the imagination)

Block 3: mathematics (ability to count); Russian (national, foreign language) (ability to write correctly); informatics (computer skills); drawing and music (the ability to sing and draw); labor (the ability to craft); physical culture (the ability to work with the body).

Block 4: Russian (national) literature (morality).

Thus, blocks 1 and 3 are more saturated.

School timetables are not always harmonized.

We propose to build a class schedule based on the comprehensive concept of learning, in particular, the principle of freedom of thought and choice (principle No. 2) and the principle of harmonious development of personality (principle No. 6): all four blocks should be present in equal proportions in the process of learning.

The schedule of lessons in the elementary school in accordance with our concept is presented in Table 3:

**Table 3.** Schedule in the elementary school

Subject	Block
<b>Monday</b>	
Natural history	Block 1
Literature reading	Block 3
Mathematics	Block 2
Russian (national) literature	Block 4
<b>Tuesday</b>	
Drawing and music	Block 3
Russian (national) language	Block 1
Mathematics	Block 2
Russian (national) literature	Block 4
<b>Wednesday</b>	
Physical education	Block 3
Mathematics	Block 2
Russian (national) literature	Block 4
History	Block 1
<b>Thursday</b>	
Computer science	Block 3
Mathematics	Block 2
Russian (national) literature	Block 1
Russian (national) literature	Block 4
<b>Friday</b>	
Labor	Block 3
Mathematics	Block 2
Russian (national) literature	Block 4
History	Block 1

To saturate block 2 and block 4, we propose to introduce additional subjects: logic (block 2), imagination development methods (block 2), heroes of our time (block 4), heroes of history (block 4)

The lessons “heroes of our time” would deal with real cases from everyday life (rescuing a drowning child, saving children during a house fire, etc.), and the lessons “heroes of history” should tell about heroic historical events (flight of man into space, the defense of the Brest Fortress in the Second World War, etc.).

## 4 Conclusion

The study developed a comprehensive concept of learning, its principles and definition.

We proposed a new version of the class schedule (using the example of the schedule in the elementary school), taking into account the distribution of subjects into four blocks.

It should be taken into account that all students are unique and have own interests. Someone gravitates towards a liberal arts education, others show an interest in technical or mathematical education. However, their interests may change over time.

In order to fix all these points, the institution of mentors should be introduced. Each mentor is assigned a certain number of students throughout the entire period of study. The task of mentors is to diagnose the abilities and talents of the student and disclose them through interactions with teachers.

In market society, the following question is always raised: what will be in demand in the labor market in the future? Taking into account global trends, we can say that professions related to the creation of a unique product will be in demand. There will be a demand for workers who can build harmonious relationships with people and competently manage teams.

It is the complex concept with its idea of dividing the educational process into four blocks aimed at meeting new trends and responding to the current challenges.

In addition, the fourth level of general education (secondary general education) the purpose of which is an in-depth study of subjects mastered at the previous third level, is redundant. We believe that nine grades of school (basic general education) are sufficient for mastering general education programs. After graduating from grade nine, the student should begin mastering vocational education programs: secondary or higher.

In addition, the schedule for the ninth grade should be based on the profile principle: mentors help the student decide on the future profession. If the student relates his future with liberal arts education, block 1 should consist exclusively of humanitarian subjects.

Within the comprehensive concept of education, the role of the teacher has been also changed. The teacher is not a bearer of a barrel of water, endlessly pouring huge volumes of water into the thickets of student's consciousness. The teacher teaches to think correctly and creatively, to master practical skills and abilities, social and moral norms.

The activity of the teacher is aimed at social progress, since only educated citizens are the engines of social progress.

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