



Ways and Means of Forming Divergent Thinking of Primary Class Teachers

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Abstract: In this article, I present the opinion that in order to raise the future generation with the ability to acquire knowledge and skills necessary for the development of society, the teacher's qualification should be focused on expressing the potential of the individual, the sphere of reproduction of his creative base.

Keywords: divergent, intellectual, concept, identification, attention, perception, process of associations, thinking, association, motive, activity, convergence, reproductive, creative thinking, independent, heuristic.

The analysis of the teacher's activity in modern conditions allowed us to conclude that for a teacher, only science knowledge and natural power of mind are not enough - an important aspect is flexibility and freedom of thought, a high and multifaceted culture of thinking and emotions, strong will, knowledge of the nature of "subject" interaction, etc.

Before moving on to the structure of divergent thinking, let's determine its place in the structure of the intellect.

Currently, there are several basic definitions of intelligence. Here are some of them:

Intelligence is a relatively stable structure of a person's mental abilities.

Intellect - in a broad sense - the sum of all cognitive functions.

Intellect - from intuition and perception to thinking and imagination, in the narrow sense - thinking.

Intelligence is a form of organization of individual mental experience in the form of existing mental structures, the space of mental reflection created by them, and mental images of what is happening in this space.

Intelligence is a set of skills needed to survive and succeed in a given culture.

Intelligence is an integral part of knowledge and skills.

Intelligence is:

- a) the general ability to study and solve problems that determine the success of any activity and are based on other abilities;
- b) the system of all cognitive abilities of a person: sensations, feelings, memories, imagination, thinking, imagination;
- c) Ability to solve problems without trial and error "in mind".

M.A. Kholodnaya defines mental experience as follows: "Mental experience is a system of existing mental formations and mental states initiated by them, which underlies a person's cognitive attitude to the world and characterizes the specific features of his intellectual activity."

Mental experience takes three forms: mental structures, mental space, and mental representation.

Cognitive experience - mental structures that ensure the storage and organization of available and incoming information. Their main goal is "operational processing of current information about current effects at different levels of reflection."

Metacognitive experience - mental structures that carry out the voluntary regulation of the process of information processing, as well as the equally important voluntary organization of the intellectual activity of a person. The main goal is "to monitor the state of individual intellectual resources, as well as the progress of intellectual activity."

Intentional experiences are mental structures based on individual intellectual tendencies. Their main goal is to "predetermine" subjective selection criteria for a certain topic, the direction of the search for a solution, certain sources of information, subjective means of its presentation.

The characteristics of cognitive, metacognitive and intentional experience organization determine the characteristics of individual intelligence.

Thus, we see that divergent thinking is embedded in intelligence. Analyzing the views of D. Gilford, G. Grubber, C. Taylor, E. Torrens on the problem of divergent thinking, analyzing the structure of professional competence proposed by A. K. Markova, taking into account the achievements in the works of V. I. Zagvyazinsky, E. L. According to Prasolova et al., a conclusion can be drawn about the structure of divergent thinking (Table 1).

Table 1

The main characteristics of divergent thinking	The main characteristics of divergent thinking	The main characteristics of divergent thinking
1. Integrity and consistency Ability to create a holistic image of professional activity in a specific model of education Ability to systematically implement pedagogical activity	1. Integrity and consistency Ability to create a holistic image of professional activity in a specific model of education Ability to systematically implement pedagogical activity	1. Integrity and consistency Ability to create a holistic image of professional activity in a specific model of education Ability to systematically implement pedagogical activity
2. reflexivity Awareness of the level of personal professional competence based on information about different models of education Ability to adjust pedagogical activity depending on the situation	2. reflexivity Awareness of the level of personal professional competence based on information about different models of education Ability to adjust pedagogical activity depending on the situation	2. reflexivity Awareness of the level of personal professional competence based on information about different models of education Ability to adjust pedagogical activity depending on the situation
4. criticality. Having information about different models of education as a condition for objective analysis of educational events. Instructions from forms of activity in self-assessment of professional skills and evaluation of teachers' pedagogical experience. ability to use as	4. Criticality. Having information about different models of education as a condition for objective analysis of educational events. Instructions from forms of activity in self-assessment of professional skills and evaluation of teachers' pedagogical experience. ability to use as	4. Criticality. Having information about different models of education as a condition for objective analysis of educational events. Instructions from forms of activity in self-assessment of professional skills and evaluation of teachers' pedagogical experience. ability to use as
5. The ability to determine one's own destiny in conditions of uncertainty. To have information that allows movement in the flow of new ideas and educational	5. The ability to determine one's own destiny in conditions of uncertainty. To have information that allows movement in the flow of new ideas and educational	5. The ability to determine one's own destiny in conditions of uncertainty. To have information that allows movement in the flow of new ideas and educational

technologies.	technologies.	technologies.
6. Adaptability Knowledge of systematic restructuring of thinking and pedagogical activity in changing education Ability to systematically reconstruct thinking and pedagogical actions in changing conditions	6. Adaptability Knowledge of systematic restructuring of thinking and pedagogical activity in changing education Ability to systematically reconstruct thinking and pedagogical actions in changing conditions	6. Adaptability Knowledge of systematic restructuring of thinking and pedagogical activity in changing education Ability to systematically reconstruct thinking and pedagogical actions in changing conditions
7. Productivity. The ability to create new ideas. Creative activity in research and professional pedagogical activities	7. Productivity. The ability to create new ideas. Creative activity in research and professional pedagogical activities	7. Productivity. The ability to create new ideas. Creative activity in research and professional pedagogical activities

Divergent thinking leads to a holistic, polyparadigmatic knowledge of pedagogical reality, to its critical understanding, to interdisciplinary research in solving psychological and pedagogical problems (the desire to "create one's own image of the world", the desire to creatively solve pedagogical problems, the humanistic "subject-subjective" position in professional activity).

The formation of divergent thinking of the teacher is provided by the unity of the content and procedural organization of educational activities.

Educational philosophy is a means of forming divergent thinking of teachers in the educational process. This makes the class a "research team". Philosophy is the paradigm discipline for teaching thinking. Ways of thinking create a framework that allows you to engage the subject content of this subject in the discussion. The main goal of a teacher is to develop high thinking in children through philosophy. Philosophy requires dialogue, and this dialogue serves to develop divergent thinking.

From the beginning of its emergence, philosophy sought not only to understand the existing educational systems, but also to form new values and ideals of education.

Every year, many seminars and conferences dedicated to the problems of the philosophy of education are held in the world, separate journals are published or titles are created in existing ones. The World Philosophical Congress held in Boston on August 10-16, 1998 was devoted to the problem of education. The conference was held under the slogan of philosophy as a means of educating humanity. Four plenary sessions and five symposiums and colloquiums were directly related to the philosophy of education.

However, there are still difficulties in clarifying the position of educational philosophy, on the one hand, with general philosophy, and on the other, with pedagogical theory and practice. Representatives of different philosophical currents, of course, interpret the content and tasks of the philosophy of education in different ways. There are also different approaches to defining the philosophy of education. Here are just a few definitions:

"Philosophy of education is a special type of philosophical system specializing in the field of education" (Encyclopedia Britannica);

"Philosophy of education is a way of thinking about education" (J. Beuys);

The philosophy of education is a response to the crisis of education, the crisis of traditional scientific forms of its understanding and intellectual support, and the end of the main pedagogical paradigm. In the philosophy of education, the final foundations of education and pedagogy are discussed: the place and meaning of education in the cultural world of life, the understanding of the individual and the ideal of education, the content and characteristics of pedagogical activity, etc.

The methodological and, in particular, the project direction of the philosophy of education determines the ways and methods of solving the crisis in education and the discussion of the new school image.

The interest of the philosophy of education is pedagogy and education itself, therefore, it uses all the ideas from other disciplines to understand the educational crisis, discuss the final foundations of

pedagogical activity, and develop ways to create the main directions of education. revises and reflects in relation to their duties.

The philosophy of education is pluralistic in its essence: under this name, different views about education and ways of acquiring it, different views on the personality and its development, different views on life and its meaning live side by side.

It is not at all necessary for a person who teaches reception to be guided by any particular concept, but a careful and critical study of the theories developed by professional philosophers of education is important in shaping his professional worldview. is a step. In fact, any teacher has his own approach, it may not be fully conscious, it is not formed in strict terms, but this approach is definitely reflected in his actions.

The philosophy of education examines the essence of all phenomena in the educational process: what is education itself (educational ontology); how it happens (educational logic); what are the nature and sources of educational values (educational axiology); what happens and what should be the behavior of the participants of the educational process (educational ethics); what and how should be the methods of promoting the educational process (educational methodology).

- Learning and teaching in the course of "Philosophy of Education" goes through several stages. Teachers should always undergo regular professional development based on the requirements of the times.
- The training was based on the principles of pedagogy of the developing environment:
- the principle of equalizing initial opportunities and creating didactic and psychological conditions for successful personal and professional development of teachers;
- the principle of unconditional acceptance and respect for a person;
- the principle of reflexive management, i.e. organize the activities of the listeners from the point of view of the listeners themselves, based on the understanding of their expectations, attitudes, and interests;
- the principle of combining the development of thinking and speech in the process of using the methods of reproductive reproduction of information received from the teacher, as well as the dialogical method related to the clarification of the meanings of pedagogical concepts, theories, concepts, pedagogical activity;
- the principle of creativity aimed at creative, personal rethinking of educational material;
- the principle of "growing" new forms of thinking, communication, business cooperation during the educational process;
- the principle of the variety of simulation types of the developing educational environment that correspond to the real processes of professional pedagogical activity and the value orientations of teachers;
- The principle of a student-oriented approach to communication and partnership between teachers and students.
- the principle of systematic reflection of educational activities, including the analysis of the work of teachers and educators, the search for the meaning of certain forms of work proposed by them, as well as self-evaluation and personal participation in teaching peer review. Among such forms of teaching: lecture-discussion, seminar-discussion, business game, colloquium, practical lesson, because they are based on dialogue. And dialogue, as shown above, is one of the main methods of developing divergent thinking.

The source of the teacher's personality development and self-affirmation in the first year of study is the conflict between the individual's need for personalization and the presence of obstacles that prevent its implementation, the marginality complex [that on the ground]. During this period, the formation of divergent thinking on the material of the history of the philosophy of education is

carried out.

The main task of this stage is to develop the reflexive sphere of professional-pedagogical activity by interpreting, enriching the lexical content of the language of professional-pedagogical communication, forming integrity and consistency, as well as forming the flexibility and criticality of speech. Divergent thinking, the ability to self-determine in conditions of uncertainty.

The development of the language of professional communication (in this case, the language of pedagogic science) is carried out in the process of performing such educational tasks related to the discussion of one's own versions of the definitions of certain pedagogical categories. In the performance of tasks, teachers have an equal right to acquire new information and new forms of educational activity for them, which allows them to overcome fear and self-doubt. This is provided by the simplicity of the tasks, the possibility of their successful implementation, and the clarity of the set educational goals.

The following methods of developing divergent thinking are used in the philosophy of education classes

- a story - a monologic presentation of the problem material of the "Philosophy of Education" course, which is used to form the consistency and integrity of divergent thinking;
- Essay writing is primarily a method used to develop a divergent thinking system and integrity, as well as criticality. It is possible to write an essay on a strictly defined topic (a problem is formulated, a solution must be proposed in different ways; a statement is given - it must be refuted and supported by giving evidence; a question is asked. it is necessary to give a one-sided answer; the text is offered - you need to isolate the problem independently and offer several solutions to it) or on a free topic suggested by the teacher;
- Interpretation. The method is necessary for the development of reflexivity and flexibility of thinking. Teachers interpret texts or oral statements. And texts and statements of increased complexity. The teacher should offer several options for interpretation;
- Modeling. It is a necessary method to develop the systematic and integrity of thinking, as well as the ability to self-determine in conditions of uncertainty (in various business games). Building a model is always systematic and holistic, and the modeling process allows predicting different behaviors in the face of uncertainty;
- Proof is very effective as a method of developing criticality. It is also used in essay writing. The teacher must prove the truth or falsity of the statement in different ways.
- The method of "brainstorming" or "brainstorming" is one of the most common ways to free and activate creative thinking. For the first time, this method was used in the United States as a way of obtaining new ideas, which consisted of complete freedom of speech and the prohibition of their criticism. As noted, the fear of criticism prevents creative thinking, so the main idea of the attack is to separate the process of forming ideas in a closed group of experts from the process of analyzing and evaluating the expressed opinions.

As a rule, the attack lasts about 40 minutes. Participants are invited to express any ideas (joke, fantasy, and mistake) on the given topic. Criticism is prohibited. More than 50 comments are usually made. The time limit is up to two minutes for each presentation.

The most interesting moment of the attack is the beginning of the peak (hype), when the ideas "gash", that is, the involuntary formation of hypotheses of the participants takes place. When analyzed further, only 10-15% of ideas turn out to be reasonable, but some of them are very original. The results are usually evaluated by a panel of experts not involved in the generation;

The "6, 3, 5" brainstorming method means that in 5 minutes, 6 experts should propose 3 options for solving a pedagogical problem. After 5 minutes, the next 6 teachers are invited for the same procedure and so on. Thus, in half an hour you can get 108 new ideas and suggestions, which will be actively discussed and used later. The method is essential for obtaining random results;

- the method of separation into parts is applied to material (tangible) objects; it consists of making a list of the main features of an idea or object and reviewing each of them for improvement;
- Morphological analysis consists of entering all variables into the matrix and combining them.
- If long-term intensive work on any problem does not give an innovative solution, the "daydreaming" method is suggested. In such a situation, complete rest and imagination can lead to creative insight.

Regardless of which method is used, the following four rules must be followed:

- 1) refrain from premature judgment - it is necessary to exclude premature criticism of ideas;
 - 2) looseness - the crazier the idea, the better the results;
- In the seminars, the following exercises aimed at developing divergent thinking on educational philosophy materials were developed:
 - What is this? (More than one answer was needed.) In most cases, at first, the thinking is focused on getting the only correct answer. But we must not stop searching;
 - Establishing contacts. The ability to make connections and relationships, sometimes even strangely, is a very important skill for divergent thinking;
 - metaphors and comparisons (assignment: study the following comparisons and explain why they are valid);
 - Separation and connection (There is another good way to generate ideas. This is called "attribute analysis". Attribute analysis creates a list of features, characteristics and parameters of the idea you are working with. Then, to create a new idea, you need to change one or more properties at the same time);
 - improvisation exercises;
 - Exercises for the development of metaphor (answers to questions: education is ..., philosophy is ...).

The effectiveness of the first stage of the formation of divergent thinking of teachers can be evaluated as follows:

- the ability to objectively assess one's creative and professional capabilities;
- emotional satisfaction from communication with children in lessons and extracurricular activities, as well as in informal communication;
- the ability to design professional and pedagogical activities;
- development of self-awareness, its criterion is the ability to analyze one's pedagogical activity;
- to be able to think about educational processes, to understand the essence of different approaches to upbringing and education;
- Development of integrity and systematic thinking, as well as its flexibility, criticality.

In the second stage (the second year of training), the formation of divergent thinking continues. But to the characteristics of divergent thinking developed at the first stage of development, such characteristics as "innovation" and "productivity" are added. During this period, divergent thinking is formed when considering different models of education.

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