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Learning Activity as an Effective Way to Develop Meta-Subject and Personal Competencies in Elementary School Students

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The article presents data from many years of research that confirms the fact that the system of teaching younger students based on the method of learning activity creates conditions for successful cognitive, social and personal development of children in primary school. Students aged 10—11 show a higher level of mastery of key competencies than their peers who study on the basis of traditional methods and techniques of organizing educational work. It is reliably established that the" developing educational environment" allows children to form higher results on such important indicators of learning ability as the ability to separate the known from the unknown and ask questions about the unknown. The indicators of development of the basics of theoretical thinking (content analysis, depth of planning, reflection) in children who study on the basis of the method of learning activity are higher than in children who study in a traditional school. The "developing educational environment", in contrast to traditional schools, contributes more to the effective development of children's social competencies - the ability to interact, overcome cognitive conflict, and exercise mutual control and evaluation of actions performed.

Keywords: developing educational environment, educational environment based of traditional learning content, learning to learn, cognitive meta-subject results, social competence

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Problem

One of the key areas of the human activity theory is the theory of learning activity developed in line with the concepts of cultural-historical psychology. Created in the 1960s in the works of outstanding psychologists D.B. Elkonin and V.V. Davydov [1; 3; 4; 11; 19] learning activity theory has become a fundamental scientific platform for the development and implementation of a developmental learning system in Russia. The system was based on the principles of organization of learning that fundamentally differ from those underlying the traditional school.

So, in contrast to other methods of teaching according to V.V. Davydov [5], "the peculiarity of learning activity lies in the fact that in the process of its implementation, the student learns theoretical knowledge. Its content is the origin, formation and development of any subject. Conversely, if at school we observe a child assimilate such knowledge, which is already clearly articulated in advance and presented to him by the teacher in a ready-made form, and which content lacks moments of the origin and development of the studied subject, then we can surely affirm that in this case the child is not accomplishing learning activity. Given that with help of the illustrations and explanations offered by the teacher, he assimilates this or that empirical knowledge. Unfortunately, in a regular school, children most often learn just such kind of knowledge. Therefore, in a regular school a relatively small number of children is engaged in full-time learning activities... " The learning problem is characterized by the accomplishment of special learning actions. The main one among them is the transformation of the problem situation in order to distinguish certain initial relationship (it serves as the general ground for solving the whole variety of particular problems). Through the accomplishment of learning self-control and self-evaluation activity, schoolchildren regulate their work in the situation of learning problem solving, perform analysis and planning of a solution search.

Relying on numerous studies conducted within the framework of learning activity theory system of concepts,

V.V. Davydov articulated a number of provisions that allow us to consider the system of learning activity as a universal way of organizing the learning work of the adult and the children, the way that differs from traditional teaching methods in its goals, means and results. So, the full-fledged learning activity of primary schoolchildren is associated with the solution of particular learning problems that differ from all other tasks in the following. The process of learning problem solution is aimed at student searching and mastering a general way (approach) to specific practical problems of a certain grade. In the process of this search the agents, mastering certain methods of action, are being changed themselves (D.B. Elkonin). "Firstly, schoolchildren learn theoretical knowledge and corresponding abilities and skills when solving learning problems. Secondly, the solution of such problems allows students to assimilate somewhat "common" even prior to assimilating its particular manifestations. Thirdly, the main method of schooling should be the method of introducing children to the situation of learning problems and the organization of learning activities, in brief — *the method of learning problems solving by students*. These attitudes are opposite to those of the theory and practice of traditional school education " [5, p. 7]. In the 1960s the principles of learning organization by type of learning activity were the basis for the development of educational courses and developmental learning programs for elementary school students. Later on educational courses for elementary school implementing the principles of learning activity theory were created. These programs continue to be created and improved nowadays with account for modern technological advances and modern requirements for the development of children.

Moscow school No. 91, where the principles of developmental learning were piloted and put into practice, is also currently working on the basis of learning activity method. It remains the main platform for conducting extensive research on the psychological and pedagogical patterns of the formation of learning activities in children, platform for studying the particular aspects of learning problems solving and the aspects of the of schoolchildren learning activities performance.

Unlike schools that work according to traditional curricula, in this school:

— certain requirements to the educational content are presented: the content should reproduce the logic of scientific knowledge, i.e. should ensure the derivation of concepts and their interrelations in the course of school problems solving by schoolchildren, should provide students with the opportunity to experiment with model and subject material;

— the teacher's most important task is to create a problem situation at the lesson that encourages children to search for and explore, put forward hypotheses, test them and evaluate their sufficiency in terms of problem solving;

— the lesson is organized in the form of joint activity through meaningful interactions between the teacher and the children, as well as interactions among the children themselves. Hypothesizing and hypotheses testing, assessment of their sufficiency build the basis of a group discussion. The teacher should ensure that most students in the class are included in a meaningful discussion, where hypotheses on how to solve the problem, which have to be tested in practice, are being developed;

— the formation of meaningful criteria for self-evaluation and evaluation of one's actions in children is a logical result of the organization of the learning process in the form of joint solution of learning problems. They learn to control and evaluate their learning activity and the actions of others as a contribution to solving a learning problem.

From developmental learning theory perspective the traditional school has virtually made no changes in the content of the curricula. Although at present several basic coursebooks for elementary education have been adopted, the analysis shows that they are designed according to same general principle: the formulated rule and many similar examples, i.e. ready-made knowledge, orientation on reproduction and memorization, as well as on training and strengthening of skills and abilities. The learning environment of a traditional school can be characterized by different goals, yet in all the cases, the method of organizing teachers' and students' educational work does not meet the requirements of learning activities.

Experimental study

The presence of at least two methods of organizing the learning of elementary schoolchildren, which are different in their theoretical foundations, makes the study, aimed at identifying the relationship between the teaching method and the level of the development of primary education meta-disciplinary results, relevant.

The hypothesis of this study was to show that the change in the content of education from traditional to reflectively — active, characteristic of D.B. Elkonin—V.V. Davydov system of developmental learning, creates conditions relevant to the successful cognitive and social development of children 10—11 years old.

The main *objective* of the study was to qualitatively and quantitatively assess the impact that the type of school educational environment with a given method of learning organization has on the development of basic competencies in children — learning skill, cognitive abilities and social competencies.

Sample:

The study involved students of three schools different in their ways of organizing education, i.e. children, who were engaged in different educational conditions and from this perspective represented different educational environments.

• Environment 1. In this sample, we included the students, who finished elementary school, which is implementing a developmental learning program. The sample consisted of two groups. The first group comprised of students from school No. 91. Three years of data were examined (2016, 2017, 2019). A total of 124 people participated in the study. The second group included school students, where the developmental learning program was implemented only in one out of four cohort of same

year students. In total, this group included 20 children (data from 2019).

• Environment 2. In this sample, diagnostic data are presented for the students from seven Moscow schools working according to traditional educational programs. The students finished elementary school. A total of 342 people (data from 2016).

• Environment 3. This sample presents diagnostic data for the students of the fourth grades from a special school for gifted children. The school conducts strict annual selection of children admitted to the first grade with help of special "giftedness tests". Learning in this school is conducted according to the uniquely designed program for gifted children. In 2017, cognitive and social meta-subject results diagnostics was carried out among two classes of same year students from this elementary school. The study involved 45 people.

Results

1. — *The study of the dependence of learning to learn on the way of learning organization of younger students*

Learning to learn is an essential meta-subject educational result, that among other things to a great extent determines the success of further learning.

According to research, the learning to learn is a characteristic of the agent of learning able to independently transcend the limits of one's own competency for searching ways of acting in new situations [16]. The person, who can learn, should be able to discover what kind of particular knowledge and skills for solving the task given are missing (reflective element of learning to learn), to find the knowledge missing and to master the missing skills (search element of learning to learn).

A developed learning to learn is an educational objective that can be achieved by the end of the main stage of education. It was established that for the successful implementation of this objective in elementary school it is necessary to form two basic prerequisites: the ability to separate the known from the unknown and ask questions about the unknown, and also the skill of using a hint. The ability to separate the known from the unknown allows us to distinguish the solvable tasks from the underdetermined ones and ask a question about the missing conditions for action. This skill is diagnosed with help of the "Underdetermined Tasks" test [10]. The test is based on the material of simple textual mathematical problems, methods to solve them were carefully worked out during mathematics classes in elementary school. The student must first determine what type the task belongs to, i.e. whether it is "solvable" or "with missing data", and, in the second case, must independently supplement the condition, so that the problem can be solved. The number of tasks correctly assigned to "solvable" or "underdetermined" (indicator "distinction") and the number of correctly made supplements to the conditions of underdetermined tasks (indicator "correctness of supplement") will be important for assessing the learning to learn skill. The test includes 10 tasks, five of which are solvable, and the other five require additional determination.

The diagnostic results for these indicators in various environments are presented in Fig. 1.

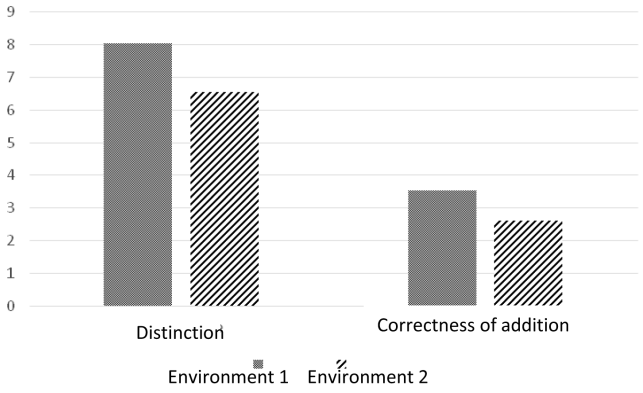

Fig. 1. Level of learning to learn development among the students, who finished elementary school, in various environments[1]

The differences between the samples are statistically significant (the significance of the differences was determined by Mann—Whitney *U* test; U_{dist} = 13530.5, $p < 0.01$, U_{supp} = 15232.5, $p < 0.01$).

Can it be considered proven on the basis of the data obtained that the formation of learning to learn is affected specifically by the type of school educational environment (in terms of the ability to separate the known from the unknown and ask questions about the unknown)? Or school No. 91, which implements the method of learning activity, has some other mechanisms that impact the formation of the learning to learn, in addition to a special curriculum and the corresponding forms of educational process organization? A comparison of the data obtained in two different groups of environment 1 with help of the test "Underdetermined tasks" was made to answer this question. Recall that the first group included students from school No. 91. The second group included students of the school, which implements D.B. Elkonin—V.V. Davydov program only in one out of four cohorts of same year elementary school students. The rest of the classes worked in line with traditional curricula. The data of the comparative study of the learning results in two groups of schoolchildren are presented in table 1.

Table 1

Comparative data on the results of different schools students learning within the framework of D.B. Elkonin—V.V. Davydov program (on average per child) according to the test "Underdetermined tasks"

	Distinction	Correctness of addition
Group 1	8,02	3,53
Group 2	7,71	3,71
	The differences are not significant	The differences are not significant

[1] The maximum values of the "distinction" indicator and "correctness of addition" indicator are 10 and 5 grades respectively.

According to the data, the results of the two schools are not statistically different. This suggests that it is the factor of the curriculum aimed at organizing learning activity that has a significant impact on the learning to learn formation from primary school graduates.

In addition, the "Underdetermined Tasks" test presents two important indicators — "distinction", which shows whether a child can distinguish a solvable task from an underdetermined one, and "correctness of supplement", which shows whether he or she is able to understand what the task is, what is missing, what needs to be added to the conditions, so that the task becomes solvable. The frequency distributions of grades obtained by the students for each of these two indicators are presented in Fig. 2.

The histograms show that the frequency distribution of scores for both indicators in Environment 2 received by the students, who finished elementary school, for performing the tasks of the diagnostic technique "Underdetermined tasks" "splits" into two parts ("double-humped distribution"). Such a "wrong" distribution denotes that there are children, who have learned to distinguish tasks with sufficient data and tasks with missing data, and there are children, who have not learned to do this, among the study participants in schools with a traditional curriculum (Environment 2). As well as some of the children were able to correctly determine the condition of the problem so that it could be solved, and some were not.

A different situation was observed in students of schools with a developmental learning environment (Environment 1). The histograms show a "one-humped distribution" that shifted towards higher values, which indicates a rather high level of learning to learn formation in these children.

2. The study of the dependence of cognitive competencies development on the elementary schoolchildren students' way of learning

When analyzing cognitive competencies in this study, we relied on the provision about two types of cognitive activity, which were most consistently elaborated within dialectical logic and actualized in the works of V.V. Davydov [3; 4; 6] and in the studies of his followers [2; 9; 11; 12; 16; 17; 18]. They affirm that a person, who cognizes the surrounding reality can be both aimed at reflecting the internal connections and relations of objects and phenomena, thereby actualizing theoretical, substantial, rational knowledge, and at reflecting their external connections

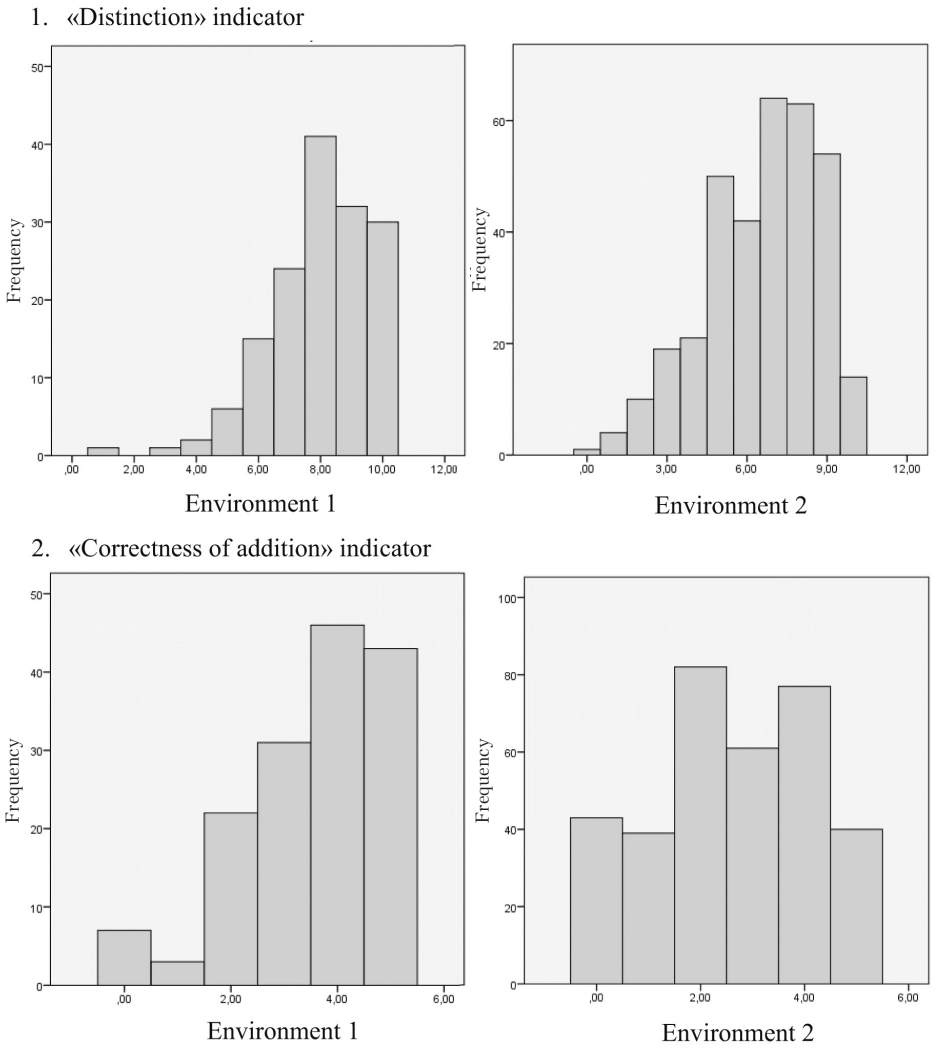

Fig. 2. Frequency distribution of grades by learning to learn indicators in different educational environments

and relations, and therefore actualizing empirical, formal, rational knowledge. In the first case, the result of the activity is associated with the identification of the reasons underlying the changes in the knowable object. In the second case, the result of the activity is the description and classification of the externally presented characteristics of changes in objects of cognition. Based on this distinction, the features of cognitive competencies were substantiated, and "Transposition" technique was developed to conduct qualitative and quantitative assessment of the competencies [7; 8; 10].

The "Transposition" technique allowed us to determine the method children used for solving search-related tasks. With the empirical way of task solving, the essential and non-essential relations in the conditions of the task are usually not distinguished, the solution is realized by way of trial and error — the method itself is either not recognized, or recognized is only a specific set of operations performed within the task solving process without elaborating any general scheme of action. With the theoretical way of task solving, essential relations in the conditions of the task are singled out, the solving process is planned in its entirety and implemented, mainly, without trial and error. Successful task solving method implies recognizing not only specific operations, but, most importantly, its connection to the essential relationships of the object studied. In this case, the solution of the problem includes both theoretical (when the content of the problem is studied with help of special cognitive actions) and practical parts (when a concrete result is really achieved). A special analysis made it possible to identify a number of special actions that characterize a generalized approach to task solving. They are:

— cognitive action associated with the study of the task conditions aimed at determining the essential relationships among them (substantive analysis itself);

— regulatory action related to the child awareness of the task solving method of action and its generalization on the ground of prior identifies essential relationships (substantive cognitive reflection);

— regulatory action associated with mental experimenting in order to develop an integral

"Transposition" technique allowed us to assess whether these actions were present in children. The technique included a set of tasks presented in a visual form. Each task consisted of two matrices similar to a chessboard with a reduced number of cells. In different tasks the number of cells ranged from 4 to 12. The cells of one matrix contained numbers inscribed inside. The cells of the second one had simple geometrical figures (circle, rhombus, pentagon, etc.). Given a limited number of rearrangements (from 1 to 3, as indicated in each task) the child was offered to arrange the figures in the same way, as were the numbers in the example sample. Moreover, the rearrangements had to be carried out the mind — they could not be drawn, and it was necessary to write down in the protocol, which cells participated in each rearrangement. The non-subject content of the tasks of this technique was specifically selected to eliminate any possibilities of the result being impacted by the degree of subject knowledge proficiency.

The technique consisted of 3 tasks.

Task 1 allowed us to determine the level of development of the initial forms of cognitive reflection. The children were asked to solve three problems: two of them (No. 3 and No. 5) were designed over one same principle, and one (No. 4 — on a different principle). Then it was necessary to choose one out of five proposed opinions about the tasks. A substantive generalization of noted tasks solving method of action is associated with the choice of the following wording: "... tasks 3 and 5 are similar, and task 4 is different from them...". Such a choice indicates that the child knows the foundations of his or her actions (in contrast to knowing just only their external characteristics).

Task 2 is intended to determine the level of development of ways to solve search-related tasks. Children were invited to solve three problems, built over a single principle, but expressed in a different specific set of actions. The successful solution of all three tasks indicated substantive analysis of their conditions (in contrast to the formal analysis).

Task 3 made it possible to assess the level of development of skill to act "in mind". This is a starting point for the formation of regulatory universal learning actions in children, actions related to planning, control and evaluation of subject-specific learning activity. In this assignment, children were asked to solve tasks where, in contrast to previous ones, there were more figures presented in the conditions of the situation and more combinatorial actions were required. The aforementioned conditions significantly complicated mental operations with the elements set in the task conditions (geometric figures and numbers). The quality of the solution and the number of tasks solved in this assignment characterizes the level of development of their ability to act "in mind" (partial or complete).

When analyzing the results of cognitive competencies development (reflection, analysis, planning), we compared the data obtained in schools that implement various educational technologies: the technology of learning activity, the traditional curriculum and the program for gifted children (see above). The comparison of the data from the school practicing developmental learning (Environment 1) with the results of the school for gifted children (Environment 3) made it possible to put forward an assumption about the mechanisms of certain levels of cognitive competencies development within the process of learning in elementary school. Figure 3 presents the primary indicators for the entire range of competencies.

The data presented in the diagram demonstrate that in terms of all three indicators of cognitive development, the results of the school with developmental learning surpass not only the results of schools with traditional educational environment, but also the results of the school, which via competition selects intellectually gifted children. The significance of the differences is indicated by the data given in table 2.

As follows from the data in table 2, the development of individual cognitive competencies can be rightfully associated with environmental factors. So, it is legitimate to as-

sume that the traditional educational environment is less effective in terms of cognitive development of younger students than the developmental environment. But at the same time, from the perspective of reflection development, students learning at school for gifted children are at the same level as children from a traditional school. In terms of analysis and planning, students from two schools with different educational settings and programs (a school for developmental learning and a school for gifted students) also gained similar results. Thus, it can be assumed that the educational environment of the school with developmental learning creates such conditions for its students that it allows all students to achieve the same high level of development of cognitive meta-subject results as that of the students from school, which selects them through giftedness competition uses special curricula focused on gifted children.

To verify this assumption, we compared the results of the study of two groups of students enrolled in developmental learning school (Environment 1). The first group consisted of the students, who completed elementary school, where D.B. Elkoni—V.V. Davydov program was implemented. The second group included a class working under the same program at school, where the other classes of same year students studied according to traditional programs. The data is presented in table 3.

The data presented in table 3 indicate that the development of reflection, analysis and planning in children is indeed a consequence of the curriculum implemented in a particular school or class and related to the following factor — this program is introduced with help of learning organization method, that is with developmental type of educational environment.

In order to determine the sustainability of the obtained results in all three indicators of students' cognitive development, we compared reflection, analysis and planning diagnostic results at school No. 91 for the last several years. The results of this analysis are represented in table 4.

According to the data presented in table 4, in one same educational environment that employs learning activity method, from year to year students were showing similar (and relatively high) results for all indicators of cognitive development. The only statistically significant change there is, is represented by the growth of indica-

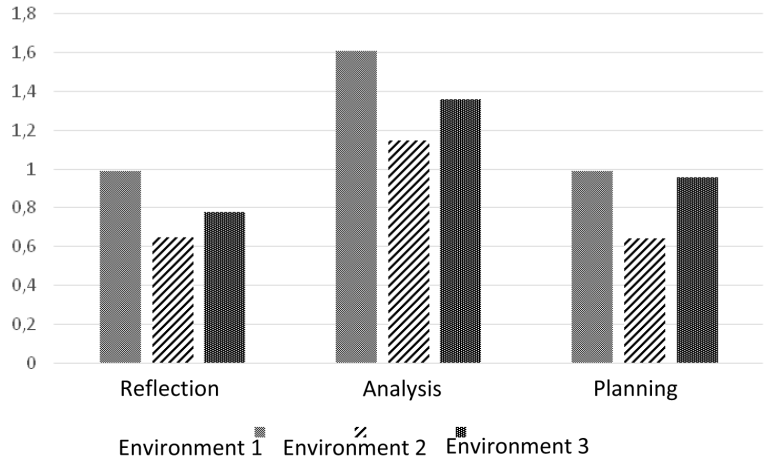

Fig. 3. The level of reflection indicators formation, the development of ways to solve search-related tasks (analysis) and the ability to plan among students engaged in different educational environments

Table 2

The significance of differences in the level of the development of cognitive indicators among the students in different educational environments

	Reflection	Analysis	Planning
Environment 1/ Environment 2	The differences are significant, p<0,01	The differences are significant, p<0,01	The differences are significant, p<0,01
Environment 2/ Environment 3	The differences are not significant	The differences are significant, p<0,05	The differences are significant, p<0,01
Environment 1/ Environment 3	The differences are significant, p<0,05	The differences are not significant	The differences are not significant

Table 3

The comparison of the students from different schools working within D.B. Elkonin's and V.V. Davydov's system of developmental learning

	Reflection	Analysis	Planning
Group 1	1,067	1,867	1,289
Group 2	1,080	1,720	,920
	The differences are not significant	The differences are not significant	The differences are not significant

Table 4

The dynamics of the cognitive indicators of meta-subject educational results of students in school No. 91[2]

	Reflection	Analysis	Planning
2017	1,07	1,47	0,84
2018	0,91	1,52	0,98
2019	0,98	1,82	1,22

tor 2, and denotes an increase in the ability of students of the experimental school to analyze and distinguish significant relationships in the task.

These data made it possible to assert that the educational program employed and corresponding learning style based on mastering learning activity methods make a decisive influence on the development of cognitive meta-subject educational results.

3. *A study of social competencies development depending on the method of learning activity organization.*

It is known, that the new junior school standards devote great attention to the requirements for the social and communicative competencies of schoolchildren finishing elementary school. The new educational standard includes such components of this ability as the capability of a group of children to set a common goal, to agree on methods of action, to get out of a conflict situation and to constructively overcome it. A well-organized joint activity leads not only to the development of students' relations with adults and their own peers expressed in the form of business cooperation, but also contributes to the development of such important learning activities as modeling, evaluation and control. The development of cognitive competencies is impossible without them. Group work during the class, as shown by the data, encourages the development of communication among children, the construction of comprehensive detailed communication and leads to the improvement of their self-esteem. Various perspectives are being recognized and agreed upon in the course of this interaction, which enables the participants of joint activity to discuss the search for learning task solution from different angles and escape conflict situation.

As it is known, within the system of developmental learning joint work of students, group discussion, mutual control and mutual assistance — these are the most important elements of a full-fledged educational process organization based on the method of learning activity. Therefore, we assumed that in terms of social competence, the results of the children studying in the context of learning activity will differ from the same results of students attending other schools.

We developed the "Conflict" technique [10] to assess the social development of students. The technique allows us to diagnose capabilty of children, who completed elementary school, to jointly solve a visual-logical task, to overcome the substantive conflict that arose in the context of interaction when searching for the way to solve learning problems

The essence of the task was as follows: a group of four people, solving a visual-logical problem, had to select suitable pictures and include them in an incomplete picture system, and the location of the pictures was not random, but corresponded to a certain regularity (see Fig. 4). The technique was carried out in two stages. At first, the children solved the problem individually, that is, each child selected the necessary pictures, choosing them from the given set of numbered pictures, and fixed their numbers in empty cells of the given system of an individual form.

Fill in the empty cells of the table with the correct pictures, extending these rows. Choose pictures from the set and put their numbers in in the appropriate rows.

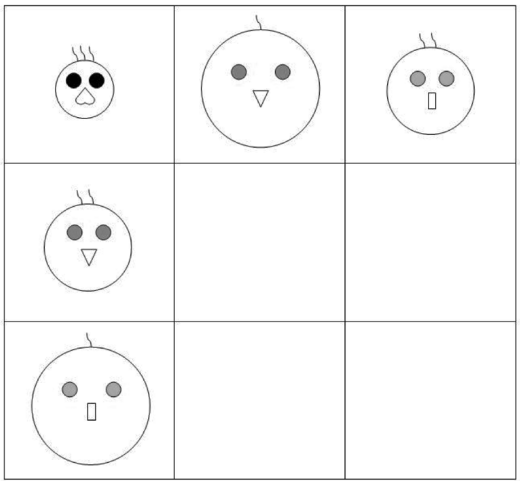

Fig. 4. «Conflict» technique blank sheet

At the second stage, immediately after individual solutions, the children got into groups of four people, they were asked to solve the same problem together by refilling the empty cells on the form with suitable drawings of "faces".

The conflict in the situation was posed by the fact that at the first stage of individual work, the pictures themselves and their number in the set for each individual participant coincided, but the same pictures were located at different places in the sets of individual participants and therefore had different serial numbers. Below is a sample of one of the four sets of pictures that were given to individual participants at the first stage (Fig. 5).

At the first stage, in the process of an individual solution, each child formed his or her own idea about the correct way of filling the matrix with certain pictures. When starting to work together the children faced the fact that the numbers of drawings ("faces") in empty

[2] In indicator 2, the differences are statistically significant (2018—2019), $p < 0.01$ (the Mann—Whitney U-test).

cells that each of one them had were different. This led to the inevitable clash of children's perspectives regarding the choice of just one correct picture for each cell. The group needed to fix and coordinate the positions of individual participants and agree on what exactly the participants, working together, would place in each empty cell. In that case when the group found the right common solution for all empty cells, it could be considered that the group successfully coped with the conflict and effectively solved the problem together.

The level of development of this cooperative was determined in the study through the ratio of success indicators for individual and group solutions. The results are shown in Fig. 6.

The circles indicate the results of the developmental learning school (Environment 1), the triangles indicate the traditional school (Environment 2).

According to the results, the students of the traditional school were worse at solving the visual-logical tasks given to them in the mode of individual action than the students of the school of developmental learning, yet these differences are not statistically significant. It is important that during the transition to group work, these students showed a slight increase in terms of the solution effectiveness measurement, that is, the association of students in a group did not significantly affect the quality of the solution to the problem. Students of a school with a developing educational environment, working in an individual mode, showed results close to those of students from a traditional school. However, in the transition to a group solution, the effectiveness of their joint action doubled. Therefore, grouping for children studying in a developing educational environment is an important factor determining the effectiveness of solving a learning problem.

These data proves that the educational environment whilst relying on learning activity method creates favorable conditions for the development of such social competences as ability to overcome cognitive conflict in the process of joint learning tasks solving. It is the presence of this competence that characterizes the ability of children to interact with each other, to participate in a joint search for a solution, to analyze and coordinate individual actions in cooperative.

Conclusions

The data obtained in the study on the whole confirm the fact that the educational system for elementary schoolchildren based on the method of learning activity creates psychological and pedagogical conditions for the successful cognitive and social development of children in elementary school. According to the study results, 10-11 years old students demonstrate a higher level of mastery of key competencies in comparison to their peers learning on the basis of traditional methods and techniques of learning organization. Thus, the study reliably established that:

- "developing" educational environment allows to form higher results in children by such important indicators of learning to learn as the ability to separate the known from the unknown and ask questions about the unknown;
- indicators of the development of theoretical thinking fundamentals in children (meaningful analysis, depth of planning, reflection), studying on the basis of learning activity method, are higher than those in children studying in a traditional school;
- "developing" educational environment, in contrast to the traditional school, to a greater extent contributes to the effective development of social competencies in children — the skill of interaction, ability to overcome cognitive conflict, develop a common way for task solving, exercise mutual control and evaluation of the actions performed.

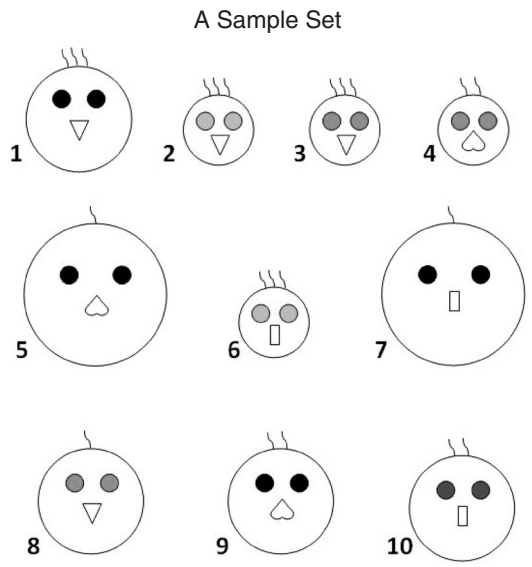

Fig. 5. A sample set of "pictures" for an individual solution of the "Conflict" technique task

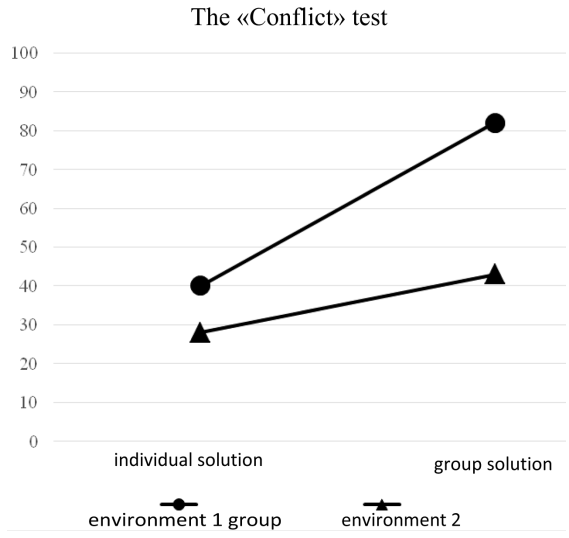

Fig. 6. Individual and group results of solving "Conflict" technique tasks at the school with developmental learning (environment 1) and with traditional educational environment (environment 2)

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Учебная деятельность как эффективный способ развития метапредметных и личностных компетенций у младших школьников

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В статье приведены данные многолетних исследований, подтверждающих тот факт, что основанная на методе учебной деятельности система обучения младших школьников создает условия для

успешного когнитивного, социального и личностного развития детей в начальной школе. Учащиеся 10—11 лет обнаруживают более высокий уровень овладения ключевыми компетенциями, чем их сверстники, обучающиеся на основе традиционных методов и приемов организации учебной работы. Достоверно установлено, что «развивающая» образовательная среда позволяет сформировать у детей более высокие результаты по таким важным показателям умения учиться, как умение отделять известное от неизвестного и задавать вопросы о неизвестном. Показатели развития основ теоретического мышления (содержательный анализ, глубина планирования, рефлексия) у детей, обучающихся на основе метода учебной деятельности, выше, чем у детей, обучающихся в традиционной школе. «Развивающая» образовательная среда, в отличие от традиционной школы, в большей степени способствует эффективному развитию у детей социальных компетенций — умения взаимодействовать, преодолевать когнитивный конфликт, осуществлять взаимный контроль и оценку выполняемых действий.

Ключевые слова: развивающая образовательная среда, образовательная среда традиционного обучения, умение учиться, когнитивные метапредметные результаты, социальные компетенции.

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