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**Psychology of subculture: Phenomenology and Contemporary  
Tendencies of Development**

**SOCIAL SKILLS DEVELOPMENT IN MODERN JUNIOR  
SCHOOL**

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***Abstract***

The new standard of junior education in Russia formulates a necessity to develop a set of different social competences. We propose new diagnostic techniques to assess different aspects of social behavior. Our methods allow to estimate ability to interact constructively in the situation of cognitive conflict; readiness to listen and to conduct a dialogue; ability to distribute functions and roles in joint activity. We estimate the differentiating capabilities of the methods on the experimental results obtained in different schools of Moscow. Three different educational environments are treated. It is shown that in the situation of traditional junior education that is based on individual work of students and special prescriptive type of “student-teacher” interaction (traditional educational environment) the ability of primary school graduates to work in a group is not developed. In these schools individual results are higher than the results of group problem solving. This fact is supported by a comparative assessment of the successful results in the school oriented on development of “children-children” interactions in educational process (so called “developmental education” worked out by D.Elkonin - V.Davydov). The obtained results prove that the technologies of developmental education are much more effective for the development of social competencies than traditional primary educational environment.

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**Keywords:** Social competences, educational environment, diagnostics, cognitive conflict, joint problem solving, “Developmental education” school.



## 1. Introduction

In the tradition of cultural - historical theory (Vygotsky, 1962), the emphasis is on the idea that the origin of internal forms of activity lies in the expanded forms of joint work of adults and children, children themselves. In this approach, a specially organized joint learning activity is considered to be a source of cognitive development of the child, on the one hand, and his socialization - on the other hand. System of “developmental education” worked out by Elkonin (1974) and Davydov (1972) is based on Vygotsky’s theoretical ideas and demonstrates their effectiveness in junior school education (Polivanova et al., 2013; Rubtsov, 2005; Zuckerman, 1993).

In the system of “developmental education” (DE) Elkonin (1974) and Davydov (1972) postulated the advantage of group and collective-distributed forms of organization of learning activity, involving interaction with both classmates and teachers, the inclusion of children in the collective discussion of learning problems (Garnier et al., 1991). In this case, the main method is dialogue, communication in the classroom, during which students are involved in joint activity, learn to formulate their points of view, compare them and logically resolve contradictions. At the same time, communication in joint activity allows to unite its participants, to carry out mutual informing of partners, to connect them more closely with the search for a joint solution to the learning problem. Some schools use ideas and technics of DE in their educational practice. Most of schools in Russia use another model of organization of learning activity, especially in junior school. Its typical features are individual training of skills, “student-teacher” communication, where the teacher puts a task, checks and assesses results, and a student just fulfils teachers commands. In this model communication is not integrated into the learning activity and doesn’t become a tool of problem solving.

## 2. Problem Statement

The new standard of junior education in Russia (2011) formulates a necessity to develop a set of different social competences. It’s a new trend in the development of the educational system that is a reaction to modern changes in educational content and values all over the world. But it also demonstrates that educational practice at last accepted Vygotsky’s theoretical ideas as an effective mechanism of child development by means of education. One of the attempts to introduce Vygotsky’s theory to educational practice is the so called “developmental education” worked out by Elkonin (1974) and Davydov (1972). Their theory of learning activity is implemented in a set of programs (math, native language, nature, arts) for junior school based on the following ideas:

- The goal of junior school education is assimilation of scientific concepts;
- The means of scientific concepts’ assimilation is “learning activity”.

The aim of the learning activity is to find a general way (method) to solve a learning problem, and the tools of learning activity’s implementation are different types of models and interaction with other students.

The general problem of our research is to find out how different junior school programs (and the correlating styles of “student-teacher” interactions) influence social competences’ development.

### **3. Research Questions**

- To create diagnostic methods for evaluation of different social competences, such as an ability to overcome a group cognitive conflict situation, an opportunity to construct effective interaction for joint problem solving, to find strategy of communication adequate for special experimental conditions (for example, lack of information, distribution of elements necessary for problem solving between the group members and so on).
- To evaluate different school environments by the criterion of development of social competences.

### **4. Purpose of the Study**

The aim of a study is to search factors of educational environment which influence the social competences development in junior school.

### **5. Research Methods**

We have developed two methods to determine main social competences of junior school graduates.

#### **1. "Conflict"**

In psychology, it is known that one of the essential diagnostic and developmental tools to identify the degree of consistency is to use a conflict situation that forces children to look at their actions and the actions of other participants of the group work reflexively. Thus, the construction of the conflict situation can act as a principle of construction of a technique for identification of features of group work as a whole and diagnostics of ability of participants of group to overcome a conflict situation substantially.

In the "Conflict" procedure children develop their own positions, which (in the subsequent group decision) they should agree in the conditions of a provoked socio-cognitive conflict. The essence of the task is the following: a group of four people, solving a visual-logical problem, must find suitable pictures for some unfinished system of pictures, built on a certain pattern. The technique is carried out in two stages. In the first children work individually. Each child receives a sheet with a 9 cells' matrix in which 5 cells are filled with pictures, and other four are empty. A student has to pick up the right pictures for these four empty cells, selecting them from a set of 10 numbered pictures, and write their numbers in the empty cells of the unfinished pattern in his individual form.

In the second stage, immediately after individual decisions, children are grouped into groups of four people and they are invited to solve the same problem together filling in the empty cells in the group form.

The conflict situation is defined by the fact that the pictures in the set for each individual participant are the same, but they are in different places and therefore have different sequence numbers. This ensures that each participant coming to the group will have a different result in the individual form.

At the first stage, in the process of individual decision, each child has his own idea about the correctness of filling the matrix with certain numbers of pictures. Starting to work together, children are faced with the fact that in the same cells all participants have different numbers. This causes an inevitable

clash of the positions of children on the choice of the only right picture. Therefore, the group needs to fix positions of individual participants and agree what exactly the group will put in each empty cell together. If the group finds the right common solution for all empty cells, then it has successfully coped with the conflict and effectively and meaningfully carried out joint activity.

In the "Conflict" procedure for assessing the level of compatibility we compare individual and group decisions. Assessment of the correctness of individual and group decisions was carried out by points. The number and percentage of correct answers for each of the four cells of the matrix were calculated (one point for each correct answer that is a correct number in the cell). Thus, the minimum score for this task, which could get an individual student or a group of children was 0, and the maximum was 4. Samples were compared by mean, standard deviation, percentage of maximum score, skewness, and kurtosis. The significance of differences between individual and group solutions in two paired samples was calculated using Student criterion.

## 2. "Puzzle"

The "Puzzle" method simulates the situation of group interaction in a joint problem solving situation. While developing this procedure, it was important for us to create conditions that would force the students to interact with each other. To do this, we divided the material between the students so that no member of the group could fulfill the task without the help and participation of other children. We came up with a very simple problem. Since we study the ability to work in a group, the result of the work should be determined by the formation of this social skill, and not by the complexity of the task. Finally, the method should allow not only to state the presence or absence of interactions, but also to measure and describe their effectiveness, techniques, development in the course of group problem solving. Therefore, in the "Puzzle" children have several attempts to solve a problem. In each attempt they can assess the correctness of the hypothesis or the effectiveness of the strategy in the course of the work itself, and not only after its completion.

The material - pieces of colored mosaics, which one can unit in four simple geometric figures. Each of these figures was cut into 2 parts. The material includes extra pieces that are not suitable (by shape or size) for making a figure. All pieces of the puzzle are distributed among the 4 participants of the group work so that none of the students has two parts of one figure. Thus, no member of the group can independently, without other members, lay down any geometric figure. The table was separated by screens, so that it was not visible, what pieces of the puzzle went to each of the four students. It was forbidden to show pieces or peek to other members of the group. This way of organizing joint work makes communication the only available way to solve the problem (that means to unit pieces in geometric figures).

The main indicators of the effectiveness of joint work are the number of figures which were combined correctly, strategies of group interaction, means of verbal and non-verbal communication. The last two are fixed by the observer in a specially designed registration form, who monitors the work of children. Correlation of these three main indicators characterize the ability of the group to organize an interaction, which is adequate to the group task and allows to solve it in the given conditions. Thus, the data obtained in the "Puzzle" procedure allows us to evaluate different aspects of social competencies of younger students, and to evaluate them quantitatively as well as qualitatively.

For this research were selected students of primary classes of three Moscow schools with different educational environments. In one of them special selection on students with cognitive abilities was made. This school accepted those pupils from different schools who demonstrated high level of development of logical operations (sample 1; 79 people, 20 groups). In another – students were accepted without any tests, and for 4 years they studied in “developmental education” environment (DE system of D. Elkonin and V. Davydov - sample 2; 78 people, 20 groups). In the third school, working in the framework of the traditional junior school program (traditional educational environment) , children also were accepted without tests (everybody who wanted to study in this school) and were not taught to work together (sample 3; 80 people, 20 groups).

## 6. Findings

In the “Conflict” procedure we compared individual and group solutions of the same problem in three samples of students, who study in different educational environments. Comparative analysis of the effectiveness of group work in a situation of socio-cognitive conflict was based on three indicators: the correctness of the result, coherence and coordination of actions of participants and strategy to overcome group disagreements.

The main indicator for assessing the level of consistency in our work was the comparison of the correctness of individual and group decisions. The degree of consistency of the group decision was determined by the way the group filled the empty cells: if the group draws a single pattern, it means that they came to a joint decision. If they write numbers taken from their individual forms, it means that they didn't overcome a conflict and didn't succeed in group work. The strategy of overcoming group disagreements was determined by the social parameters of interaction, revealed by us in the process of monitoring the work of the group.

**Table 01.** Comparative indicators of the individual solutions' correctness in three educational environments

Educational environments	Average score of correct solution	% of maximum possible score	Standard deviation
Sample 1 (79 students)	2.09	53%	1.73
Sample 2 (78 students)	1.31	34%	1.54
Sample 3 (80 students)	0.71	17.81%	1.13

**Table 02.** Comparative indicators of the group solutions' correctness in three educational environments

Educational environments	Average score of correct solution	% of maximum possible score	Standard deviation
Sample 1 (79 students)	3.3	83%	1.46
Sample 2 (78 students)	3	75%	1.58
Sample 3 (80 students)	0.45	11.25%	1

The accuracy of individual and group decisions in the three student samples is shown in tables 1 and 2. We see that the results of students in different school environments differ significantly both in individual and group decisions.

In individual work (table 1) students from the first educational environment demonstrate high results and fulfill correctly more than a half of a task (fill two and more cells of the matrix with correct numbers of pictures chosen in the individual sets). But in the joint work (table 2) their results increased slightly.

In “developmental” educational environment groups (table 2) work twice more effectively than their individual participants (1.3/3). It means that the adequate use of group forms in educational work significantly increases the efficiency of joint problem solving.

In the traditional educational environment individual results (table 1) are less than one correct cell. But what is more important, the results of joint problem solving (table 2) are worse than individual ones. It means that the group can be destructive if the students have no practice to interact constructively. That is, students of schools with a “traditional” educational environment are not able to build meaningful interaction, do not use constructive strategies for resolving group contradictions, and a cognitive conflict is translated into an interpersonal one.

At the same time, the positive attitude to work was quite high in all the surveyed samples. We received high rates of concerted student action (89, 91 and 60 per cent, respectively, in samples 1, 2 and 3). These data show that the readiness of children to work together is a necessary, but not sufficient condition for its high efficiency, implying, first of all, the formation of appropriate communicative competencies for educational activities.

The vast majority of groups of students in school with DE environment used a strategy of cooperation. All members of these groups actively interacted in solving the problem, offering their own versions of the solution. These data are consistent with the existing ideas that in the lower grades, enrolled in the programs of Elkonin (1974) and Davydov (1972), quite often there are attempts to keep the mismatch (conflict) in the complex process of finding an appropriate solution, and not the desire at all costs to approve their decision.

In the “Puzzle” technique, the basic principle of conflict was used to complicate the direct comparison of details (by the screens) and not to permit to solve a problem individually (by the distribution of details among the participants). The main indicator of group success in this technique is the number of correctly assembled geometric figures. But monitoring of group work permits also to evaluate verbal communication, containing a description and analysis of the characteristics of geometric details, their correlation and making a joint decision about the required figures. The results of “Puzzle” show that special limitations used in it permit to construct productive strategies of joint problem solving in schools where students have an experience of group work. In schools where group forms of learning activity are not used, these limitations completely destroy the process of problem solving.

## **7. Conclusion**

According to the experimental data obtained, it can be argued that:

1. Methods “Conflict” and “Puzzle” have significant differentiating opportunities to assess the development of group work of children. They permit to evaluate the strategy and effectiveness of group work of students in the process of problem solving. The methods allow to identify universal

communicative actions: the ability of a group of students to set a common goal, to agree on ways of action, to get out of a conflict situation and to resolve it constructively.

2. In the process of testing of these methods, 40 schools with a traditional educational environment (2100 students) were examined. On average, it was found that their ability to interact in the group while solving cognitive problems is formed insufficiently. In the organization of educational activities schools need to pay special attention to the formation of the ability of children to work together in the context of solving learning problems.

3. “Developmental education” school can be considered as an effective model for the formation of social competences in primary school.

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