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**Influence of group work on development
of educational motivation of pupils at physics lessons**

Article is devoted to a group form of work at physics lessons as, working in groups, pupils profit from communication and cooperation with different people. At the same time, during group work at physics lessons for the purpose of increase of cognitive interest of pupils' application of various approaches is traced. So, for example strategy of critical thinking assumes work in groups, strategy of dialogue training confirms that children effectively study at their active involvement in discussions and discussions. It should be noted that at group form of education pupils develop both in social and in the emotional plan that is have opportunity to communicate with contemporaries, to protect and represent the ideas, to exchange opinions, to take active part in mutually estimation and estimation themselves.

Key words: Motivation, physics lessons, group work, educational, pupils.

The motivation — the most important component of structure of educational activity, and for the personality the developed internal motivation is the main criterion of its formation. It is that the child derives «pleasure from the process of activity, the importance for the identity of her direct result.

In the seventh class, there were 32 qualities of knowledge. The gap in opportunities of perception of course pupils was very great. As a result after an explanation of new material one are ready to independent work, and others didn't acquire the received information yet, and additional work at a stage of working off of the main, and also basic knowledge and abilities is necessary for them. At the same time unreasonably to detain the pupils who acquired a new subject differently at them interest in study will be gone.

We were interested by that fact that development of informative interest of pupils happens in the conditions of interaction of available knowledge with new, or to the knowledge gained in a class from various sources. Pupils have tendencies to various subjects, for their development, teachers need to create conditions that these tendencies were shown, that are to interest in a subject of all pupils. It is known that the contingent studying at comprehensive school different therefore teachers should meet in the practice such difficulties as this subject, and another — No. comes easily to one pupil. Each subject teacher at school tries to solve this problem, applying various forms and work methods. Also we were excited by a question how to teach children to study as to interest them in the subject proceeding from it there is a need to apply such forms of work with pupils to promote increase of their interest. One of such approaches is the group form of work.

Thus, «Essence of collaborative (group) training, that is training in the cooperation, being personal philosophy of the teacher, and not just the method used in a class. In all cases of association of subjects in groups, cooperation assumes mode of work on the basis of respect, recognitions of abilities and a personal contribution of each member of group. There is a power and responsibility distribution between members of group for effective work of groups. The main prerequisite of training in cooperation is based on achievement of consensus by cooperation of members of group.

We came to a conclusion that being trained in one class according to one program and the textbook, children can acquire a material at various levels. Thus opportunities for work with strong pupils as need constantly disappears to reduce the general level of requirements increase, looking back at weak school students

who work in group of one level of development more productively. Work proceeds in psychological comfort, discussing a material as equals they manage to comprehend a material and to take part in discussion.

Division into groups of pupils depending on achievement of level of obligatory preparation by them has objective character and doesn't give to pupils reasons for offenses. Also we give to pupils opportunity of a choice of this or that group at each lesson. When forming groups, first of all we pay attention to speed of assimilation and activity of thinking [1].

So, the class is conditionally divisible on 3 groups:

- group 1 — the strong pupils possessing profound, strong knowledge, able to reason, prove, generalize, knowing main methods of the solution of tasks;
- group 2 — the average pupils possessing good knowledge of the basic facts, however not always able to prove the answer, to generalize, knowing main methods of the solution of tasks, but at a loss at the solution of creative tasks, they not always rationally solve problems;
- group 3 — the weak pupils possessing a minimum of knowledge, skills, sufficient for their application on a sample are able to answer the questions which aren't demanding special reasoning and proofs, are able to solve standard problems.

In group 3 more bad pupils who hardly acquire the facts, concepts, rules and ways of the decision meet also, are at a loss at reduction of examples — the special help is necessary to them. Such division is conditional since at achievement of a certain level of knowledge movements from group in group are possible. At lessons of studying of a new material I use the differentiated approach to training. The new material speaks the first stage of a lesson, the detailed sample of the answer is given at the solution of exercises and problems of a new subject then at will to a board strong pupils several times to show samples of answers to all class are called. At the following stage of a lesson I start applying the differentiated approach which is expressed in the following: while one pupil of an explanation on a course of the solution of tasks becomes already optional and another — they are still necessary begins at the same time independent and collective works. The class shares on two groups. In the first those pupils who consider unite that already understood a new material and can independently work. Such independent work is offered at will, and I recommend to some pupils, but I don't insist, to refrain from independent work and to continue work with a class. The condition is thus laid down pupils who work independently with questions shouldn't address yet, but they are allowed to consult with each other to verify the decision with answers. With questions these pupils can address after independent work which lasts 10–15 minutes. In these 10–15 minutes I pay all attention to the second group, i.e. those pupils who yet didn't acquire a new subject rather well. These pupils continue collective work: serially leave to a board, solve problems and explain them. And to a board there are at the same time 2–3 pupils: one solves together with a class and comments aloud, others work independently. When the first finishes the decision it is given a mark for the decision and for an explanation. After that all together check, whether is true executed exercises two others caused the pupil. They also are given marks for the written-down decisions, but, as a rule, without oral explanations. Further to a board there are following 2–3 pupils etc. All this becomes in order that to a board to call as much as possible pupils and to estimate their work at a lesson [2].

After 10–15 minutes of this collective work pupils of this group receive short-term (for 4–5 minutes) independent work and independent work of the first group is checked. And it is expedient to prepare decision fragments on slides in the presentations containing 1–2 mistakes — counter examples to strengthen attention, to stir up cogitative activity of pupils. Children especially carefully and with interest try to verify the decision and to find mistakes on slides. Discussion of results of work begins the arisen questions are resolved.

Pupils work at lessons of fixing of the studied material on levels. Pupils of group 1 receive non-standard or more difficult and volume tasks, groups 2 — tasks of optional level, group 3 — obligatory level. Work has to be organized so not to deprive of attention of children from different groups: at certain moments of a lesson the teacher advises, checks work of concrete group, the others work at this time independently. Naturally, more attention is received by the worst and average pupils, strong is rather thin to hint concerning arising questions. Respectively homework at such lessons is differentiated.

Activity of the pupil at a lesson considerably increases when it becomes the carrier of function of the teacher. Naturally the pupil doesn't substitute the teacher at the lesson, the organizing and mobilizing beginning at a lesson remains for the teacher. But, on the instructions of the teacher at a certain grade level pupils can make a lot of things: to define and allocate the main thing, to provide options of check of their knowledge and abilities to expect the next question, to prove communication of a new subject with previous, to expect a train of thought of the teacher in a statement of new information on the schemes represented on a board, to models and other basic signals, i.e. as though to assume a role of the teacher at an explanation of a

new material. It is very important to organize work so that each pupil as a result of such work felt own growth (I «guessed», «as I earlier before didn't reach», «yes same it is absolutely simple», etc.). By all means in such activity the psychological factor is very important: it is necessary that children saw in the teacher of the reliable assistant, trusted it, moved towards requirements and installations of the teacher and, naturally, trusted in the forces in possibility of achievement of the best results [3].

Examples of cards which we use at a stage of oral independent work which is performed in couple under the conditional name «The Pupil — the Teacher». Everyone plays that a role of the teacher, a role of the pupil at a given time. For work about 10 minutes of a lesson are taken away.

For example a lesson — repetition on base 7 of a class. For repetition of this course of physics developed 6 didactic cards tasks in 5 options. Each card — a task corresponds to one subject.

Card No. 1. Initial data on a substance structure.

Card No. 2. Substance density.

Card No. 3. Types of forces.

Card No. 4. Pressure of solid bodies, liquids and gases.

Card No. 5. Use of pressure in the nature, equipment and life.

Card No. 6. Work.Power.Energy.

Each card task contains theoretical part and practical part. In the first part of a card the questions and tasks checking key questions of a subject in the second part — practical tasks (tasks, experiences, mini-stories) are offered. The practical part of a card has 5 options of tasks (on number of pupils in group). Tasks carry both reproductive, and creative character. The practical part of a task is checked generally by the teacher, theoretical — the commander of group.

Card No. 1. Initial data on a substance structure

Option 1.

Operating procedure.

1. From the text §§6 — 10 write out three basic positions about a molecular structure of bodies.

2. Remember and tell, on the basis, what supervision and experiences these points were made.

3. Redraw the table in a notebook and specify what of the listed properties to what conditions of substance belong (put a sign +).

T a b l e

Properties of substance	Condition of substance		
	the firm	the liquid	the gaseous
To keep a form			
To keep volume			
To take the form of a vessel in which is			
To occupy all provided volume			

4. Answer questions:

a. In what distinction in an arrangement of molecules (atoms) in a solid body, liquid and gas consists?

b. Than motion of the molecules (or atoms) in a solid body differs from their movement in gas and liquid?

If you are at a loss to answer questions 3 and 4 repeat §10.

5. Solve a qualitative problem.

• In what water — in hot or cold — it is necessary to kill peas for cooking of soup that it inflated rather?

• What prevents the seventh-grader Vasya caught by the principal on a smoking place to break up to separate molecules and in all directions to disappear from a look?

• In what state at the room temperature there are following substances: milk, oxygen, mercury, wax, cologne, gasoline, water vapor, soda, coal?

At this time the included control is exercised, i.e. answers that obey one, other pupil in various pair groups and respectively I estimate them, I help the pupil who is carrying out at present function of the teacher to correct mistakes at the time of their emergence, I estimate not only answering, but also high-quality work of «teacher». The positive moment of such work is, undoubtedly, that a half of pupils of a class at the same time learn to speak, learn to see, hear, correct errors of others, thereby enriching, consolidating also the knowledge. After all, everyone should give such chance: to express the opinion and to be heard.

After completion of this work once again, but already before all class one of groups gives answers by cards. Thus, for a small period it is possible to estimate work of 10–12 pupils that during the traditional frontal work it is impossible. Besides, the volume of a task for the oral account during the frontal work would be smaller. It is best of all to carry out such form of work for repetition of a certain section. On completion of work in group forms the result of pupils increased by 30 %. But the group form of work is less effective at the solution of tasks. Here it is important that other members of group didn't assume performance of those private tasks with which others didn't cope, and provided only partial advice in performance of a separate fragment.

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Also operation in Pupil teacher steam which put strong and weak or strong and average pupils is organized. The purpose of such work is the help organization strong pupils to weaker companions on a class. And such work is very effective not only at the initial stage of studying of a new subject, but also in the course of repetition studied. Thus work will be organized is combined: those who perfectly acquired a material, on a certain part of a lesson carry out a role of the teacher, helping to liquidate gaps in knowledge of those who for any reason has them the others work individually and collectively then check of performance of work Pupil teacher vapors will be organized.

Except the work described above a form in couple, we use also work in groups when the pupils sitting at two next school desks, solve the task set for them. The «strong» pupil plays a role of the teacher. Work proceeds in psychological comfort the «weak» pupil doesn't hesitate to express the opinion, takes part in the solution of tasks. After the solution of tasks, the group protects the decision, and, any pupil of group can be caused to a board.

The group form of work can be effective when checking homework problem tasks well justify themselves. Their value that the part of tasks provides performance of the interesting experiments connected with a studied material which then the pupil of all class authors' show

As group forms of work promote the decision not only educational tasks, but also educational, they have to be applied surely at least from time to time, and irrespective of age features of a class and skills of carrying out such lessons at the teacher.

One of forms of active creative work of pupils is conferences. In preparation and carrying out studies of this kind pupils actively act on all stages, and the teacher carries out a role of the organizer and the consultant. Are thus combined individual work with work of all class, pupils gain new knowledge and from references (book) or the Internet with which work by preparation for conference, and from reports which other pupils make.

Preparation for conference consists of the following stages:

1. the subject and the plan of occupation are given for two — three weeks or at the beginning of subject studying.
2. the class breaks into creative groups on 4–5 people
3. each group chooses one of questions and studies it, i.e. selects literature, gets acquainted with a material.
4. duties in group are distributed: who prepares the performance text who will act as the speaker who prepares experiences, evident means;
5. some days before conference consultation during which the teacher discusses the maintenance of a material is held with each group. It is natural that at the beginning there are many problems and difficulties, but at systematic holding of conferences at pupils experience is saved up, skills are formed, and problems gradually leave. Preparation and carrying out conference big loading for the teacher and children therefore the similar form of work shouldn't be abused. It is enough to hold conferences no more than two — three times a year [5].

It is important to designate rules of work in group and to define estimation system: whether the contribution of each participant or result of group as a whole will be estimated, on what indicators the assessment will be made.

The teacher (or the observer) can trace and estimate how participants listen to each other, help each other, together solve the arisen problem. It is possible to include some elements of competition between groups. It is also necessary to stipulate that process of performance of a task in group has to be carried out on the ba-

sis of exchange of information, opinions, estimates. Or other option: each pupil receives the task on which success of performance the general result and evaluation of the work of group will depend.

Holding of conferences promotes development of interest in scientific and technical knowledge, formation of skills of independent work with scientific and polar and educational literature, with devices and visual aids. Besides, value of conferences for development of oral speech is very great, abilities it is competent and logical to state the selected material. It is expedient to hold conferences mainly in the senior classes.

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Физика сабақтарында оқушылардың оқу ынтасын қалыптастыруға бағытталған топтық жұмыстың әсері

Мақалада топтық жұмыс түрлері қарастырылған, оқушыларға топта жұмыс жасау әр түрлі адамдармен қарым-қатынас жасауда зор пайдасын тигізеді. Оқушылардың таным қызығушылығын арттыру мақсатында әр түрлі жолдар пайдаланылды. Мысалы, сыни ойлау стратегиясы топтық жұмысты болжайды, әңгімелесе оқыту стратегиясы оқушылардың белсенді талқылау және пікірталас арқылы тиімді білім алатындарын дәлелдейді. Авторлар оқушыларды топтық оқыту формасы әлеуметтік дамытады, сонымен қатар эмоционалды жағдайда қатарластарымен қарым-қатынас жасауға мүмкіндік береді, өзінің ойын қорғап ортаға салады, ойларымен алмасады, өзін-өзі бағалауға және басқаны бағалауға белсенді қатысады деген қорытындыға келеді.

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Влияние групповой работы на формирование учебной мотивации учащихся на уроках физики

Статья посвящена групповой форме работы, так как, работая в группах, учащиеся получают пользу от общения и сотрудничества с разными людьми. Вместе с тем, показано, что в ходе групповой работы на уроках с целью повышения познавательного интереса учащихся прослеживается применение различных подходов. Так, например, стратегии критического мышления предполагают работу в группах, стратегии диалогового обучения подтверждают, что дети эффективно учатся при активном их вовлечении в обсуждения и дискуссии. Авторы отмечают, что при групповой форме обучения учащиеся развиваются как в социальном, так и в эмоциональном плане, т.е. имеют возможность общаться со сверстниками, защищать и представлять свои идеи, обмениваться мнениями, принимать активное участие во взаимооценивании и оценивании самих себя.

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