

# THE POSSIBILITIES OF THE LESSON OF TECHNOLOGY IN FORMATION OF UNIVERSAL EDUCATIONAL ACTIONS THROUGH THE METHOD OF PROJECTS

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## **Annotation.**

*The performance of final qualification work in formation of universal educational actions of the pupils in the course of training in the subject "Technology" is reflected in this article.*

*The offered method of projects is considered as an opportunity and the manual for the teacher in the course of training in the subject "Technology" to form universal educational actions of the pupils.*

## **Actuality**

Project activity of pupils is registered in FGOS of the second generation. According to the standard of education each pupil has to be trained in this kind of activity. Today the programs of all school subjects are focused on project activity. And it is by no chance. Only in the course of the correct independent work on the creation of the project the child learns to work both independently and in a term, the creative abilities of pupils are developing, the culture of their brainwork is formed.

The project method at the lessons "Technology" is an educational and labor task in a result of which a creative object of subjective and sometimes an objective novelty is created. According to requirements of social, scientific and technical progress, the production projects being in great demand must be in the centre of certain knowledge and abilities in the field of business activity. The content of education as well as the training methods developing a set of personal qualities which would allow the student to adapt to new social and economic conditions are changed radically. Thus, when implementing the project, the pupils carry out an economic calculation in which they reflect monetary costs of project production, time expense, a possibility of mass production, sale price and many other things. As a rule, the educational projects comprise the problem requiring the solution of one or several tasks. This task has to be attractive in the formulation and has to stimulate motivation to design activity.

Using a project method of training, the pupils comprehend all technology of the solution of the tasks – from a formulation of the task to a representation of the final result.

Therefore, the method of projects can be attributed to a possibility of a technology lesson in formation of universal educational activities.

## **Project**

Let us consider the structure of project method organization at the lessons "Technology".

The implementation of the project is carried out in three stages:

I. Search and research stage.

1. Choice of a topic of the project, its reasoning, the formation of motivation of activities in implementing the project. The short formulation of a task (actuality of the topic is proved, the planned result is formulated, it is reported for whom the project is and in what its novelty is concluded. The task arisen in a problem situation and solved during implementation of the project is formulated briefly and accurately).

2. Defining the knowledge, skills necessary for implementation of the project according to requirements of the program (the brainstorming method is used).

3. Drawing up the joint plan of project by pupils and the teachers (the plan of project is formed under the leadership of the teacher, the duties and responsibilities of everyone for implementation of the project in general, are accurately defined if several people take part in the project).

4. Collecting, studying of necessary information, training abilities to work with literature and other information on the topic of the project (the collected, studied and processed material necessary for a solution is described; the historical information can be presented. Various sources of information are specified).

5. Definition of characteristics to which the designed project should correspond to satisfy needs of the user. (What is it the product? Whom is it for? What is its functional purpose? What requirements will be satisfied? What material is it made of? What labor protection standards should be kept? What is estimated cost of the product? Appearance (style, color, finishing, etc.).

6. Research of options of product design, properties of materials, their durability, availability, a possibility of processing in the terms of workshops, manufacturing techniques of various knots and details of a product, finishing.

Development not less than three options of solving problem is represented.

Each option has:

- sketch or drawing,
- necessary explanations of a design, materials, connections, etc.

7. The choice and study of the corresponding technical and technological documentation, preparation of necessary materials, the equipment, tools, etc. for working process. (The reason of the chosen option on the basis of the analysis of the developed ideas is given. At this stage the design analysis of several, most acceptable product options is applied).

II. Technological stage:

1. Implementation of the solution of the design-technology and other tasks directed at implementing the project.

2. Current quality control of performance of a product, operations.

3. Observance of technological discipline, rules of safe work, standard of work, culture of work.

4. Introduction of possible changes into a design and technology, quality control of operations.

### III. Final stage.

1. An economic and ecological assessment of project (it is necessary to provide calculation of production costs of a designed project and reasoning the choice of all used materials from the point of view of ecology).
2. An assessment of quality of the project (the made project).
3. Analysis of the results of the project (object of work), defence of the project.
4. Studying of opportunities of use of results of design activity, actual demand on a commodity market.

This structure shows that use of a method of projects in training the subject "Technology", gives the chance to form the universal educational activities according to FGOS of the second generation which assumes the full development of all components of educational activity by school students, including: 1) cognitive and educational motives; 2) educational purpose; 3) educational task; 4) educational actions and operations (orientation, material transformation, control and assessment).

Let us consider the formation of each universal educational action apart.

*Communicative universal educational actions:* abilities to establish mutual understanding, to communicate with group mates, there is an exchange of knowledge between members of group, abilities to obtain missing information by means of questions, ability to formulate the purpose accurately.

*Cognitive universal educational actions:* to develop ability to see a problem, to put questions, to make hypotheses, to structure texts, abilities to draw conclusions, to classify purposes. Here it is possible to refer also the skills of work with reference books, listening to the speaker, supervision, selective remembrance, summary.

*Regulatory universal educational actions:* are developed by defining the purposes, the choice of ways of achievement, definition of sequence of stages of activity, an assessment of what is acquired and that else must be learnt.

Development of personal universal educational actions is reflected in ability to put the thoughts accurately, clearly, competently in writing and orally, to comprehend the task, to distinguish a hypothesis from the fact, to show activity in solving tasks.

Thus, at the corresponding educational training manual the subject "Technology" can become basic for formation of system of universal educational actions. The subject "Technology" creates favorable conditions for formation of the major components of educational activity, such as: planning, an assessment of project, transformation, ability to set tasks, to offer practical ways of solving tasks, etc.

#### **Literature:**

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