

ORGANIZATIONAL CHARACTERISTICS OF STUDY PROJECTS IN TECHNICAL HIGHER EDUCATION INSTITUTIONS

Sohiba Ergashboevna Numanova

Assistant lecturer of Namangan Engineering Construction Institute

<https://doi.org/10.5281/zenodo.7729456>

Abstract. *In the practice of higher education institutions in the process of preparing future civil engineering specialists for professional activity collecting information about a specific object, event, analyzing it and evidence summarization tasks are performed. Such projects also well-thought-out structure of work, such as research and practical projects demand to introduce systematic corrections to the process is enough.*

The article provides information about the types of design activities during the training of civil engineers in technical higher education institutions.

Keywords: *technology, project, idea, problem, result, independent thinking, problem formulation.*

Introduction

The rapid development of science, technology, production and technology has opened up new prospects for the development of society in all spheres of life. Humanity's centuries-old experience of building a state and society led to the decision of advanced approaches to regulating social relations based on new approaches. In the process of training civil engineers in technical higher educational institutions, great attention is paid to design activities. For example, in the curriculum of "Manufacturing of construction materials, products and structures", four coursework and two coursework projects, as well as graduation qualification work, are planned for the entire course of study.

The essence of the design technology is to stimulate the interest of students of higher education institutions in the practical application of the acquired knowledge through project activities aimed at solving one or more problems and a specific problem that involves a certain set of knowledge.

Methods

The basis of the design technology is the development of the ability to independently construct one's own knowledge and target the information space. The basis of technology is the idea that constitutes the essence of the concept of "project", its orientation to the results obtained in solving a practical or theoretical problem of one or another form. This result can be seen, understood and applied in real professional activity. In order to achieve such a result, the student should learn to think independently, formulate a problem and solve it by drawing knowledge from different fields, be able to predict the result and the possible consequences of different options for solving the problem, and establish a cause-and-effect relationship.

Taking into account the guidelines in [1] as requirements and conditions for the use of project technology in the preparation of students studying in the field of education "Production of construction materials, products and structures" in technical higher education institutions, we determined the following:

- the presence of significant problems (issues) from the point of view of research that require integrated knowledge;
- practical, theoretical and cognitive significance of the estimated result;
- independent (individual, pair, group) activity;
- structuring the textual part of the project with step-by-step results;
- *of research methods* that provide a clear sequence of actions (formulating a problem, putting forward a hypothesis for its solution, choosing a research method, collecting, systematizing and analyzing the obtained results, formalizing the result).

Results

The topic of the project can be proposed by the teacher, taking into account the interest and ability of the students, and in other cases, by the students based on their knowledge and creative interests.

The topic of the project can be dedicated to solving some practical problem that is relevant for everyday life and requires the integration of knowledge from different fields, not within one discipline.

There is no uniform classification of educational projects in scientific pedagogical literature.

According to the number of project participants, educational projects are divided into individual, pair and group types.

Teaching design technology has been used in higher education practice for a long time. However, the analysis of sources related to the topic showed that until now there are no systematic, methodological and generalized methodical sources for the activities of students in this form, but there are a number of educational and training programs designed to carry out course work and course project, graduation qualification work and diploma project on a specific subject and specialty. there are methodological manuals [2], as well as methodological instructions on the organization of a specific type of educational projects, which reflect some specific and local pedagogical experience and the field of use is very narrow.

Discussions

Based on the analysis of scientific pedagogical literature on the topic of research, we identified the following as typological signs of the design method: the following are leading in project activity: research, research, creative, playful, practical; substantive area with a subject: monoprocess (within one area of knowledge); interdisciplinary project; coordination nature of the project: direct (rigid, flexible), hidden (not overt, imitating project participants); number of project participants; duration of the project.

“Manufacture of construction materials, products and structures” specialty students studying in the field of education perform research, informative, creative, practical and interdisciplinary educational projects in accordance with the curriculum. *Research projects* include academic projects such as course projects, graduate theses, coursework in subjects, computational and computational work in specific departments of subjects, reports on academic, graduate and pre-graduate internships.

A research project requires a well-thought-out structure, a defined goal, relevance of the research subject for all participants, social significance, appropriate methods, methods of processing results.

Research projects include the relevance of the research topic, the formation of the research problem, its object and subject, the determination of research tasks in the sequence of the accepted logic, the determination of the research method and the source of information, the choice of the research methodology, the promotion of the hypothesis of solving the specified problem and the development of ways to solve it. , envisages discussion of obtained results, formalization of research results.

Informative projects are used in the practice of higher education institutions in the process of training future construction specialists for professional activity. collecting information about a specific object, event, analyzing it and focused on summarizing evidence. Such projects also well-thought-out structure of work, such as research and practical projects demand to make systematic corrections (corrections) in the process of going is enough.

Creative projects , as a rule, have a detailed structure does not have, they are only determined and then subject to the final result develops. Formalization of the project result plan, article, design and requires a clearly thought-out structure in the form of an album. Of this type projects, preparing reports for conferences, in business games divided into types such as participation.

Practical (practically oriented) projects are from other projects with the results of its participants clearly defined from the beginning differ and these results in the social interest of the participants intended. A study based on the results of a practical project to be a document, action program, guideline created based on the results possible

Individual, group and collective design can be noted as one of the organizational characteristics of educational projects in technical higher education institutions. In this case, some complex technical facility, for example, diagnostic section, maintenance.

Individual, group and collective design can be noted as one of the organizational features of educational projects in technical higher education institutions. In this case, some complex technical facility, for example, diagnostic section, maintenance 3-5 students can be involved in the graduation qualification work performed as a team on the design of a station or a unique innovative technology.

The results of design activities performed by students are formalized in the form of explanatory notes, working drawings, computer programs, layouts, models, experimental industrial samples. It can be seen that the completion of collective graduation qualification works is related not only to interdisciplinarity, but also to the integration of knowledge, and the organization of such graduation qualification works requires a high level of professional and practical competence from teachers.

Conclusions

Thus, the design activity is the basis for the development of professional-practical competence components in students, the diversity of design technologies allows teachers to organize the educational process in higher education institutions based on a person-oriented approach, to individualize the teaching process, and to increase the motivation of students to study.

REFERENCES

1. Krichevsky V. Uroven shkolnogo poiska // Narodnoe obrazovanie. - 1997.-№1.-S.12-14.
2. O Gurtsov A.P. Filosofiya obrazovaniya i ee fundamentalnye principles // Proektirovanie v obrazovanii: problems, poiski, reshenia: Sb. Nauch. trudov instituta pedagogicheskikh

- innovative RAO. - M., 1994. - S.12-18.
3. Vygotsky L.S. Pedagogical psychology / L.S. Vygotsky; pod ed. V. V. Davydova. - Moscow: Izd-vo AST: Astrel, 2009 - 671 p.
 4. Gershunsky B.S. Philosophy of education for the XXI century. (V poiskakh praktiko-orientirovannyx obrazovatelnyx kontseptsiy). - M.: Sovershenstvo, 1998. - 608 p.