



Section 4. High professional education

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METHODOLOGICAL SUPPORT FOR THE DEVELOPMENT OF DESIGN COMPETENCE OF FUTURE SPECIALISTS

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Abstract

This article describes the independent educational work of students, the use of a type of Web-quest activity, which includes means of implementing sources of knowledge and finding the results of cognitive activity, which is carried out without the direct help of students. teacher, as well as the use of different types of training at different levels of the educational process to maximize the integration of the Internet into science.

Keywords: *distance education, active project, independent work, web quests, cognitive activity, integration, information resources*

Introduction

Decisions of the President of the Republic of Uzbekistan dated June “5, 2018, No. PQ-3775” “On additional measures to increase the quality of education in higher technical colleges and ensure their active participation in comprehensive reforms implemented in the country” (Usubjanovna, D.M., & Sharifjanovna, Q.M., 2023) and other regulatory legal documents related to this activity in order to ensure the implementation of the specified tasks, significant work was carried out in our country on the development of market economy mechanisms aimed at the development of modern science, technology and technology and their targeted implementation.

The future of any country is logically related to the attention paid to the education of the youth growing up in it. This, in turn, indicates that solving the unresolved issues between education and training, science and production, improving the quality of education in higher technical educational institutions, and the innovative approach to the organization and management of pedagogical processes are being solved (Usubjanovna, D.M., & Sharifjanovna, Q.M., 2023). Teachers working in higher technical institutions should know and be able to apply to the educational process innovative educational technologies, methods of activating the educational process, and interactive methods

that ensure the formation of quality knowledge, skills, and competencies in the taught subjects. The teacher should be able to study the content, essence, purpose and tasks of interactive methods, develop scientifically based information and practical guidelines about them, and after mastering the methods and information technologies, introduce them in the educational process. Distance education is playing an increasingly important role in the modernization of this education. Currently, the higher education system is focused on the independent work of students. One of the standards of European universities is the attitude that a student needs to get his basic education not in the classroom, in lectures and seminars, but in the process of independent work, studying the recommended literature and writing essays, theses, term papers, Final qualifying works, etc.

Literature Review

In recent years, scientists and pedagogues-practitioners have been comprehensively studying the possibilities of involving students in independent creativity and research activities in order to form design competencies in the teaching of specialized subjects (Leontovich, A.V., Lyashko, L. Yu., Kalugina, T.G., Karpov, A.O., Klimova, T. Ye., Mirzakhmedov, B., Obukhov, A.S., Russikh, G.A., Sychkova, N.V. and others). (Najmiddinova, Yo., Abdullaeva, N., & Davronova, M., 2016). As one of the forms of project activity of distance learning technologies, web quests are used to organize independent work of students. The founders of webquests are Bernie Dodge, a professor of educational technology at San Diego State University (USA) and his student Tom March, who at that time was an English teacher at a high school in Poway, California. Since 1995, they have developed the web-quest model as one of the strategies for successfully integrating the Internet into the educational process. (Usubjanova, D.M.).

In today's post, I would like to mention one of the 10 best technologies that have entered our lives. In the technology of active project work – thanks to modern technology, we can get any information in the specialty by clicking on a single link. At the same time, real life and business expect practical skills

from yesterday's graduates, not theoretical knowledge. These two facts call for reformation of the educational process. As one of the forms of project activity of distance learning technologies, web quests are used to organize independent work of students.

Research Methodology

Designing in the process of technical education is one of the important conditions for the effective organization of activities, not only in the correct selection of educational methods in training, but also in the precise definition of teaching forms and their successful implementation (Najmiddinova, Yo. R., & Davronova, M. U., 2020). In the course of the work carried out within the framework of the research, the study and research of interactive forms of training organized on the basis of innovative teaching methods and technologies were included among the main tasks and means have separate importance.

In technical education, practical methods are considered to be the most effective method, and this method is important because 75% of the information is retained in the minds of students, but the methods of independent study of educational materials by students, independent implementation of practical exercises are considered even more effective. 90% of knowledge is acquired and skills are formed. Therefore, the use of active methods aimed at students' independent learning, research, independent problem solving, and practical effects will have a good effect. The number of students in the group is important in the teaching process. If there are not many students in the group, it is possible to speed up teaching using an active method. If there are many students, using active methods may not give good results. It will not be possible to work with every student. When choosing active learning methods, it is important to take into account the educational opportunities of learners, that is, their age, level of training, and the uniqueness of interactions in the team. When preparing for training, choosing the educational method, we must take into account the ability of students to work independently and creatively. Independent educational work of students is a type of activity that includes the search for the means of implementing knowledge

sources and the results of cognitive activity, which is carried out without the direct help of a teacher. Web-quests – search for information on the Internet on a given topic. “Educational web quest is an Internet site that students work on while performing a specific educational task”. They can cover a particular problem, subject, or be interdisciplinary. Educational web quests are characterized by the fact that some or all of the information is located on different websites for students to work on independently or in groups.

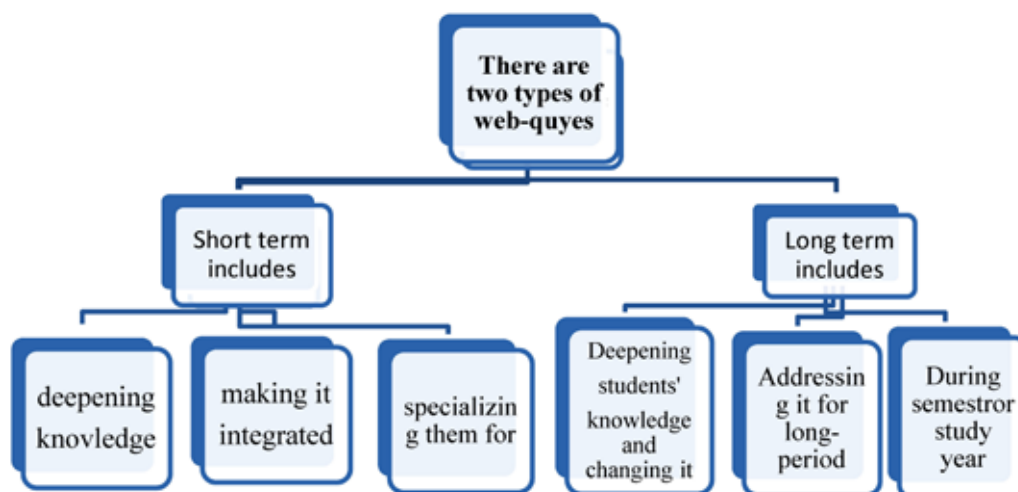
In pedagogy, web inquiry is a problem task with role-playing elements that use the information resources of the Internet. This is a mini-project based on searching for information on the Internet. A web quest can

be created by the teacher or the student, depending on the goals set for the student.

Analysis and Results

Here are many reasons to use web quests in your learning process, let's list some of them. It's an easy way to integrate the Internet into your learning process without requiring special technical knowledge. The quest can be completed individually, but teamwork is preferred when solving the quest. At the same time, two learning objectives such as communication and information exchange are achieved. Web-quests develop critical thinking, as well as the ability to compare, analyze, classify, and think abstractly. Web-quests are divided into the following types.

Figure 1. The purpose of short-term projects is to acquire knowledge and add it to your knowledge system. Working on a short-term web quest can take anywhere from one to three sessions



Types of web-quests

Long-term – web quests aimed at expanding and clarifying concepts. After completing the long-term web quest, the student should be able to analyze the acquired knowledge in depth, to be able to change it, and to have the material to create tasks for working on the topic. Working on a long-term web quest can last from a week to a month (maximum two months). The peculiarity of web-quests is that part or all of the information is located on different websites for students to work with it independently or in groups. As a result of working with web-quests, students' work can be published on the Internet in the form of web pages and websites. It is also always

interesting to use web quests in the classroom. It is based on researching students, creating an interesting learning process for students and their teachers. The design of the web-quest involves the rational planning of students' time, which is aimed not at finding information, but at using it. The web-quest contributes to:

- searching the Internet for information that the teacher instructs students on;
- data analysis;
- development of students' thinking at the stage of generalization and assessment;
- to develop students' computer skills and increase their vocabulary;

– to encourage students to learn independently from the teacher.

The modern requirements of the State Educational Standard on the organization of extracurricular activities of students envisage such forms of student work as projects and research activities.

The future person who knows how to act according to the model in the process of project activity, but also gets the necessary information independently from the most sources, knows how to analyze it, put forward new ideas, draw conclusions, make decisions in difficult situations and apply them a specialist is formed (Rukhiddinovna, N. Y., Dadamirzaevich, I. D., Usubjanova, D. M., & Kiramidinovna, I. D., 2020).

Using the project method has great advantages

1. It contributes to the successful socialization of graduates by creating a sufficient informational environment in which students learn to act independently.

2. The relevance of research topics, the ability to introduce the results of their research to a wide audience in a live, visual way allows to organize the educational process in all its stages, which supports an activity-based approach.

3. Students learn research technology, which includes the following steps:

- identifying research problems;
- setting goals and objectives;
- formation of research hypotheses;
- determination of data collection and processing methods;
- search for additional information;
- analysis of new facts;
- generalization;
- registration of research results;
- discussion and translation of the obtained results.

4. When choosing a research problem and solving a specific problem within a group, students are guided by their interests and level of preparation:

- Reaching a consensus – developing a solution to an acute problem;
- Evaluation – justifying a certain point of view;
- Journalistic investigation – objective presentation of information (separation of opinion and facts);

– Persuasion is convincing opponents or neutral thinking persons to one's side;

– Scientific research – study of various events, discoveries, facts based on unique online resources.

A web quest typically includes the following steps:

- Introduction at the first stage (justification of the topic and the value of the project). This step provides background information, introduces key concepts, and includes a question for students to reflect on;
- In the second stage, the task (goal, conditions, problem and ways to solve it). This is the most important part of the web quest. The task directs students to a series of specific actions to solve the problem;
- In the third stage, the process (step-by-step description of the work progress, distribution of roles, responsibilities of each participant, links to Internet resources, final product). This section contains instructions on how students should complete the task (order to fill in and sort data);
- Evaluation at the fourth stage (self-evaluation scale and teacher evaluation criteria). There are criteria for evaluating the task performed in the department according to certain standards;
- In the fifth stage, the conclusion (summarizing the results, summarizing the results (what you learned, what skills you gained; rhetorical questions or questions that encourage further research of the topic are possible). This summarizes and encourages reflection on the problem and further research.

Step Six Teacher Pages (optional): These contain information to help other teachers using the web-quest.

The steps involved in working on a Web-Quest include:

Preliminary stage (team). Students get acquainted with the main concepts of the chosen topic, materials of similar projects. Roles in the team are distributed: 1 person out of 4 for 1 role. All members of the team should help each other and teach each other to work with computer programs.

Role stage. Individual teamwork for a common result. Participants simultaneously perform tasks according to their chosen roles. Since the purpose of the work is non-competitive, team members will be taught computer software and Internet skills while working on the web quest. The team summarizes the results of each task together, and participants share materials to achieve a common goal – creating a website.

Tasks of this stage:

- search for information on a specific topic;
- development of site structure;
- creating materials for the site;
- revision of materials for the site.

The final stage. The team works together under the guidance of the teacher and feels responsible for the research results published on the Internet.

Conclusions and proposals are formed based on the results of the study of the problem. A selection of completed works is held, in which the understanding of the task, the reliability of the information used, its relation to the given topic, critical analysis, logic, structure of information, clarity of positions, problem solving approaches, individuality, professionalism of the presentation are evaluated (Kodirov, N. 2023). Both teachers and students participate in the evaluation of the results through discussion or interactive voting (Kodirov, N. 2023).

Conclusions

Completing the Web-Quest tasks involves cooperative activities. Students’ assessment of the team member’s contribution to the overall work is also a good motivational factor;

– Web-Quest uses various multimedia resource formats as material, such as graphics, photos, tables, videos, animation, video tutorials;

– It’s no secret that visual memory helps to better absorb information, so using visual resources of the network is another way to interest students;

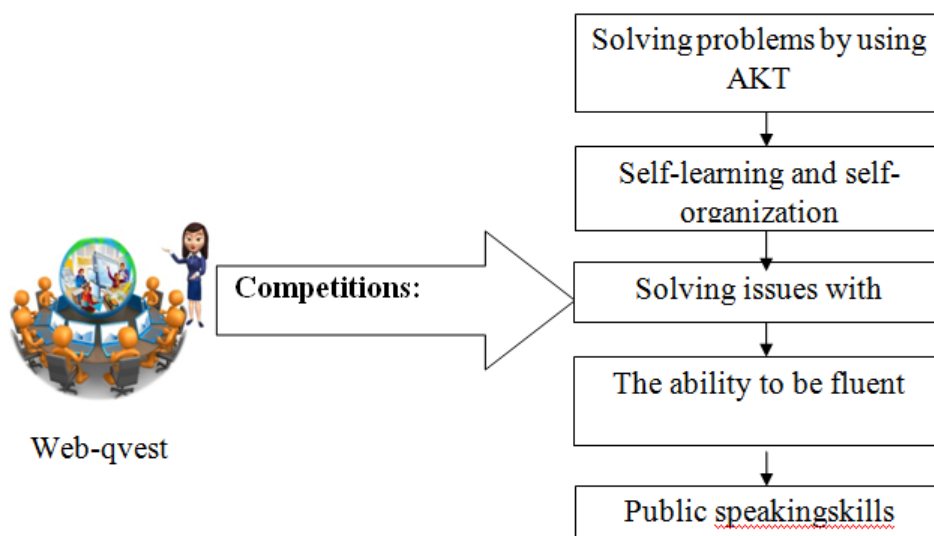
– Web-Quest is easy to use;

– Web-Quest is developed taking into account its integration with other types of educational materials on the studied topic;

– Web- Quest includes a built-in rating mechanism. Assessment gives students a good idea of how the work should be done.

This is the most important part of the Web-Quest. Tasks and assignments should force students to search more based on facts, study the relationships of objects and events, distinguish true knowledge from lies, analyze cause-and-effect relationships in the surrounding world, and directly connect with production. Technical higher education By using web quests as one of the forms of project activity in teaching students of specialized subjects, we will achieve the development of design competencies as follows.

Figure 1. Educational Web-kvest



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