DIDACTIC POTENTIAL OF WEB-QUEST EDUCATIONAL TECHNOLOGY IN DEVELOPING STUDENTS' COMPETENCIES IN BIOLOGY

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Abstract. This article discusses web-quest educational technology and its didactic potential. Additionally, it highlights the advantages of using web-quest educational technology in developing students' competencies in biology.
Keywords: web-quest, hyperlink, website.

In general secondary schools, web-quest educational technology plays an important role in increasing the effectiveness of teaching biology and developing students' competencies. This is because web-quest educational technology integrates active teaching methods with the advantages of interactive technologies by using the global network to search for necessary educational materials [1]. Therefore, utilizing web-quest educational technology in developing students' competencies in biology is considered appropriate.

In this regard, U.M. Mirsanov [1], G.A. Vorobyov [2], Ye.A. Igumnova [3], I.V. Radetskaya [3], M.V. Andreyeva [4], O.V. Volkova [5], and O.V. Gorbunova [6] have conducted research, and according to their findings, web-quest educational technology possesses the following features: it provides the opportunity to acquire knowledge by searching for subject-related information through hyperlinks; enhances positive motivation in learning; ensures differentiated learning; creates opportunities for independent learning; and develops learners' competencies by generating intellectually challenging situations.

Summarizing the views of these scholars, it can be stated that web-quest educational technology, first and foremost, develops the ability to use the global network to search for educational information. Secondly, it enhances the effectiveness of lessons by creating a problem-solving environment aimed at developing students' active cognitive activity.

Considering the above-mentioned potential of web-quest educational technology, we concluded that it should be utilized in general secondary schools to enhance the effectiveness of teaching biology, improve students' knowledge of natural sciences, and develop the necessary competencies.

A distinctive feature of using web-quest educational technology in teaching biology is that it directs students to independently or collaboratively solve assigned

problems using the global network. In this approach, students are tasked with collecting educational information from the global network on a specific topic related to biology and solving the problem using the gathered data. Some references are provided by the teacher, while others can be independently found through traditional search engines [4-6]. This, in turn, provides the following opportunities:

- Encouraging students to explore new material related to biology;
- Directing students towards purposeful research to complete practical tasks in biology;
- Enhancing students' abilities to conduct experiments.

At the same time, using web-quest educational technology in teaching biology and solving problems helps develop a number of competencies in students: using information technologies to solve environmental problems and search for necessary educational materials on websites and databases; enhancing the ability to make independent decisions; developing the ability to find multiple methods for solving environmental problems, selecting the most effective option, and justifying their solution.

Thus, web-quest educational technology enables the activation of students' research activities and enhances their critical thinking skills and abilities when working with large volumes of information related to biology. It helps develop skills such as making choices, taking responsibility for those choices, evaluating the effectiveness of information search, and determining the appropriate amount of information to present.

Additionally, web-quest educational technology is implemented in biology education for the following purposes:

-Educational: Engaging each student in an active learning process and enhancing their skills and competencies in organizing both individual and group activities;

-Developmental: Increasing students' interest in biology, developing their creative abilities, and shaping skills for independent work with research, public speaking, literature, and internet resources;

-Creative: Developing a sense of responsibility in completing practical tasks related to biology.

In conclusion, web-quest educational technology is a modern teaching method aimed at solving problems independently through searching the global network. Therefore, it is essential to use web-quest educational technology to develop students' biological competencies.

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