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Educational Possibilities Of Quest And Web-Quest Technologies In The Conditions Of Education Modernization

Muminova Nodiraxon Jurayevna
Fergana State University, Independent Researcher, Uzbekistan

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Abstract: This study examines the significance of quest and web quest technologies in developing information competence, digital literacy, and professional skills of future teachers in the context of globalization. Drawing on the pedagogical heritage of Jadid educators and modern competency-based approaches, the research emphasizes independent thinking, creativity, and spiritual development. It demonstrates that quest-based learning enhances students' motivation, problem-solving abilities, collaboration, and effective use of digital resources in contemporary educational environments.

Keywords: Quest technology, web-quest, gamification, future teachers, digital education, competence, innovative pedagogy, creative thinking, quality of education.

Introduction: In the current era of globalization, the pace of emergence of new knowledge is accelerating. Continuous improvement of the quality of education, the transition to digital technologies is one of the most pressing issues in education today. Information competence plays a key role in solving these problems. Modern children are born, grow up and receive education in an environment saturated with information and communication technologies and digital devices. In this regard, from the early stages of education, future teachers need to acquire the skills of conscious and purposeful use of modern digital opportunities, in particular the information potential of the Internet.

In the pedagogical heritage of the prominent figures of jadid pedagogy Mahmudkhoja Behbudi, Abdurauf Fitrat, Abdulla Avloni, the issues of education and enlightenment are closely related to the social, cultural and political conditions of the time, where special attention is paid to the position and professional qualities of the teacher in society.

The famous educator Abdulla Avloniy paid special attention to the issue of education and upbringing. He believes that the educational process should equip the student not only with knowledge, but also with independent thinking, creativity and spiritual maturity[2;120-b]. Avloniy pointed out the important role of education in the development of society by stating that "education is for us a matter of either life, or mammoth, or salvation or destruction" [3;18-b]. The scientist's work "Turkish Gulistan or Ethics" emphasizes the need to convey knowledge in an interesting, intelligible and life-related way[30;40-b]. According to it, the teacher should take into account the age characteristics, interests and individual capabilities of the student during the lesson[1;80-b]. Indeed, Abdulla Avloniy's views on education and upbringing are in harmony with today's modern pedagogical approaches. His ideas aimed at the comprehensive development of the individual in the educational process are consistent with the basic principles of the current competency-oriented approach. That is, education should not only provide knowledge, but also serve to form students of independent thinking, creativity and spiritual maturity. Avlony's assessment of education as an important factor in the development of society further increases the responsibility of the teacher to society. "Education is either life or mammoth for us..." He deeply understands the

strategic importance of the educational process. This idea has not lost its relevance today and is at the heart of all reforms aimed at improving the quality of education.

Each age period of human life is characterized by its unique physiological and psychological features. Understanding and taking these features into account in the educational process is one of the important professional tasks for future teachers. This paragraph describes the knowledge of future teachers in understanding students, as well as pedagogical and psychological problems that may arise in the process of using quantum technology at this age and ways to effectively solve them.

Future teachers should teach children to work with different data sources from their first school days, because now working with text, graphics, sound, multimedia, digital data has become a necessary meta-educational skill. They often think about the use of new educational technologies in accordance with modern requirements of the educational process. One such effective pedagogical technology is quantum technology, which is based on educational research. Participation in the quest strengthens the need for dialogue between students and serves to form their universal learning activities. The use of quest technology allows the future teacher to retreat from the traditional relationship between participants in the learning process, to expand the learning environment even more and involve students in active cooperation.

For the first time, the concept of "quest" appeared in computer games in the last century. According to O.V. Pankova, M.N. Kicherova[20], G.Z. Yefimova, this concept refers to different types of online and offline computer games. In the interactive story presented here, the player with the hero or heroines has to search for something to move on to the next level, solve some puzzle, or find the only right solution in a particular situation in order to reach a goal at any time in the game. [23] Therefore, interactive, research-based activities are an important tool in engaging learners and improving educational effectiveness.

According to the analysis of sources, the term "quest" comes from the English language, and the word quest means "seeking", "searching for something", "purposeful adventure". This concept represents a search process that is conducted towards a specific goal. Initially, the term "quest" was used in the field of computer games, and it was widely used through game titles such as King's Quest, Space Quest, Police Quest, developed by Sierra On-Line.[13] Later, the concept was expanded to denote a type of active and intellectual game aimed at research, adventure, and problem solving[19].

The manifestation of classical pedagogy E.A. Komensky in his work "The Great Didactics": "... If young people were allowed to play for the remainder of the Agâr Aql, and if they could come up with games that brightly illustrate the serious aspects of the story, the solution would be to be already to get worse and worse 118-120-b] - he had argued.

It can be said that the content of quantum technology is close to some of the popular games that already existed in the field of pedagogy, in which tasks are completed in special "stations", participants move through various obstacles and directions. Even in such games, participants complete tasks step by step, moving along a set route. For example, in games such as "Relay", "Find and Find", "Mystery Letter", "Labyrinth", "Interesting Journey", students are searched, solve problems and strive to achieve the ultimate goal. In this respect, these games are in line with the basic principles of quantum activity.

On this problem the views of E.A.Igumnova, I.V. Radetskaya, M.V.Ilyushina deserve attention. They note that station-based games developed by I.P. Ivanov are often referred to as "live" quests. However, scientists note that there are important differences between the games and quests, organized by stations. In particular, in the quest, all tasks are tied together by a single common goal, which is completed in sequence: it is impossible to move on to the next one without completing the previous task. In the quest process, the reader is faced with a specific problem, and he gradually approaches the set goal by solving this problem. [16; 164-b] Indeed, these views allow for a deeper understanding of the content of quantum technology. The distinguishing between station-based games and quests by the authors provides a basis for evaluating the quest as a distinctly goal-oriented educational process, rather than just an action-based game. The interconnected and sequential completion of assignments develops students' skills of consistency,

logical reasoning, and step-by-step problem solving. In this regard, quantum technology can be recognized as an effective pedagogical tool that engages the student in active learning, encourages independent thinking, and serves to organize the educational process in a meaningful and interesting way.

The theoretical and practical foundations of application of quantum technology in modern teaching are studied in the scientific activity of scientists such as Yu.S. Bukhovsky, B.Dodge, G.Z. Efimova, G.S. Isakova, E.A. Igumnova, M.N. Kicherova, T.A. Kuznetsova, N.V. Nikolaeva, I.N. Sokol.

The quest can be designed both for groups (3-5 people) and for individual work and develops competition and leadership among schoolchildren (E.S.Bukhovsky, N.G.Budanova, A.A.Vlasova, E.N.Zarubina, G.L.Shamatonova). [14]

The technology of quest as a pedagogical technology based on project activities is widely covered in the studies of N.G.Budanova, V.V.Schmidt, N.A.Nikolaeva, E.A.Igumnova, I.V.Radetskoy, A.V.Yakovenko. Scientists say that in the process of quest, students acquire the skills of searching and analyzing information, independently forming new knowledge by retaining, transmitting and compare. At the same time, students will not only master ready-made answers, but create a variety of learning products aimed at solving a problem. This process includes activities from finding reasonable answers to questions to developing multimedia presentations, videos, websites, booklets and other creative works. [17; 164-b] Agreeing with the opinion of the scholars, it is worth admitting that these views allow for a deeper understanding of the content of quantum technology. The distinguishing between station-based games and quests by the authors provides a basis for evaluating the quest as a distinctly goal-oriented educational process, rather than just an action-based game. Completing tasks in an interconnected and sequential manner develops students' skills for consistency, logical reasoning, and step-by-step problem-solving. In this respect, quantum technology can be recognized as an effective pedagogical tool that engages the student in active learning, encourages independent thinking, and serves to organize the educational process in a meaningful and interesting way.

L.O. Afanasyeva believes that if we pay attention to the fact that the quest has a clearly defined didactic task, a game plan, a leader (coach), clear rules, the quest is carried out with the aim of expanding and deepening the knowledge and skills of students. [5; 149-159-b] Consequently, such ordered activities encourage students to be active, teach them to think independently and solve the problem step by step. At the same time, teacher guidance facilitates control of the process and clear implementation of educational goals.

O.V. Pankova notes that quantum technology, first of all, immerses the child in the educational environment, allows to engage the child by creating a game-like process with active search on the Internet or other resources, for example, textbooks, didactic materials, posters, presentations. [22; 45-52-b] In our view, quantum technology transforms the learner into an active seeker, a problem-solving participant, rather than just an individual listening to the lesson. Through the use of the Internet and various educational resources, children will be interested in the topic they are learning, will have the opportunity to test and experiment with their knowledge, and lessons will be interactive and fun. In this way, they will also learn to think independently, analyze and make creative decisions.

Notable is the explanation of I.A. Ovcharenko that it is possible to create a quest both within the framework of the lesson and in extracurricular activities. A quest can be aimed at gaining new knowledge on a topic, or it can enrich or summarize, deepen the information received by the students, allowing you to consider several interrelated problems at once. [21] Hence, quantum technology will serve as an important tool in the development of pedagogical and methodological competencies of future teachers.

In the mid-90s of the last century, B. Dodge and T. March (University of San Diego, USA) developed the concept of web quantum technology with the aim of improving the educational process. The term "WebQuest" was coined by university professor B. Dodge in 1995. B.Dodge suggested using a specific search engine in the training process. According to his proposal, it was necessary to find a solution to the problem by going through intermediate stages. Each of them, after having completed some task or action,

requires finding a key to move on to the next level. T.March considered the web quest from the perspective of cognitive psychology, based on the works of L.S. Vigotsky, on the "zone of proximal development". He defined web quest as a specific task in the structure and order of education that uses links to important resources on the Internet. In order to develop in students the skills to work both individually and in groups in the process of searching and changing information, students were encouraged to explore any problem with a non-linear solution.

B.Joge presented 30,000 internet web quest designs on his personal site, Quest Garden; The source has been translated into ten languages (Spanish, Portuguese, Calhoun, French, German, Italian, Dutch, Greek, Arabic, and Indonesian).

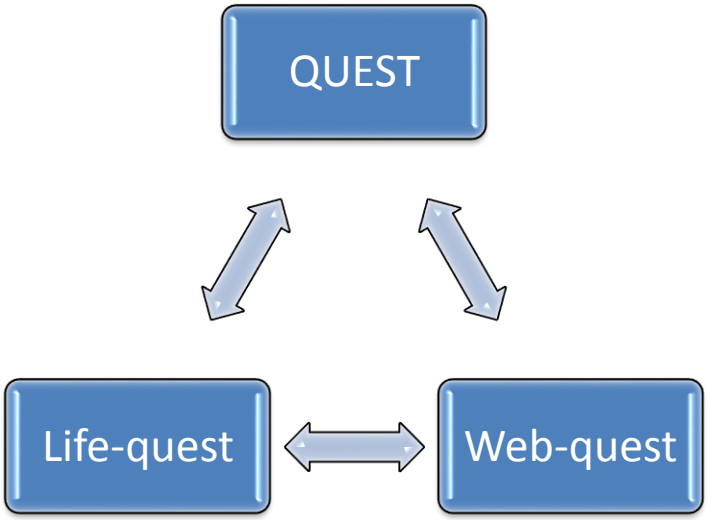

Figure 1.1. Types of Quest by Transfer Medium

The essence of web quest technology is explained as follows:

- There are special sites on the Internet where students work to complete certain tasks. Such platforms allow teachers to monitor the activities of students, orient them in independent research and help in further development of complex didactic tasks (E.S. Bykhovsky, G.S. Isakova, E.M. Shulgina, G.L. Shamatonova); [14]

- It is important that a special website created to search for information via the Internet and solve an educational problem is not limited only to obtaining the final result, but also provides technical assistance to the user, as well as provides guidance in performing complex and interesting didactic tasks. (E.A.Igumnova, I.VRadetskaya); [16]

-Information and communication technologies is a didactic tool used in the educational process, which uses special computer programs. With the help of these technologies, students will be able to search for information on the Internet, prepare and present their results, as well as organize effective exchange of ideas between participants in the learning process (A.A. Vlasova, Yu.N. Zarubina, A.A. Karavka, G.L. Shamatonova); [19]

- Interactive learning environment created by the teacher (T.A. Kuznetsova)[10]; – intellectual type of game activity (G.Z.Efimova, M.N.Kicherova); [20]

-Problem task with elements of role-playing games used from information resources of the Internet (A.V.Yakovenko). [24] Indeed, kAdvances have shown that web quantum technology is an important and versatile tool in the educational process. Scholars interpret the web quest not only as a web-based technology, but also as an effective didactic environment that enables students to independently pursue, solve problem situations, and work collaboratively. The web quarter is organized through special educational sites that allow the future teacher to direct and control the activities of students, and students to search, analyze and apply information. At the same time, it serves not only to achieve the end result, but also to organize the learning process itself in a meaningful and interesting way. The combination of information and communication technologies, game and role-playing elements turns the web quest into an effective pedagogical technology that develops

students' cognitive activity, critical thinking and communication skills in the conditions of modern education (Table 1.1)

The Essence of Web Questum Technology		
Directions	**Main Contents**	**Educational Value**
🌐Internet platforms	*Execution of assignments, monitoring of activities through special sites*	*Develops independent research and supervision*
🔍 Information Search and Help	*Information, technical assistance, guidance*	*Problem-solving effectively*
💻 ICT-based education	*Search, presentation, collaboration through programs*	*Builds Digital Competence*
❓ Interactive environment	*Teacher-Created Environment*	*Increases engagement and motivation*
🎮 Intellectual game	*Imparting Knowledge Through Play*	*Develops interest and logical thinking*
🎭 Role-play problem-solving tasks	*Role-play-based problem task*	*Develops social and communication skills*
❓ Collaboration and research	*Teamwork, problem solving*	*Strengthens critical thinking*
📈 Unity of process and results	*Interesting organization of the process*	*Increases educational effectiveness*

Table 1.2. The Essence of Web Quantum Technology

While the quantum and web quantum technologies used in the educational process are essentially interrelated, they differ in terms of the form and means of implementation. Quest is a play- and research-based educational technology that focuses on students solving a specific problem through step-by-step tasks. It can be organized in a real learning environment, even without information and communication means. Web quest is a form of quantum technology implemented in the Internet environment, in which the process of completing tasks is organized on the basis of online resources, electronic resources and links. In the web

quest process, students actively use digital technologies to search, analyze, and process information. Therefore, while the quest expresses an activity that can be applied in different environments as a general didactic technology, the web quest is a special form of it based on information and communication technologies. In other words, while every web quest is a component of quantum technology, not every quest has to be organized in the form of a web quest. This approach plays an important role in the interactive organization of the educational process, the development of students' independent thinking and the formation of their digital competencies.

The analysis of the above data shows that the normative-legal acts adopted to reform and develop higher education in Uzbekistan until 2030 determine as a priority task to improve the quality of education, introduce digital technologies and train competitive personnel. The spiritual, moral and creative directions of education put forward in the Jadid heritage are harmonized with today's competential approach. In the environment of globalization and digital environment, there is an urgent need to develop information competence, skills of independent and creative thinking in future teachers. In this context, quantum and web quantum technologies will play an important role in preparing future teachers for the gamification process as an effective innovative didactic tool that engages students in research, problem solving and collaborative work.

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