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DOI https://doi.org/10.30525/978-9934-26-373-6-3

WEB-QUEST AS A TOOL FOR INCREASING STUDENTS' MOTIVATION WHILE LEARNING MATHS ONLINE

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The motivation of students to study mathematics largely depends on the method of its teaching, on how skillfully the teacher uses the time in the lesson to present the material and how successfully the work will be constructed [7]. It is necessary to pay attention to the fact so that every student works actively and deliberately in the lesson. It is especially important to do this in adolescence, when permanent interests and inclinations towards a certain subject are still being formed, and sometimes are just beginning. It is during this period that the teacher should draw the attention of children to the curiosity and fascination of mathematics. An important role here is given to didactic games in traditional mathematics lessons and game lessons. Modern didactics sees them as the possibility of effective organization of interaction between the teacher and students, a productive form of their communication with elements of competition, looseness, and interest [2, p. 2].

Playing is creativity, playing is work. In the process of playing, children develop the habit of concentrating, thinking independently, develop attention, imagination, and desire for knowledge. Enthusiastic students do not notice that they are learning: they learn, remember new things, orient themselves in unusual situations, fantasize [3, p. 9].

As a result of the organization of educational activities with the use of interactive technologies, students in mathematics lessons develop and complicate mental processes – perception, memory, attention, imagination, etc., mental operations such as analysis and synthesis, abstraction and generalization are revealed, will and character are formed. Using various types of creative activities in lessons, students develop mathematical abilities and show interest in the subject [4] A large number of diverse and accessible types of work included in the content of knowledge (where interactive technologies

are used) provides food for the mind, develops imagination, observation, broadens one's horizons, introduces important elements of professional activity, influences the formation of sustainable cognitive interests.

During active learning, the student, analyzing a creative task, determines the necessary operations for its implementation, the sequence of actions, compares and determines common and different ways of implementing similar tasks, summarizes the ways of its performing. On the basis of such mental actions, the intellectual sphere of the individual develops. In addition, in the process of performing educational activities, students have to make certain calculations. They learn to use knowledge from other subjects (that is, cross-subject connections are made); the language of schoolchildren is enriched with new words and terms, which, in turn, has a positive effect on the mental development of the individual.

The modern teacher is faced with the problem of a quality lesson in the conditions of distance education. Which form of synchronous or asynchronous classes should I choose? It is clear that this question is subjective, because everything depends on the level of knowledge and skills of students, as well as the place of a certain lesson in the topic. But the asynchronous form of learning is not always optimal [5, p. 131–132].

Mathematics is a subject where students have to understand the process of solving problems and equations, "get your hands full." And here one cannot do without banal problem solving, providing an algorithm, considering various examples and ways of approaching one problem.

The use of quests contributes to the education and development of personality qualities that meet the requirements of the information society, the disclosure of abilities and the support of children's talent. In addition, web quests contribute to the development of logical thinking, teach children to reflect on tasks, evaluate the situation from various angles, analyze information, allow to connect materials of several subjects, involving logic, creativity and critical thinking.

Web quest is one of the newest means of using information and communication technologies for the purpose of creating a lesson focused primarily on students involved in the educational process [8]. Gamification, of course, makes the educational process more interesting, but there is another advantage: children are involved in the work, get excited, enjoy the game, and the teacher can use these positive emotions to spend the rest of the lesson with more traditional exercises, which are difficult to present in the form of quest tasks.

Interactive technology, such as "Web Quest", is used to bring dry, sometimes dull material to life. Questions have been developed for students, the answers to which can be found in various sources of information – these are handouts, textbooks, reference publications, and lesson notes. Students

complete the quest tasks at a time convenient for them. Time is determined for information search and analysis. At the end of the lesson, messages from each student are listened to, which are then repeated and expanded by the whole class, errors and difficulties in performing this or that task are analyzed.

The use of web quests in generalization lessons and preparation for the test will also be successful. During the game, children will be able to repeat all the program material on a certain topic in an exciting way.

Web quests can relate to a separate topic or subject, or be cross-curricular. All lessons of this type have a similar structure:

1. The problem. Any quest begins with setting a task. Students must understand what they have to achieve at the end of the game (exit the building, find the map, key, safe, etc., open the suitcase).

2. Entertaining nature. Each web quest has a shell that depends on the imagination and creativity of the game creator (lab, jungle, classroom, shop, etc.)

3. Plot, rules, tasks and criteria for achieving the desired result. Before starting the quest, students familiarize themselves with the number and type of tasks, the dependence of the transition from one task to another, the accumulation of correct answers, and the number of permissible attempts or errors.

If it is difficult for children to complete the tasks of the quest room, then you can give hints at the beginning.

Therefore, any web quest contains interactive exercises, the performance of which involves participation in a game-competition, stimulates the interest of students, ensures the activity and involvement of all participants, unites students, and the use of the Internet contributes to the creation of motivation for educational activities taking into account age and personal characteristics of students, development of critical thinking, realization of interdisciplinary connections based on the mobility of any pedagogical actions.

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DOI https://doi.org/10.30525/978-9934-26-373-6-4

THE METHOD OF FORMATION OF A SYSTEM OF KNOWLEDGE IN DISCRETE MATHEMATICS IN IT-INDUSTRY PROFESSIONAL JUNIOR BACHELOR

МЕТОДИКА ФОРМУВАННЯ У ФАХОВИХ МОЛОДШИХ БАКАЛАВРІВ ІТ-ГАЛУЗІ СИСТЕМИ ЗНАНЬ З ДИСКРЕТНОЇ МАТЕМАТИКИ

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м. Тернопіль, Україна

Дискретна математика має великий спектр застосувань, перш за все в областях, пов'язаних з інформаційними технологіями, програмуванням та комп'ютерами. Саме тому, дискретна математика є одним з базових курсів при підготовці фахівців з інформаційних технологій.

Аналіз програм підготовки фахових молодших бакалаврів галузі знань 12 «Інформаційні технології», показав, що дискретна математика є невід'ємною складовою підготовки майбутніх фахівців у зазначеній галузі. Варто зазначити, що більшість закордонних вузів також вважають дискретну математику ключовою для подальшого вивчення професійно-орінтованих дисциплін [4].