

“ZAMONAVIY TA’LIMDA SUN’IY INTELLEKTNI QO‘LLASHNING ISTIQBOLLARI VA MUAMMOLARI” XALQARO ILMIY-AMALIY ANJUMAN 22-23-MAY 2026-YIL

PEDAGOGICAL IMPORTANCE OF EXPLAINING WATER ISSUES TO STUDENTS

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Anotatsiya: mazkur mavzu talaba-yoshlarga suvga oid masalalarni tushuntirishning pedagogik ahamiyatini yoritishga qaratilgan. Unda suv resurslarining jamiyat hayotidagi o‘rni, ekologik muammolar, suvdan oqilona foydalanish zarurati hamda bu bilimlarni ta’lim jarayonida samarali yetkazish yo‘llari tahlil qilinadi. Shuningdek, talabalar ongida ekologik madaniyatni shakllantirish, mas’uliyat hissini rivojlantirish va barqaror rivojlanish tamoyillarini singdirishda pedagogik yondashuvlarning o‘rni asoslab beriladi. Interfaol metodlar, amaliy mashg‘ulotlar va zamonaviy pedagogik texnologiyalar orqali suv muammolarini o‘rgatishning samaradorligi ilmiy jihatdan izohlanadi. Ushbu yondashuv talaba-yoshlarning ekologik tafakkurini kengaytirish va ularni atrof-muhitni asrashga yo‘naltirishga xizmat qiladi.

Kalit so‘zlar: suv resurslari, ekologik ta’lim, pedagogik yondashuv, barqaror rivojlanish, ekologik madaniyat.

Аннотация: данная тема направлена на раскрытие педагогического значения объяснения студентам вопросов, связанных с водными ресурсами. В ней анализируются роль водных ресурсов в жизни общества, экологические проблемы, необходимость рационального использования воды, а также эффективные способы передачи этих знаний в образовательном процессе. Обосновывается значение педагогических подходов в формировании экологической культуры, ответственности и понимания принципов устойчивого развития у студентов. Научно объясняется эффективность использования интерактивных методов, практических занятий и современных педагогических технологий при обучении водной тематике. Такой подход способствует расширению экологического мышления студентов и формированию у них бережного отношения к окружающей среде.

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Ключевые слова: водные ресурсы, экологическое образование, педагогический подход, устойчивое развитие, экологическая культура

Annotation: this topic is aimed at highlighting the pedagogical significance of teaching water-related issues to students. It analyzes the role of water resources in society, environmental challenges, and the importance of rational water use, as well as effective ways of delivering this knowledge in the educational process. The study also substantiates the role of pedagogical approaches in developing ecological culture, responsibility, and awareness of sustainable development among students. The effectiveness of teaching water-related issues through interactive methods, practical activities, and modern educational technologies is scientifically explained. This approach contributes to expanding students’ ecological thinking and encourages them to protect the environment.

Keywords: water resources, environmental education, pedagogical approach, sustainable development, ecological culture.

Today, as a result of climate change, globalization and desertification processes that continue on a global scale, the threat of water scarcity is becoming increasingly serious. Because water is a source of life, the existence of the world and the living conditions of living beings are also beautiful thanks to water. Every student should know this well.

Therefore, in this regard, it is of great importance to explain to students the ideas of the President of the Republic of Uzbekistan Shavkat Mirziyoyev, in his speech at the 80th session of the UN General Assembly on September 23, 2025, “Another important problem is the scarcity of water resources. Currently, more than two billion of the world's population do not have access to clean drinking water. We plan to hold a World Water Forum in our country. Based on the results of this conference, it is planned to identify the water crisis as a serious threat to sustainable development. In this regard, we intend to adopt a separate “road map” for the introduction of innovative technologies at the global level.”¹

¹ Ўзбекистон Республикаси Президенти Шавкат Мирзиёевнинг Бирлашган Миллатлар Ташкилоти Бош Ассамблеясининг 80-сессиясидаги нутқи. <https://president.uz/uz/lists/view/8525>

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Students should also be aware that 2.1 billion people on our planet live in homes without access to water, that a quarter of the world's schools are not connected to a clean drinking water source and that children are deprived of their right to safe water, that every day about 700 children die worldwide due to drinking unsafe and unsanitary water, that 80 percent of the world's users of unsafe water live in rural areas, and that 159 million people worldwide collect drinking water from springs and other natural sources for consumption and household use. Therefore, they should understand that by 2030, at least 700 million people will be forced to migrate to other areas due to water shortages.

Today, under the call for water conservation, it has become a tradition to celebrate World Water Day, and over the years, slogans such as "Is there enough water in the world?", "Water resources for the future", "Nature and water", "The value of water" have been chosen. Therefore, people should live with the understanding that water is not only the most important resource, but also a right inherent in all aspects of life.

On World Water Day, everyone should come together and focus on important issues to achieve peace and a more sustainable and prosperous tomorrow.

Today, all people on earth are called to be part of the global campaign “Water for Peace”. It is necessary for every person and family, from companies and governments, to cooperate, unite as much as possible and be like-minded to pave the way for a more harmonious society. The UN is publishing key information to encourage people to participate in World Water Day, learn more about the connection between water and peace, call on people to use water wisely, and appreciate this great gift, which encourages students and young people to use water resources wisely and protect it.

What is noteworthy is that, according to analytical data from international organizations such as the UN and the World Bank, the population of Central Asia is expected to exceed 100 million by 2050². At the same time, Uzbekistan is recognized as the country with the largest population (about 50 million people). The increase in the population also increases the need for water resources. According to the Ministry of Water Resources of the Republic of Uzbekistan, 80 percent of water resources in

² Кенжаев А. Сув – бу бир халқ ёки миллатнинг бойлиги эмас. <https://xs.uz/uzkr/post/cuv-bu-bir-khalq-yoki-millatning-bojligi-emas#>:

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Uzbekistan come from the territories of other countries, 20 percent are produced in the country. Analyses show that it is extremely important for our students to know that by 2030, Uzbekistan may face a water shortage of 7 billion cubic meters³.

Today's conditions related to water resources and the challenges expected in the future require the establishment of effective state governance in the field of water use in Uzbekistan. This requires the implementation of organizational and legal measures, the formation of a mass culture on the rational use of water, and the conduct of mutually beneficial water diplomacy with Uzbekistan's neighboring countries. Because these ideas awaken in students and young people thoughtful thoughts for the rational use and protection of water resources.

According to the World Health Organization, today, 50-100 liters of water are needed per person per day for their needs, and according to the data of Uzsuvtaminot JSC, this figure in Uzbekistan is an average of 99.2 liters per person per day. This figure looks like this in the following regions of the world: 500 liters in Saudi Arabia; 450 liters in the USA; 340 liters in Canada; 320 liters in Japan; 250 liters in the Russian Federation; in Western Europe, due to the high cost of water supply services, it varies from 130 to 180 liters; in rural areas of Africa, 10-20 liters⁴.

In this sense, our students should also learn the essence of the new laws. In particular, the Water Code of the Republic of Uzbekistan was prepared based on this need and is being implemented in practice, approved by the Law of the Republic of Uzbekistan No. ZUR-1076 dated July 30, 2025. Each of our students should know that this code combines the norms of 8 decrees and 14 resolutions of the President of the Republic of Uzbekistan and 26 resolutions of the Government, and as a result, a systematized comprehensive code was created.

It is appropriate for students and young people to apply in their activities with great prudence the fact that the main tasks of the **Water Code**⁵ are to sustainably provide the population, economic

³ 2030 йилга бориб Ўзбекистонга 7 миллиард куб метр сув етишмайди-Сув хўжалиги вазирлиги. <https://kun.uz/kr/38806395>
⁴ Кенжаев А. Сув-бу бир халқ ёки миллатнинг бойлиги эмас. <https://xs.uz/uzkr/post/cuv-bu-bir-khalq-yoki-millatning-bojligi-emas#>:
⁵ Ўзбекистон Республикасининг Сув кодекси. Қонунчилик маълумотлари миллий базаси, 30.07.2025 й., 03/25/1076/0672-сон

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sectors and ecological systems with water, to manage water rationally taking into account climate change, to protect water from pollution, contamination and depletion, to prevent the harmful effects of water, to develop economic mechanisms in the field of water relations, including public-private partnerships, to protect the rights and legitimate interests of all in the field of water relations, and to develop interstate cooperation in this field.

Our students and young people should also know that the state policy of Uzbekistan in the field of water use is being adapted to modern conditions and requirements, and that since the first years of Uzbekistan's independence, water use issues have been identified as an important direction of state policy and are of international importance. In this regard, students and young people should understand that on the international scale, our country pursues an independent policy as a member state that has ratified the 1992 UN Convention on the Protection and Use of Transboundary Watercourses and International Lakes (entered into force in Uzbekistan in 2007) and the 1997 Convention on the Right to Use International Watercourses without Navigation (entered into force in Uzbekistan in 2014).

In particular, it is advisable for our students to know the essence of the Resolution of the President of the Republic of Uzbekistan dated February 5, 2026 No. 47 “On Additional Measures to Increase the Efficiency of Water Resources Use” on the rational use and protection of water resources, and to be well aware of the following procedure for state support for the introduction of water-saving technologies in the production of agricultural products. In particular, they should know that starting from 2027, the tax rate and subsidies for the use of water resources will be determined annually based on the water supply status of irrigated land areas, the requirements for the introduction of water-saving technologies on irrigated land areas located in areas with unstable water supply, and the application of a 2-fold increased tax rate for the use of water resources if water-saving technologies are not introduced on irrigated land areas located in areas with stable water supply.

In general, the adoption of such legal documents in our country, the practical application of the reforms to be implemented in the future regarding the management and rational use of water resources as a modern legal basis will help students and young people to increase their knowledge in this field.

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Our students should know in their activities that the strategic programs adopted in our country and the practical measures being implemented have turned water use issues into a separate, important direction of state policy. It is very important that our young students know and explain that it is appropriate to pay attention to the following main issues in order to further increase the efficiency of water resources use in the future:

firstly, to include specific cases of unreasonable use of water resources in the legislation and to eliminate shortcomings in the practice of law enforcement that do not allow to prevent them;

Secondly, it is necessary to carry out propaganda work aimed at improving the culture of rational use of water among the population, and to explain to the population and young people, in the words of our Head of State, the idea that "water is not free," and to instill it in their minds.

In their activities, our students should remember that foreign experience in the efficient use of water is based on advanced technologies (drip irrigation, recycling) and strict management systems, and countries such as Israel, Turkey, and the USA are reducing water scarcity by introducing water saving, digital management, and water taxation systems. Because in this matter, our students should also know the main aspects of the experience of foreign countries: For example, Israel is a world leader in drip irrigation and wastewater recycling and reuse in agriculture, while Turkey effectively uses water user associations in managing water resources in agriculture. In the USA and Europe, tax and payment systems for water use have been introduced, which encourages consumers to save money. In terms of digitalization, modern IOT (Internet of Things) sensors and automatic systems are used to account for and manage water distribution. It is very important for our students to know that these experiments will be of great importance in increasing the efficiency of resource management in conditions of water scarcity. It will also help our students to know that artificial intelligence is developing rapidly in the Netherlands, that the country is paying great attention to promoting AI research and innovation and ensuring the responsible use of technology, that automatic flood risk forecasting systems are controlled by Artificial Intelligence, and that the efficiency of water management systems has increased by 40 percent.

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In short, our students should realize that it is time to fight against waste and waste in water use, and to take measures to urgently apply modern technologies and use advanced modern experience in water conservation, so that every student, farmer, and citizen understands that water is no longer free and must use it effectively. This will serve to increase the pedagogical and environmental-legal knowledge of our students regarding the rational use and protection of water resources.

Referends:

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