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METHODOLOGICAL POSSIBILITIES OF DEVELOPING ENVIRONMENTAL COMPETENCE OF STUDENTS BASED ON THE NATURAL-SCIENTIFIC VIEWS OF MEDIEVAL EASTERN SCHOLARS

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Abstract:

This article analyzes the issues of developing environmental competence of students based on the natural-scientific views of medieval scholars of the East and describes methodological possibilities.

Keywords: competence, ecological education and training, ecological competence, competence, pedagogical, methodical, oriental sciences.

INTRODUCTION. The educational values created by Eastern thinkers in the Middle Ages serve to form the young generation as mature and well-rounded individuals in all respects, to provide them with the right education, because in their teachings, human manners, morals, faith The issues of faith, conscience, freedom, family and child education have not lost their theoretical and practical importance. Even today, their didactic works make a great contribution to the education of young people [1]. Also, to inculcate in the minds of the young generation the ideals of good human education, such as scientific knowledge, patriotism, freedom, humanitarianism, hard work, faith, honesty, moral purity, justice, brotherhood, superstition, which are the main place in their educational and moral views. has important didactic value.

LITERATURE ANALYSIS AND METHODS. Al-Khorazmi, Ahmad ibn Muhammad al-Farghani, Abu Nasir Farabi, Abu Rayhan Beruni, Abu Ali ibn Sina and Umar Khayyam, Mahmud al-Zamakhshari, Mahmud Chagmini and Amir Timur's ecological thoughts and ideas In essence, the state of the environment at the time they lived has served as an important guide for generations for centuries.

Using the complex of ecological thoughts of thinkers, the content of the series of pedagogic sciences: solving the problems of family and child education in the family based on the curriculum of "Family pedagogy" science; "History of the development of social pedagogy in Uzbekistan" based on the curriculum of the subject "Social pedagogy"; "The idea of value and its development in national philosophy" in the curriculum of "pedagogical axiology"; Ecological scientific views in providing environmental education to students of non-ecological education fields in highlighting the essence of topics such as "Essence and content of the educational process", "Spiritual and moral education" in the "General pedagogy" curriculum taught in all directions Pedagogical opportunities were determined based on the optimization of the content of environmental education technologies related to historical heritage, national traditions, environmental laws.

RESULTS AND DISCUSSION. In ancient times, in the examples of folk art, in the first lithographs, and in the natural-scientific views that were formed later, very valuable ideas about the conscious attitude of man to nature can be found. For example, ancient legends such as "The Creation of the Universe and Man" are embedded in the essence of the harmony of man and nature, and the responsibility of man to protect nature.

Despite the fact that the elements of primitive syncretism that have reached our time are preserved in the most ancient legends, fairy tales, legends, and narratives, their pedagogical meaning is still an important didactic one in the spiritual-ethical, aesthetic and ecological education of a person. is important. These include the legend about "Swallow is a friend of man", "Fable about lame crane", myth about the origin of Turkish people from wolf (nature) and others. Even if the system of moral and religious teachings, science of natural science, and specialized arts were not fully formed at the time of creation of these myths, they included ecological, religious, philosophical, ethical, and worldview elements in a fragmentary, discrete, spontaneous and simple way. and embodied in himself. The first examples of views on natural science were directed not only to the development of the scientific thinking and spiritual world of man, to satisfy his aesthetic needs, but also performed an important social function of forming an ecological worldview.

The development of ecological thinking and way of thinking is also important in the development of students' ecological competence based on the natural-scientific views of medieval scholars of the East. The ecological way of thinking of each person is inextricably linked to the natural and geographical conditions of the region where he lives, the way of life and the worldview of the people of the existing society about nature and their relationship to it.

Aristotle's teaching occupies a special place in the history of views on the role of ecological thinking in the life of man and society. According to him. "Nature has given man intellectual and moral power, but he can also use this weapon in the opposite direction. Therefore, a person without moral guarantees is the most apostate and wild creature" [2]. From this opinion of the thinker, it can be understood that the need for means that eliminate evil in human nature is important. Later, Abu Nasr Farabi, who deserved the title of "Second teacher" in the East, developed Aristotle's ideas and expressed valuable thoughts about understanding nature and studying the environment in his works.

During the historical development, the study of natural-scientific views expressing universal ideas has been encouraging students to develop their ecological competence and to love and preserve nature. In particular, it is a historical fact that the natural-scientific heritage of the ecological theme, which expressed the worldview of the great thinkers who grew up in Central Asia, made a great contribution to the development of the global ecological spiritual thinking.

Especially hundreds of Eastern thinkers such as Mahmud Koshgari, Abu Ali ibn Sina, Nasir Khisrav, Ahmed Yassavi, Yusuf Khos Hajib, Omar Khayyam, Abdurrahman Jami, Lutfi, Alisher Navai, Babur, Mashrab, Makhmur, Gulkhani, Muqimi, Furqat and Aghahi. Our opinion is evidenced by the recognition of deep ecological teachings in his natural-scientific works as the spiritual heritage of mankind. In particular, in Ibn Sina's works "Poems and medical epic", "Risolai ishq", the poetic language of the hygienic culture and the functions of the human body had the potential to have a strong emotional and spiritual impact.

Jalaluddin Rumi wrote in his poem "The Flute's Song" that if the harmony between the elements of nature is disturbed, chaos will arise: . Rumi noted that human existence, life, joy, and pleasure in this world are shared and integrated with the existence and beauty of nature.

In prose works and poems of Abu Ali ibn Sina, such as "Tair", "Solomon and Ibsol", he expressed the ideas of preserving nature, being kind, not harming creatures and plants. For example, in "Solomon and Ibsol", a white deer saves the unconscious Ibsol from death. The fact that Ibsol found goodness that he did not see in a human being from a speechless animal helps the reader to develop deep scientific observations and feelings of love for nature.

In fact, the ecological moral education school of the peoples of Central Asia goes back to Zoroastrianism before our era. From this point of view, the sacred book of Zoroastrian religion "Avesta" is the first evolutionary basis of the ecological knowledge and education of the peoples of Central Asia. It still retains its practical value in terms of not spoiling nature, protecting the environment, personal cleanliness, hygiene, health, and tasks to be done in order to maintain the natural balance of society. At the present time, when the fight against pollution of the environment and the discharge of various effluents into drinking water sources has intensified, the thoughts on ecology in "Avesta" have a great theoretical and practical, literary and educational value [5].

The importance of studying the values of "Avesta" in the development of students' ecological competence is that the elegant aspects of the existence of nature, colorful similes in it give a person unlimited aesthetic pleasure and familiarize the soul with the nature of the Mother Earth. For example, a well-cultivated fertile land is likened to a wife who gave birth to her husband sooner. The new trend of Zoroastrianism The antiquity of monism is a unique direction in Turkish literature, in "Huastuanift" (Repentance of the Monians) and poems in the spirit of monism [4], in the doctrine of Mazdak [3] suffering to animals giving, killing is considered a grave sin, and the idea of turning students away from such heinous evils and calling them to goodness is embodied.

So, over time, ecological echo of natural-scientific ideas aimed at countering the negative influence of man on nature has found its expression in various topics and genres. In this respect, the science of natural science, in the process of performing an important social function as a convenient tool for creating and instilling ecological ideas aimed at the protection of a stable natural environment in the life of society, has perfected the scope of didactic and educational influence in accordance with the spirit of the time. .

The natural-scientific views of Khorezmi, a major representative of medieval Eastern scholars, especially his invaluable work "Zij", are important in the development of students' ecological competence. Khorezmi's astronomical work "Zij" consists of 37 chapters and 116 tables. The first five chapters of the work are devoted to chronology, and the rules for transferring dates from the eras of "flood", "Iskandar", "Safar" and the Christian era to the Hijri era are given. Chapter 6 describes the division of a circle into 12 signs, a sign into 30 degrees, a degree into 60 minutes, a

minute into 60 seconds, etc. Chapters 7-22 deal with the motions of the Sun, the Moon, and the five planets. In these chapters, Khorezmi skillfully used ancient and early medieval Indian astronomical data, Iranian and Greek data, based on Ptolemy's geocentric system, and explained the movement of the planets. Chapter 23 is devoted to trigonometry, in which Khorezmi introduces the concepts of "plane" and "reflected sine" and gives tables of these functions. Chapters 25-27 are devoted to mathematical geography. Here are the rules for determining the longitude and latitude of geographical places, and it is shown that the change of these coordinates is related to the change of the ecliptic, equatorial coordinates in the annual, day-night movement of the sun.

Also, the coordinates of 2402 geographical places in cities, mountains, seas, islands and rivers are given in this work. Cities, rivers, mountains, islands and other objects are divided by climate. The word climate actually comes from the Greek word klima - "deviation", which was introduced into science by Hipparchus. Hipparchus divided the inhabited part of the Earth into 12 climates. After that, Ptolemy reduces the number of climates to 8, but in his "Geography" he does not fully adhere to the theory of climates, since he divides geographical areas into regions and dioceses. Geography was described for the first time by Khorezmi, fully adhering to the theory of climates. He divides the administrative, that is, the prosperous part of the earth where people live, into seven climates. Unlike the ancient Greek scholar Ptolemy, Khorezm describes not regions, countries and geographical locations within them, but places from the first to the seventh climate.

Khorezm, like Ptolemy, calculates the longitudes starting from the Capar Islands. It has 8 cities south of the equator, 64 cities in climate 1, 54 cities in climate 2, 59 cities in climate 3, 146 cities in climate 4, 79 cities in climate 5, 63 cities in climate 6, 25 cities in climate 7 and 7 gives the coordinates of 40 cities north of climate. The second chapter of the treatise describes the mountains in the climates. The coordinates of the beginning and end of the mountains are given. Khorezmi describes the mountains of the Near and Middle East and the Caucasus and Central Asia in detail, as well as the cities there. In the third chapter of the treatise, Khorezm describes the seas, in the fourth chapter the coastlines of the islands and their points, in the fifth chapter the countries, and in the sixth chapter the rivers and springs.

CONCLUSION. It is desirable to study the influence of the natural-scientific views of Eastern scholars on the development of ecological knowledge and skills, the alternative directions of the spiritual-enlightenment sciences in general, and the natural-scientific worldviews in particular, in the context of ecological goals, on the basis of comparative analysis. Because at the core of the analysis of ecological themes in the views of thinkers lies the scientific knowledge of the epistemological roots, categories, development trends of human ecological existence and the theoretical-methodological justification of their pedagogical and didactic functions. Based on this goal, development of environmental competence of students on the basis of the natural and scientific views of medieval Eastern scholars is of great practical importance. Acquaintance with such information, study of the natural-scientific views of the scholars of the Middle Ages, along with the development of the natural-scientific outlook of the students, will also develop their ecological knowledge and skills.

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