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Al-Farabi's creative heritage and his scientific-pedagogical ideas

Introduction. The study of Al-Farabi's pedagogical heritage is relevant, since it allows forming a scientific idea of the level of progressive experience in teaching and upbringing in the conditions of the early Middle Ages, in the era of the flourishing and rise of culture in the East.

Research purpose is to consider Al-Farabi's creative heritage and give an overview of his scientific-pedagogical ideas.

Materials and methods. The authors used Al-Farabi's treatises, reflecting his pedagogical ideas, as well as the works of modern teachers, historians and philosophers. Research methods: analysis, synthesis and historical-pedagogical interpretation of the data contained in the sources; systematization and generalization of materials obtained as a result of studying open Internet sources and modern scientific literature.

Research results. Despite the fact that Al-Farabi's ideas were based on the works by Plato and Aristotle on the cognizability of the world, the scholar has developed original applications of this theory in relation to the needs of that time, taking into account the state religious policy. According to the thinker, the ideal of upbringing and education includes the mastery of scientific knowledge, moral and aesthetic perfection of both the student and the teacher. The rules proposed by Al-Farabi asserted the social significance of teaching and upbringing based on mutual respect of teachers and students. The educational system and teaching methods proposed by Al-Farabi made it possible to activate the students' creative and cognitive activity, contributed to the development of logical thinking and comprehension of the information they receive.

Discussion and conclusion. The study and analysis of Al-Farabi's treatises show that the thinker considered all aspects of the educational process: educational goal, learning content, teaching methods and tools, the duties of the student and the teacher. The thinker's entire creative heritage is imbued with the ideas of humanizing and democratizing society through its improvement by upbringing and educational tools.

Keywords: Al-Farabi, scholar's views, teaching methods, educational goals, learning content

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Introduction

In 2020, under the auspices of UNESCO, the 1150th Anniversary of the great thinker, philosopher of the East Abu Nasr Al-Farabi was celebrated, which gave a powerful impetus to the study of the heritage of this great scholar, comprehension of his works in the development of world civilization.

The modern trend towards the internationalization of scientific knowledge, the formation of new thinking make it necessary to study the contribution of each nation, including the Arab one, to the development of human civilization in general and to the world historical-pedagogical process in particular.

Abu Nasr Muhammad ibn Muhammad Al-Farabi (870–950, born on the territory of modern Kazakhstan) was a philosopher, polymath, one of the main representatives of Eastern Aristotelianism. Among the prominent representatives of this school were Ibn Sina (Avicenna) and Ibn Rushd (Averroes). In Muslim literature, Al-Farabi was called "the Second Teacher" after successful comments on the works of Aristotle ("the First Teacher") and Plato.

Unfortunately, Al-Farabi's biographical data is very little. It is known that he was born in 870 in the city of Otrar and came from the privileged strata of the Turkic tribe. Personal development and self-education allowed the future scholar to master many sciences. He was interested in philosophy, mathematics, music theory, logic, medicine. Al-Farabi spoke Arabic, Persian, Greek, Syriac and other languages.

The Golden Age of Islam (a historical period from about the middle of the VIII century to the middle of the XIII century, at the beginning of which the Arab Caliphate was the largest state of its time) had a significant impact on the thinking of the scholar, in whose works there is a refraction of ancient traditions and Aristotelian ideas under the influence of Islam. Al-Farabi's works are valuable due to the fact that he is not limited only to Aristotle's formal schemes, he pays attention to the elements of dialectics, insists that the foundation of the logic of cognition is the connection with the outside world through the senses.

Al-Farabi's activities developed within a broader cultural region, which may be called Arabic-speaking in its external form. Al-Farabi's impact on the subsequent development of culture, including the culture of the peoples of the East, Central Asia, Kazakhstan, was multifaceted and long-lasting.

Thus, the study of Al-Farabi's pedagogical heritage is relevant, since it makes it possible to form a scientific idea of the level of progressive educational experience in the Arab Caliphate in the conditions of the early Middle Ages, in the era of the flourishing and rise of culture in this region.

Research purpose is to consider Al-Farabi's creative heritage and give an overview of the scientific-pedagogical ideas of the ancient thinker.

Materials and methods

The following literary sources were used in the research process: Al-Farabi's treatises reflecting his pedagogical ideas ("Politics", "Finding Happiness", "Views of the Inhabitants of a Virtuous City", "Indication of Ways to Achieve Happiness", etc.); works of teachers,

historians, philosophers; comparative studies of the views of Al-Farabi and other outstanding teachers.

The above treatises contain the scholar's thoughts about the essence of man and the ways of his formation and development, about learning objectives, content and tools, about the relationship between the educator and students and a number of other problems that are most directly related to pedagogy.

The following research methods were used: analysis, synthesis and historical-pedagogical interpretation of the data contained in the sources; a comparative historical method, which allows one to compare and contrast historical-pedagogical facts, to reveal the general and the particular in them; systematization and generalization of materials obtained as a result of studying open Internet sources and modern scientific literature.

Review of the sources

The works of many Russian, Kazakh, Arab and other foreign authors are devoted to the study of Al-Farabi's creative heritage.

The medieval scholar is known to a greater extent as a philosopher, therefore the bulk of the works of Russian authors is devoted to the study of his philosophical heritage. However, in the works of these authors, Al-Farabi's pedagogical views are only partially covered.

Certain problems of the rich pedagogical heritage are reflected in the work of the Soviet author Kh.Kh. Tllashev [23]. The first attempt to generalize Al-Farabi's pedagogical ideas was made by A. Kubesov [16]. In his research devoted to the analysis of Al-Farabi's works, the author pays great attention to the presentation of the thinker's philosophical, social views, develops the didactic provisions of the philosopher's pedagogical concept.

Al-Farabi's theoretical heritage has been studied in world science mainly by philosophers and historians. In the Arab scientific literature, there are no works specifically devoted to the thinker's pedagogical heritage.

Al-Farabi's ideas about mental, moral, aesthetic and labor education were systematically and holistically studied by Al Jindi Naziha Ahmad in his thesis "The Pedagogical Ideas of Abu Nasr Al-Farabi". The author of the work traces the impact of Al-Farabi's pedagogical ideas on subsequent thinkers and shows the importance of the scholar's pedagogical heritage for solving today's issues of education and upbringing [3].

Al-Farabi left a rich theoretical heritage in many fields of knowledge, including on the upbringing of the younger generation.

First, it is necessary to mention the scholar's classification of sciences, in which he distinguishes the pedagogical sciences. Al-Farabi's classification of sciences is as follows: syllogistic (philosophy, dialectics, rhetoric, etc.) [20] and non-syllogistic (medicine, agriculture, carpentry, etc.) scientific knowledge; specific and abstract; theoretical (mathematics [13], physics, etc.) and practical, civil sciences (ethics, politics). The so-called science of the city-state implies addressing the issues of state administration, ethics and education.

Various branches of science are analyzed by scientists in interrelation. Each science studies a certain side of material objects and their qualities, and in the aggregate, they reflect existence as a whole. For example, the main reason for the emergence of arithmetic

was the fact that a substance can be divided in many ways and contains different parts, and when determining the origin of astronomy – that the substance is inherently mobile and has three types of motion.

The scholar divides all the considered sciences into pedagogical, natural sciences and "divine science". The science of number, the science of measurement, the science of the stars (astronomy), the science of music – these are pedagogical, educational sciences. These four sciences are called educational, since they educate a student, make him more insightful and show him a direct path for learning the sciences that follow them [2].

According to Al-Farabi, if a person does not have high moral qualities and virtues, he cannot achieve noticeable success in science. Studying science helps to fight against people's base passions, to overcome the negative phenomena in society. Therefore, "knowledge and good morals", or science and education, are closely interconnected. According to Al-Farabi, those who do not have good morals are not educated, and even if they achieve some results, they look pitiful and ridiculous. Therefore, it is necessary to demand that they exert efforts to master the virtues.

The thinker attached great importance to the moral qualities of scientists. He urged them to be sincere, not to allow greed, since their works have both theoretical and educational values. In his opinion, a real scientist is a "true or perfect philosopher" who should be useful to the people with his knowledge and be a role model for moral imitation. A scientist should organically combine scientific maturity and high moral qualities.

A person who has reached the highest degree of humanity and may become an imam, i.e. the ruler of a virtuous city (state), due to his intelligence, must be a perfect philosopher and prophet at the same time [13].

Research results

Educational goals

Despite the fact that in Al-Farabi's works there are no essays specifically devoted to education, individual concepts in the aggregate make it possible to capture a single philosophical view, the worldview of the thinker.

According to the scholar, education is one of the most important social phenomena. Educational activity is the acquisition of values, knowledge and practical skills. The educational goal is to guide a person towards excellence, since man was created for this. The existence of humanity in this world is aimed at finding happiness, which is an absolute good and the highest perfection [18].

According to Al-Farabi, a perfect person has virtue, intellectual knowledge and practical moral values. Becoming perfect in his moral behavior, a person becomes a role model among other people.

In Al-Farabi's opinion, another educational goal is "mastery in the arts", and a person who is well versed in the arts and achieves perfection in them can be considered wise [4].

According to Al-Farabi, one of the educational goals is to combine learning with practical action, since the purpose of knowledge is its practical application, and perfection lies in its being transformed into action [8].

Thus, speaking about humane goals of upbringing and human destiny, Al-Farabi relied on the ideas of Plato and Aristotle about the cognizability of the world. Al-Farabi worked on applying this theory to the needs of that time, taking into account the state religious policy.

Requirements for teachers and students

The study of Al-Farabi's treatises showed that, according to the thinker, the ideal of upbringing and education includes the mastery of scientific knowledge, moral and aesthetic perfection of both the student and the teacher.

In the Islamic upbringing of that time, the teacher occupied a special place in the life of society. A teacher was required to have a good knowledge of the Arabic language, excellence in reading, writing and interpreting the Quran, the ability to write, knowledge of Islamic law, etc. However, according to Al-Farabi, these qualities are not enough for a teacher. He argued that the social position of a teacher should be determined by his professional level. A teacher should know the basics of pedagogy, explain and interpret poetry and music. But the main task of a teacher is to educate the younger generation and instill respect for moral values in students. All this should be based not on unquestioning obedience to the will of Allah, but on the education of reason, morality, skills and will. Therefore, for the successful fulfillment of his duties, a teacher should have pedagogical talent, intelligence and a variety of talents.

Al-Farabi believed that a teacher should be a highly moral, virtuous person, free from desires and striving for the truth [7]. Also, a teacher should master the basics of his art (subject) and its methods, as well as methods of persuasion, visual methods.

Al-Farabi correlated the functions of a teacher with the functions of a wise ruler of a state or city, since a teacher is responsible for the upbringing of the younger generation, on which the well-being of society depends. The correlation of the functions of a teacher and a ruler of a city indicates the important role played by a teacher in Al-Farabi's pedagogical ideas.

The scholar presented the following requirements to students: they must understand the meaning of concepts; accept the existence of what they have realized; be able to describe what they understood. Also, students must show a desire to learn and not be allowed to be distracted from classes [12]. Students are obliged to respect and honor their mentors, to avoid critical situations in communication with them. The rules proposed by Al-Farabi asserted the social significance of teaching and upbringing, based on the mutual respect of teachers and students.

Learning content

According to Al-Farabi, learning should begin with learning the native language, studying grammar, in order to express one's thoughts and understand others. Mastering the language is the basis for obtaining further knowledge.

Then comes the logic that underlies all sciences and is used as one of their main tools [1]. This is followed by mathematics, which was considered by Al-Farabi as an important step in the hierarchy of theoretical sciences. Studying optics, astronomy and natural sciences requires knowledge of mathematics, and arithmetic is one of the main tools.

The exact sciences are followed by theology or metaphysics, then the humanities (political science), jurisprudence, law and academic theology.

Al-Farabi did not include medicine in the number of sciences, but he mentioned it in many of his works, calling it either a science or an art.

Al-Farabi considered philosophy to be the highest form of cognition, due to which a student's soul "rises" up to the level of a rational human being. Mathematics, ethics, natural sciences, history should precede the study of philosophy, but Al-Farabi does not give preference to any of these subjects. Ultimately, Al-Farabi points to the intellectual, moral and religious qualities that a student studying philosophy should have.

Teaching methods and tools

Al-Farabi paid great attention to verbal and visual teaching methods, i.e. direct placement of an object (or a geometric figure on a blackboard) before the students' eyes, its definition, an explanation of specific and general characteristics, as well as a description of its unusual features, and recommended using analogies, metaphors, etc. In his opinion, all these methods contribute to both understanding and memorization [5].

For example, the study of astronomy is possible only with the tools to observe the heavenly bodies, the study of music – with musical instruments and prolonged listening. According to the scholar, medicine uses the principles of natural sciences; therefore it is studied on the basis of sensory experience acquired through anatomy [6].

Al-Farabi also used dialogue methods: the method of argumentation and the method of discourse. The scholar believed that when communicating with ordinary people, it is necessary to use methods that are closest to their abilities.

The purpose of dialogue methods is to convince in statements that do not require precise evidence, and the purpose of the visual method is to convey accurate knowledge based on reliable evidence. The debate method was used for stubborn people to get the opponent to believe the truth of his statement, although it is not necessarily like that.

Al-Farabi also uses the method of learning, which he defined as the frequent repetition of a certain action at short intervals over a long period of time.

Learning is carried out through a belief, which is fixed in them so that students voluntarily perform certain actions. Coercion is used in relation to disobedient students who are not inclined to do what is right on their own.

Al-Farabi also mentions a memorization method (for example, memorizing a language, Quran, songs, etc.). However, the scholar believed that understanding is better than memorization.

Al-Farabi considered it important to use brain-building games in educational activities, and the games should have serious goals. In his opinion, a game overcomes fatigue and restores strength necessary for learning, but it (game) should be moderately used, like salt in food.

Al-Farabi does not specify the methods of encouragement and punishment, but only points out in general terms that a teacher should not be either too harsh or overly lenient, but the scholar considers physical punishments more effective than psychological ones (intimidation, commination, etc.).

However, the thinker frequently proposed to abandon all types of physical punishment, i.e. not punish, but encourage and reward children. According to Al-Farabi, the methods of correcting a child can be moralizing conversations and methods of persuasion.

Discussion

Thus, the education system and teaching methods proposed by Al-Farabi made it possible to activate the students' creative and cognitive activity, contributed to the development of logical thinking and comprehension of the information they receive. This approach was significantly more progressive in comparison with the school practice of the Arab Caliphate.

The study of Al-Farabi's treatises made it possible to draw the following conclusion: happiness is not only an ethical, but also a pedagogical category. In this sense, it is important to note Al-Farabi's conviction that knowledge is acquired not only through self-education, but through its special organization [14].

In Al-Farabi's ideas, there are "seeds" of one of the key principles of social pedagogy – conformity to nature. It means that in the framework of practical activities a teacher should primarily pay attention to the natural factors of a child's development.

Al-Farabi's logic is based on the fact that if a person has certain innate "natural" abilities, teaching methods for different categories of citizens should be different. Teaching those destined to become part of the "elite", as opposed to the "general public", should use visual teaching methods, not verbal ones (beliefs, descriptions, etc.).

It should be noted that the "elite" as the ruling class is fundamentally different from the feudal class of that time. Belonging to the elite is determined by personal abilities, which cannot be acquired, but is laid down to a certain extent at the genetic level. The ability for intellectual activity is often determined by human heredity, which develops over many generations.

However, there is a risk: as the new upper class absorbs especially worthy representatives of other strata of society, the potential of those who remain will decline. Reverse migration is difficult, since the acquired knowledge can only be improved, while it cannot actually be lost. "Ordinary people" have no chance of joining a higher social group, since the optimal opportunities for getting a modern education are provided in childhood, and not when a person realizes that he is insufficiently educated.

Conclusion

Al-Farabi's creative heritage is the most important component of the pedagogical thought of the Near and Middle East in the early Middle Ages. The study and analysis of Al-Farabi's treatises show that the thinker considered all aspects of the educational process: the activities of the teacher and students, teaching methods and tools, etc.

The whole range of philosophical issues – society, man, man's knowledge of the environment – turns out to be the organic basis of the thinker's pedagogical concept, the basis for his interpretation of educational goals and objectives.

An educated teacher is the main link in the educational process. A teacher can get a proper education only through special training. Understanding of the origin and cognition

of the world will allow a teacher, educator to master the necessary knowledge, penetrate into the soul of a child and develop methods and techniques to enable the education and upbringing of the younger generation.

The analysis of Al-Farabi's treatises made it possible to reveal the weaknesses of his theory on the role of upbringing, on the role of a teacher in the development of society. Al-Farabi explained the presence of ignorant cities and states by two reasons: the lack of a true educated teacher and the lack of sages, scientists, philosophers. This explanation of social development was evidence of the philosopher's utopianism, his misunderstanding of the laws of social development.

The thinker's entire creative heritage is imbued with the ideas of humanizing and democratizing society by improving it through upbringing and education. Therefore, the study of the pedagogical heritage of this scholar is consistent with the modern requirements for the upbringing of the younger generation.

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