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Al-Mashani and Islamic Philosophy

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ABSTRACT The birth of Kazakhstan was great and worthy. The researchers have analyzed the historical significance of scientific works of al-Mashani in Heritage Research eastern thinkers, as well as his great contribution to the development of Farabi directed science. The scientist had read many books by Nosir Abu al-Farabi, which proved that he was a Kazakh and was born in Otrar, the largest center of the ancient culture of Kazakhstan and Central Asia, which was called Farabi. Akzhan Mashanov was rightly regarded as the first consultant to study the scientific heritage of great ancestors including al-Farabi. His findings which brought back the memories of al-Farabi were noteworthy and commendable. Based on documentary sources, the researchers examined the scientific and pedagogical activities of the thinker. Deep geological knowledge and mastering of fundamentals of physical, and mathematical sciences led Mashanov to the mathematical basis of the processes, occurring in the bowels of the earth. Knowledge in the field of geology, mathematics, geometry, mechanics and mining allowed him to create new scientific direction - "Geomechanics".

INTRODUCTION

One of the brightest representatives of science is an outstanding scientist Akzhan al-Mashani. "As a patriot and a tireless seeker of truth, Akzhan al-Mashani was one of the first Kazakh science to draw attention to the study of the heritage of Abu Nasr al-Farabi, in whom the modern knowledge finds deep roots of Kazakh spiritual culture, its Turkic-Muslim foundations and ideological content" (Abzhanov 2007). Life and work of this outstanding scientist attracted not only historians, but also all thinking people who loved their native history, culture and language. Each of his findings on the study of Heritage of al-Farabi is crucial for the development of literature, history and science of Kazakhstan. In 2006, UNESCO marked 100th year posthumous birthday of this outstanding scientist, and this fact confirmed the popularity and significance of scientific discoveries of Akzhan Zhaksybekovicha Mashanova, not only in Kazakhstan, but also worldwide. He dedicated his life to science and left a rich historical and cultural heritage. The scientist published over 250 scientific papers and 2 monographs. Most of his books were written in the Kazakh language.

Even in Soviet times, Akzhan Mashanov was bright and an extraordinary representative of the first wave of the Kazakh intelligentsia, who were pioneers of Kazakh science. Akzhan Mashanov - Founder of Heritage Studies of the great thinkers of the East Nosir Abu al-Farabi, gave birth to

11 volumes of farabieverdeniyu (Abdiraman 2007). Scientific outlook of Akzhan Zhaksybekovicha Mashanova was not limited to knowledge of farabieverdeniya, but also in other areas of science. He was one of the founders of Kazakh school Geomechanics – mining and metallurgy industry. He made an enormous contribution to the discovery of a large number of mineral deposits, as well as promoted the study of the history of science and scientific knowledge in the field of metallurgy. Throughout his life, he devoted himself to teaching and teaching activities.

Celebration of this outstanding Kazakh scientist, founder of the National School of Rock Mechanics, historian and orientalist, philologist and founder of Kazakh science fiction Akzhan al-Mashani was included in the calendar of anniversaries of UNESCO. The scientists named after one of the streets of Almaty and Natural Humanities, Institute of the Kazakh National Technical University.

One of the pressing problems of Kazakhstan's history of science is on study of the legacy of an outstanding scientist, Akzhan al-Mashani's life and works. Unfortunately, this has not yet been the subject of special study. Until recently the treatment of his works was of a fragmentary character. In the Soviet period, because of ideological dogmas, the legacy of Akzhan al-Mashani did not receive adequate coverage. After independence, the process of restoring historical truth and objective assessment began on the works of prominent figures in science and cul-

ture of Kazakhstan, including scholar al-Mashani. In-depth and systematic study of the scientific heritage of Al-Mashani intensified with the opening of a research center at the Kazakh National Technical University after KI Satpayev. One of the organizers of the center was a disciple of Al-Mashani - Doctor of Education, Professor Abdiraman (2007). He penned a series of books devoted to civilian activities of the great scholar al-Mashani: Akzhan Mashani (2007) and "Mashaninama" (2008).

Modern scientists considered it necessary to examine and implement the main provisions of the teachings of Al-Akzhan Zhaksybekovicha Mashani because his idea will help shape a new generation of young researchers, brought up on the idea of tolerance (Alpysbaeva 2015; Dukenbaeva 2015).

An important event in recognition of creativity al-Mashani was conducted under the auspices of the 2007 International Scientific Conference "Scientific, technical and spiritual values in the legacy of thinkers of the East and A. Mashani". The main outcome of the conference was to identify new areas of research heritage of al-Mashani. In this study, this research attempted to rethink the historical significance of farabievda Akzhan al-Mashani in the context national idea which justified its novelty.

METHODOLOGY

The source of study material for this research was based on the writings of al-Akzhan Mashani, articles and memoirs on his life and work. His works were devoted to the spiritual heritage of al-Farabi, Abai, issues of religion and language, and are of informative and educational value.

The research was carried out by comparing historic, multi-sided analysis, and other top scientific tutorial approaches. A great attention was paid to the worldwide developing science of biography. The scientific heritage of his person was analyzed, as well as his contribution to science and art, while investigating, the development of the whole civilization.

OBSERVATIONS AND DISCUSSION

The history of mankind - as an artistic canvas, which will never be completed, for each age leaves its own unique footprint. The canvas has

light and dark spots; there are mixed colours of the past, present and future, and not everyone can recognize that. There are shades of achievements and discoveries, greatness of spirit, unselfish love, and abnegation merge with field of bloody wars and revolutions. But not everyone can leave his mark on the canvas.

The incredible inner strength factor of historical progress is a factor of personality. Besides and beyond the individual - the person - there is no and cannot be any kind of social development. In this regard, great attention should be paid to life of the scientist, teacher, one of the founders of the National Academy of Sciences of Kazakhstan, the organizer of Education - Akzhan Al Mashani. He was honest and highly decent citizen of his country, a great man of charm and kindness, as he was, and remained until his last days.

In the 1930s, Akzhan al-Mashani actively participated in the activities of people's awareness of Karaganda and Semipalatinsk regions.

His enormous vitality, energy, and kindness created a special high moral atmosphere. These influenced a lot of people who also imbibed sincerity, truthfulness, openness, and infinite goodness as exemplified by this great scientist.

An ancient proverb says: "*Man in life should be lucky in only three cases: from whom he was born, from whom he studied and whom he married. In all other cases he can manage himself*". The researchers think that in all three cases, the fortune was on the side of the great scholar al-Akzhan Mashani.

The personality formation of Akzhan al-Mashani, his development occurred during Soviet era on conditions of rigidly centralized administrative system, which led to his political socialization. Brought up in the spirit of his time, he remained a person of high humane qualities of man. However, the distinguishing features of his character, psychology, warehouse, intelligence and deep education set him apart among other Kazakh scientists.

His name was known in the former Soviet Union, and he was well known throughout Central and East Asia. Therefore, he was a unique individual.

It should be noted that he was a patriot of his nation. He was very fond of his Kazakh nation; service to people was his main credo. Despite the difficulties in opening Al-Farabi, Mashani returned his name to descendants which served as a strong sign of his ingenuity.

Without the liberation of the spirit from the materialistic scantiness, atheistic poison, there can be no independence and economic prosperity. At the head of a spiritual awakening was Akzhan al-Mashani. With his knowledge, fortitude and will, tireless energy, he defined the sanctity of land of Turan, a feature of the Kazakh spirituality. If tens of unpublished books by Mashani became national heritage, then the spiritual world of the Kazakh people would be enriched. If the scientific work of al-Mashani was translated into English, Chinese, Russian, Arabic, Persian and other languages, it would serve as a great contribution to world science. His works would be a beacon for future generations.

Broad scientific outlook and knowledge of Arabic enabled Akzhan Zhaksybekovich to make one of his major cases - the opening of the role of the great scholar, Abu Nasir al-Farabi to the world. Al-Mashani proved that the sources of Culture and Science of Kazakhstan were the works of al-Farabi; thereby the name of this great scientist was ever recorded in the history of science of the Republic of Kazakhstan.

It was difficult raising the issue of the scientific studies of the heritage of Al-Farabi, because in Kazakhstan, there were none of his writings as there were no specialists in Arabic. As a result, Mashanov recalls: *"Despite all this, I started to work at my own risk; in the result of numerous searches I was able to establish where the manuscripts of works Al Farabi are kept... I began to send letters asking to send me a microfilm of these papers. I wrote to London, Paris, Leyden, Berlin, Ankara, Istanbul, Tehran, Cairo, Damascus, Baghdad, Beirut and other cities. These efforts yielded fruit, after 2 years. I had 2 volumes of the works of al-Farabi and the same about him. In 1960 we (me and the library director of KazSSR Akhmetov) wrote a memorandum to the president of KazSSR Satpayev, that it was time to explore the heritage studies of al-Farabi in earnest. He received the memo with great care and sight: "I agree. Implement" (Al-Mashani 2007).*

After spending several years in Kazakhstan, there organized a group to study the heritage of al-Farabi and it began fundamental research works of al-Farabi. At the beginning of exploration of Farabi in Kazakhstan, lots of help and support were provided by Kunayev and academics in the USSR, Gafurov, PhD Grigoryan, and Rosenfeld (Nazarbayev 2001). This marked the

beginning of the whole trend in the Kazakh Science – exploration of Farabi, whose center was the Academy of Sciences, and the Institute of Philosophy and Law became a lead agency that executed, and continued to carry out fundamental research in this area even till today.

In the process of formation of Farabi research, there are two directions: first - to translate works of al-Farabi into Kazakh and Russian, scientific editing, proofreading by a similar translation to other languages and publication in the press, the second - to engage in scientific research encyclopedic heritage of medieval philosopher, and introduction into scientific circulation of his works. Being interrelated, these two trends have contributed to the continued growth of qualified research, and expanded not only space of science, but also educational and outreach activities in our country. The name of Farabi became well known and was identified with the humanist culture, and history of our country. It was closely woven into the context of the revival of spiritual values of the past, and the actualization in connection with modern society's demands.

In the researchers' opinion, the development of Farabi exploration in Kazakhstan can be distinguished into three periods which are:

the initial (1967-1974), when translation and research activities just started out and unfolded to study heritage of al-Farabi;

second period (1975-1990), continued in the whole Marxist-Leninist position beginnings of the first period, and attained significant progress in studying the heritage of the thinker;

the third period (1991 - present) when the research of heritage of Al-Farabi was studied with renewed philosophical and methodological positions, that was possible due to Kazakhstan's independence, and rejection of the ideology of a totalitarian society.

Kazakh Farabi's exploration implemented the learning of the following aspects of heritage as encyclopedic thinker: the logical, social, ethical, political, aesthetic, epistemological, science, math and musicological.

These works were published in reputable monographs and scientific articles and presented at different international scientific conferences and symposia. The main achievement of the expanded research, and scientific-organizational activities of scientists was that the legacy of al-Farabi became a part of the spiritual culture of Kazakhstan. This appeared as the country's na-

tional treasure and symbol of its rich culture. The name of al-Farabi sounded not only from the stand of scientific fora, but also in classrooms. After his name was named after National University, and one of the most beautiful avenues in the city of Almaty, a public charitable foundation was created. It was published in philosophical, political science, spiritual and cognitive magazines "Al-Farabi" etc. Of course, the main initiator of Farabi exploration in Kazakhstan was Akzhan Mashani. He visited many countries around the world, collecting materials about the life, and scientific ways of al-Farabi. In 1968, Akzhan Zhaksybekovich visited the Mosque of the Bab al-Saghir in Damascus, where the tomb of our ancestor is located. It should be noted that he was the first Kazakh who found the tomb of al-Farabi in Damascus, and brought back a handful of earth. A Doctor of Technical Sciences, and also a Professor of Department of "Mine surveying" Nurpeisova recalls: "Akzhan Zhaksybekovich told a lot about that, he said that the inscription on the tomb was not there, he was helped to find it by number" (Al-Mashani 2005 b).

He described in his book "Al-Farabi and Abai" his state of mind and emotions at the time of finding the tomb of the great scientist: "I could not stop my tears... I wrapped a handful of earth from the grave of al-Farabi in a handkerchief, and devoted to him a surah of the Quran" (Al-Mashani 1994). In this book, a prominent scientist was able to show the relationship of creativity of al-Farabi and Abai, who lived in different era.

In addition, his excitement at the last refuge of the philosopher, Akzhan Zhaksybekovich was expressed in his poems, which later were translated by Bekzhanov:

*"I was looking for the grave by months,
From your motherland have come here.
One handful of the sand
Took I from the grave as a talisman.
Oh, mosque-domes of Magauil!
The dust of centuries... How much have you seen?
And still stand somewhere there
The place of holiness Dar As-Alam"* (Al-Mashani 2005 c).

In 1972, Mashanov in the magazine "Al-Farabi", that was issued in Kuwait, published his article "Stars of culture in Central Asia" in the Arabic language (Al-Mashani 1999), where he

reasonably proved his opinion. After that, many experts confirmed that "Mr. al-Mashani is right ... " (Al-Mashani 2005 b). Since that time, it is believed that Akzhan al-Mashani has opened the name of the great scholar al-Farabi to Kazakh people. The new name "al-Mashani" was appropriated to Akzhan Zhaksybekovich by Arab scholars and he liked it. Therefore, he signed up his subsequent books as al-Mashani.

The scientist read many books by Abu Nasir al-Farabi, and proved that he was a Kazakh who was born in Otrar, the largest center of the ancient culture of Kazakhstan and Central Asia, once was named Farab. These facts were discovered while studying the works of the great philosopher, encyclopedic, mathematician and astronomer, Akzhan Mashanov. It was concluded that in the book of German astronomer Johannes Kepler "Music of Heaven", many facts and figures are from the work of al-Farabi, "Kitab al-music al-Kabir" (Mashanov 1964).

Akzhan Mashanov was rightly regarded as the first consultant to study the scientific heritage of great ancestors including al-Farabi. His findings which brought back the memories of al-Farabi were noteworthy and commendable. He was one of the most active initiators and organizers of international scientific conference that was dedicated to the 1100-year anniversary of the thinker, at his hometown in Kazakhstan (Almaty 1978).

In 2001, during the celebration of the anniversary of Al-Farabi in Kazakhstan, the academic was posthumously awarded a prize named after al-Farabi and handed certificate No. 1.

Akzhan Mashanov had written books, scientific and historical works, "Aristotle East", "On studying the heritage of Al-Farabi", "Great scientists of Central Asia and Kazakhstan", "Al-Farabi and Abay", and others.

Turning to issues of scientific studies of the heritage of al-Farabi in the writings of al-Mashani, it should be emphasized as the essential feature of the historical assessment of creativity of the medieval thinker, not so much as a philosopher, but as a representative of the exact and natural sciences. He wrote: "Al-Farabi was familiar with the cultural history for a long time, but mainly as a philosopher. Meanwhile, a large part of his artistic legacy, in my opinion, relates to the natural and mathematical sciences" (Al-Mashani 1995). In this aspect of his research interests he remained to be faithful, by not ignor-

ing the cardinal questions of philosophy, as in the worldview of al-Farabi. They were closely related to natural science issues, and without their solution, it was difficult to comprehend and understand in its entirety as the magnitude of the legacy of the medieval thinker. Al-Mashani was particularly interested in the works of al-Farabi, astronomy, geodesy, geology, mining, metallurgy, physics, mathematics, chemistry, and others. And now, after a certain time, one can rightfully claim that he was, and remains one of the major scholars of his natural-scientific and mathematical perspective.

In his works *"Abu Nasir al-Farabi"*, *"Al-Farabi and modern science"*, *"About works of al-Farabi"* al-Mashani considered creativity of the medieval thinker, in conjunction with the works of ancient philosophers and scientists - Plato and Aristotle, Ptolemy and Pythagoras, and other medieval thinkers - Ibn Sina and al-Biruni, and Ulygbek ibn Rushad, al-Zhauhari and al-Tusi. The consideration was done on the influence of his ideas on the subsequent development of medieval Western European philosophy, and science of the Renaissance and modern times, in the face of Akvinskiy and Bacon, Kuzanskiy and Copernicus, Spinoza (Mashanov 1961). In the work *"Al-Farabi and Abai"* there was comparative analysis of the works of two great thinkers who had become a spiritual core of Kazakh culture, and its heart and conscience (Al-Mashani 1994).

In the work *"Al-Farabi and modern science"*, al-Mashani revealed creativity of medieval scholar living in history of the birth of natural science and mathematical ideas, it was included in an active dialogue of the past and present, and appears as a thinker who anticipated the progressive ideas in science (2005 a). The writings of al-Mashani, the great thinker are always active participant and co-creative of universal mind, through the story of his deep knowledge of the universe and man. Methodological principle of continuity in the history of philosophy, that al-Mashani used in the study of heritage of al-Farabi, which was understood in the Soviet literature in large part as an abstract identity, at this stage was considered as a specific identity where there was unity through their differences, and deployed through a variety of its manifestations. Therefore, the inclusion of al-Farabi in the modern philosophical discourse and communication, where every vote has the right to existence and

self-expression, is a highly relevant and helps the present to better understand and realize itself.

In studies of Al-Mashani, he also reported that al-Farabi carried out a productive dialogue between East and West. The idea of dialogue is particularly sound, not only in science, but also in social and political sphere, as well as communication between nations and governments in the modern world.

Akzhan al-Mashani was also a scholar and philosopher. He revealed the secret relationship of science and Islam, and proved that they are interrelated and cannot be separated from each other. This was expressed by Akzhan al-Mashani in his books *"Taboo"* and *"Al-Farabi and Abai"*, and in his manuscript *"Scientific bases of Islam"* (Al-Mashani 1994; Al-Mashani 2006).

When Akzhan al-Mashani started researching the heritage of al-Farabi, he decided that he must adhere to the direction of al-Farabi. This meant full recognition of Islamic values, which al-Farabi followed.

АБЖДЕ calculation, is an example of scientific Islam of al-Mashani. Al-Mashani mastered the material properties of the Earth - a stone-mineral and chemical elements. It is no coincidence that some substances of the Earth are found in many verses of the Quran. For instance, black stone Kahba appears in the Quran, which was sent from heaven for mankind by Allah. He called Hazhur Asud. In our concept, it is the iron meteorite (2006).

Akzhan hazyret called myriad properties of iron *"mugzhiza"*. Kazakhs called the star that is over the North Pole, which does not change its location in the winter and summer, Temirkazyk. Kazyk in Kazakh means picket, wedge, prop. The name of this star that means the support is made of iron, proposes eternity. In Arabic, there are several words that are related with the word iron: MOORE - moving - walking, Tamura - movement. In the Quran, Tamura means movement of Heaven (Earth). Hence, the name of Amir-Temir means Land (World) in motion. If we take into account that the translation of the sura Al-Mulik is *"Authority"*, then the name of Amir-Temir gives the explanation of movement, development of life on earth. Generally, the words Tamura, Tamra and tamyr-Temir-MTP for the interpretation of A. Mashani mean the source of life, and they are interconnected with the concept of Gayn al-Hayat. They can also also can be mentioned as

the deep meaning of iron which means measuring the universe. Therefore, the construction of the universe, human breath, blood flow, heart rate - everything is connected with the iron. If the blood of man is his soul, then the red blood corpuscles are the products of iron sulphate - haemoglobin (Al-Mashani 2005). This was the first or second time Mashani connected the interpretation of Surah Al-Hadid, its mugzhizu to the atomic structure of iron, and it proved and explained the calculations АБЖДĚ

АБЖДĚ is known as a calculation of the prophets. Modern science is usually limited to an explanation as an example of chemical, physical, and mechanical properties of given compounds. We must not forget that we are obliged to investigate, the name of the substance along with its numerical value. This is accomplished by АБЖДĚ - calculations. The name of this problem comes from the compounds of the first four letters of the Arabic alphabet. $A+B+Ж+Д = 1+2+3+4 = 10$. That is $A+B+Ж+Д$ consists of four primary characters, because it gives a total firm number 10 (Mashanov 1970).

In grammar of АБЖДĚ alphabet, 28 Arabic letters consist of 8 groups (абжд, хауаз, хутти, каламан, сағфас, карашат, сахказ, дазар). Е As shown in the figure below, each group is numbered with numerical values. This is called tapsir of АБЖДĚ

The method of АБЖДĚ implies conformity with the names of the essence of matter and its numerical value. That is, if they are given without each other, then it cannot fully reveal full information on the matter.

Let us look at the laws of the location of the element Iron in cell 26.

The number - 26. This is the number of electrons of iron (Fe). In the classification structure of the universe into 5 groups, the symbol of the Earth in the geometrical image is shaped like a cube. By assumption of Mashani, it is no coincidence. That the structure of the iron atom has the shape of a cube shows his consistency (hardness, resistance). The crystalline pattern of the world derived, by Al-Farabi as a harmonic law. This law was used by Mashani during studies of the earth's structure, and gave him all the provisions of geomechanics. Mashani explained that the number 26 is obtained in the sum of 12 edges, 8 vertices and 6 sides of the cube, and it proves once again that iron is the meaning of mugzhiza.

One of the sacred numbers among Kazakhs is 8. In fairytales, the sun is likened to a dragon,

which has 8 legs. In the fairy tale, Ertostik's horse has 8 legs, and when her mother conceived him, she saw in the vaults of shanyrak (cupola of ancient houses of Turkic people) ТОСĚbacon, and ate them. That was why she called her son, Ertostik. This is another heavenly attribute. In the interpretation of Mashani, such elements of tales are interrelated with sundial of Al-Farabi.

In the verse of Qur'aan Kareem, it is said: "At the top 19". This is the number of 19 joints of a person's palm when he asks the blessing of Heaven (Al-Mashani 2005 a). Mashani often addressed to this number.

Number of parts in the human body: ear - 2 eye - 2, nostrils - 2, eyebrows - 2, lip - 2, a number of teeth - 2, language - 2, throat - 2 person-2, a head - 1, in the sum - 19.

Number of bones in the human body: the bones of hands $3 * 2 = 6$, the leg bones $3 * 2 = 6$, the back bone - 2 hip bones - 2, bone ridge - 2, base of spine - 1 in the amount of - 19.

Internal human organs:

Throat - 1, 1 esophagus, lungs - 2, -1 liver, kidney, 2 spleen - 1, gall bladder - 1, rectum - 1 small intestine - 1. stomach - 1. uterus - 1, bladder - 1, the spine - 1, genitals - 2, ovaries - 2 in the amount of - 19 (Al-Mashani 2006).

It should be noted that the huge legacy of al-Farabi as documented by al-Mashani is based on the way of АБЖДĚ. Among them there are a great literary legacy: "Al-Farabi and Abai", "Al-Farabi and Cosmology", "Al-Farabi and music", "Stop the Moon", "Arys Moon and scientific news", "Gates Tour", "Sky Tour", "Thoughts on the night Kydyr", "Signature Oguzkhan", "Mother Azhar and a honey bee", "Seven alef", "Remote Printing", "In the arms of the secret fire", "Legacy of the Bronze Age in Kazakhstan" (Al-Mashani 1999).

Topical and popular modernity approach to the encyclopedic Heritage Second Teacher through the prism of Islam is used by al-Mashani in such works as, for example, "Al-Farabi zhane Islam", "Nasir Abu al-Farabi - muslim Hak'm" (Mashanov 1970). The approach was used earlier in the philosophical works and prevailed statements of fact, but without a full and deep consideration and deployment. It was believed that Islam only outwardly affected the views of al-Farabi, the same with inner content of his philosophical views and the natural heritage of antiquity which were determined. The present stage of development of Farabi exploration content worldview of al-Farabi is Islam. Moreover, al-Farabi, expressed his deeply hu-

manistic potential, his ancient heritage has become a condition and order, which helped to build and understand the unique and original Islamic culture.

Interests of the scientist were very multifaceted - history, philosophy, geology. During its most eventful and creative life, he published over 200 scientific articles, ten monographs, five textbooks and eight scientific and popular publications.

Mashani published historiography, science fiction and non-fiction works: "Volcanism", "Earthquake", "Prets of the earth", the hearth miraculous fire, "Taboo", "On studying the heritage of al-Farabi, Aristotle East "Great scientists of Central Asia and Kazakhstan", "Al-Farabi and Abay", "On the transfer of the Kazakh language works of al-Farabi and many others".

Al-Mashani whole life was devoted to understanding the world (Alpysbaeva 2015). That he taught and his disciples. All his experience, he tirelessly handed young professionals. He was constantly invited to academic conferences, where he took part. If the scientific work of al-Mashani will be translated into English, Chinese, Russian, Arabic, Persian and other languages, it will serve as a great contribution to world science (Dukenbaeva 2015). His works have become a beacon for future generations.

CONCLUSION

In this paper, the researchers comprehensively studied personality, scientific research, and historical value of the outstanding research Farabi directed scientist, Akzhan al-Mashani in the context of the national idea.

The project examined the beneficial effect of environmental education thinker on the formation of his personality. Close and friendly relations that developed between Akzhan and his father Zhaksybek's village and outstanding akin Abai Kunanbaev's village, had huge impact on him. On the formation of personality Akzhan al-Mashani was influenced by many factors. These include: his family and his teachers who awakened interest in knowledge in him.

The historical significance of scientific works of al-Mashani in Heritage Research eastern thinkers, as well as his great contribution to the development of Farabi directed science was analyzed. The scientist read many books by Nosir Abu al-Farabi, and proved that he was a Kazakh and was born in Otrar, the largest center of the ancient culture of Kazakhstan and Central Asia,

which was called Farab, Akzhan Mashanov was rightly regarded as the first consultant to study the scientific heritage of great ancestors including al-Farabi. His findings which brought back the memories of al-Farabi were noteworthy and commendable. Based on documentary sources, we examined the scientific and pedagogical activities of the thinker. Deep geological knowledge and mastering of fundamentals of physical, and mathematical sciences led Mashanov to the mathematical basis of the processes, occurring in the bowels of the earth. Knowledge in the field of geology, mathematics, geometry, mechanics and mining allowed him to create new scientific direction - "Geomechanics".

RECOMMENDATIONS

Authors analyzed the historical significance of scientific works of Al-Akzhan Mashani. Researchers need in the future to pay attention to the theoretical - methodological aspects of his teachings of Al-Farabi, including archaeological and ethnological heritage of the Kazakhs. His legacy is extensive and requires a detailed study.

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