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**SCIENCE – BASIS OF SOCIETY DEVELOPMENT**

In light of speech of the  
President of the Republic of Tajikistan  
esteemed Emomali Rahmon  
at the meeting with scientists of our country  
on March 18, 2020

## Foreword

Leader of the Nation, Founder of Peace and National Unity, the President of the Republic of Tajikistan Emomali Rahmon always emphasizes in his annual messages to the Majlisi Oli of the Republic of Tajikistan, scientific works, speeches and regular meetings with people, scientists, intellectuals, students and pupils of middle schools, that the society can only be ruled and developed by a professional, scientifically educated and enlightened person.

By that the Head of State means, that forming a strong scientifically thinking mind proven in practical use, which can analyze and explore the laws of nature, society, intellect and can actually be used for the benefit of society is what we need nowadays.

In other words, only knowledge with awareness of the true (occurring) situation is able to solve problems and can be an mean for eliminating the causes that create obstacles in the way of existence of society.<sup>1</sup>

As we already know, humans are the highest creations of nature, hence only their mental capabilities (mental potential) are big enough to be able to fully understand this world.

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<sup>1</sup>S. Yatimov. A message to the nation and problems of society development. Publishing house Irfon 85 p.

Contemplation and realization of the results of researching scientific materials are the basis of the personality development.

And as the teacher (master) Sadriddin Ayni once said, the ability to analyze and think are the best qualities of a person.

An enlightened person realizes, analyzes and evaluates the essence of nature, makes decisions equivalent to reality.

Without studying science, a person loses the ability to make an effective decision, is always under pressure from unhealthy beliefs and views, and begins to show a tendency and desire for prejudice and extremism.

An illiterate person becomes a trusting, naïve human being and becomes really dangerous for society. Such people are not able to feed their brain and mind with visual intellectual feeling, such as reading a book, and slowly this ability, this instinct becomes assigned to the auditory organs.

A person loses his abilities to analyze and think.

In that state of mind the feeling of acquiring new knowledge turns into some kind of instinct of receiving the information, and what other people say becomes the axiom. These kind of people often fall under the influence of other people's statements, oftentimes becoming fanatics of the wrong ideology of bad individuals (mostly half-taught mullas). These kind of

people are being very easily controlled by their “masters”, who guide them to the wrong path for own benefits.

Of course, these ideologists are mostly interested in making people illiterate and take them as far from science and enlightenment as possible. Because, this state of mind in which they put people to, becomes not only a source of their enrichment, but, above all, a mechanism for managing and controlling society.

It is well known that a group (part) of modern youth of our country, turned out to be divorced from sciences, has fallen under the influence of extremist religious movements because of illiteracy, and joined their troops, endangering themselves and the lives of other people and this kind of situations are still happening.

So the Head of State created all conditions for the proper educational development in this connection. And thereby in his another Message to the Majlisi Oli of the Republic of Tajikistan he proposed grandiose objectives to increase the level of education and upbringing of the younger generation.

The Leader of the nation felt and understood all the growing weight of responsibilities, faced them, and gave the educational, scientific and other related structures the following tasks and objectives:

“The control upon the proper knowledge development and learning of modern sciences needs to be strengthened by stimulating teenagers and the youth to

reading scientific and fiction books, strengthen their creativity and direct their attention to the study of natural, exact and mathematical subjects”<sup>2</sup>.

Therefore on March 18<sup>th</sup> 2020, at the meeting with the scientists of our country, Leader of the nation expressed his opinions and visions reinforcing them with concrete findings and thoughts, revealing various aspects of the given problem and the possible ways of resolve, set specific tasks for all state and non-state structures and took them under his own strict control.

Hereby, the main goal and objective of the author of this monograph was to write about his attempt to study, analyze and review of the most important aspects and parts of the Leader of the Nation, the President of the Republic of Tajikistan, esteemed Emomali Rahmon’s speech at the meeting with the intellectuals of republic on March 19<sup>th</sup> based on problems of science, education and upbringing of a person.

## SCIENCE AND SOCIETY

The knowledge lights a fire bright in hearts,  
And thee will be protected for all and once.

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<sup>2</sup>Comments on the Message of the President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: the meaning and main directions. December 26<sup>th</sup> 2019. Irfon, 2020.p.72

The greatest representatives of history and literature of all times were calling science the basis of honor, awareness of being, and the main source of society development, respect and veneration towards worthy people.

These, full of deep meaning words sounded in the very thoughtful and informative speech of Leader of the Nation, Founder of Peace and National Unity, the President of the Republic of Tajikistan Emomali Rahmon at the meeting with the scientists of our contry on March 18, 2020 at the Borbad Palace<sup>3</sup>.

The Head of State during all of his meetings, speeches at the scientific and cultural events always emphasizes the worthy contribution of the world-famous scientists and thinkers of the Tajik nation, the rich ancient creative, literary and historical heritage of the civilized Tajik nation, putting them in the same place, position and role with the most distinguished scientists of the world.

The very presence of science in the society and in the system of statehood contributes to the development and prosperity of all aspects and spheres of life, has a main

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<sup>3</sup>The speech of Leader of the Nation, the President of the Republic of Tajikistan, esteemed Emomali Rahmon at the meeting with the intellectuals of our country. March 19, 2020 №: 57

role in the character formation, brings new inventions and discoveries and establishes innovations. Exactly thanks to the development of science and its prosperity in the society help to solve a big range of political and economical problems, strengthens creation of useful people for society. The very colorful example to this statement – is the experience of statehood in several developed countries of the world.

The Oxford dictionary gives the following definition to the word “**science**”: “The intellectual and practical activity encompassing the systematic study of the structure and behavior of the physical and natural world through observation and experiment”<sup>4</sup>.

Science – is a human activity, the purpose and content of which is enlightenment of the world as a single system based on logical thinking and experience<sup>5</sup>.

One of the most ancient, close and accurate definitions, that is still being used in the modern world, belongs to Aristotle who considered scientific knowledge a combination of chosen knowledge, which in terms of logic and reason is worthy of explanation<sup>6</sup>.

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<sup>4</sup>Oxford dictionary. <https://www.lexico.com/en/definition/science>.

<sup>5</sup>Nazariev R.Z., Samiev B. D. The Philosophy of science. – Dushanbe: 2015. - P. 8

<sup>6</sup> (Arastu) ca. 4th century BCE "[[اخلاق نیکوماخوسی]] (Behavior of Nikomah)]] Book VI, and [[Metaphysics (Aristotle)|Metaphysics]]". — Aristotle Met. 1.981

Science is a continuing effort to discover and increase knowledge through research. Scientists make observations, record measureable data related to their observations, and analyze the information at hand to construct theoretical explanations of the phenomenon involved.

The methods involved in scientific research include making a hypothesis and conducting experiments to test the hypothesis under controlled conditions. In this process, scientists publish their work so other scientists can repeat the experiment and further strengthen the reliability of results.

Besides, by saying or using the word “science” people mean a complex system of knowledge and scientific views on the constitution of the universe. Most of the time research or analytical terms are used to reflect scientific professional activities. In the past (ancient) centuries, our ancestors sought to solve the issues of training, education, the formation of a scientific worldview and enlightenment of the world. Our ancestors also greatly respected knowledge and wisdom. According to the historical source of “the Avesta”, science and wisdom had their own god named Ahura-Mazda. People prayed to this god so he grants them with literate and wise children. Ahura-Mazda was the source of knowledge and wisdom, and Ahriman – the source of ignorance and foolishness.



And of course, the followers of Ahura-Mazda were pursuing science and knowledge. And because of that the followers of Ahura-Mazda were obliged to help everyone who desired and strove for knowledge. According to the studies of “Avesta”, there are two types of knowledge. The first – is hereditary knowledge, and the second – is obtained knowledge. Representatives of the Iranian race sang and respected both types.

The main goal of the upbringing philosophy was to teach and educate boys as the useful and virtuous member of society. It is clearly shown in the Yasna (veneration) – first part of “Avesta”: “Oh, Ahura-Mazda, grant me a child, who will be able to fulfill his duty towards my home, my city, my country and help my fair-minded king”. Or it is also mentioned in “Avesta”: “...Oh, Ahura-Mazda, grant me a wise and clever child, so he can become a worthy member of society and will treat his duties responsibly becomes righteous, courageous and respected person, will be helping others, grant me a son who will be able to strive for success, happiness of his family, his city and his country”.

Also, there is an appeal to the Zoroastrians in “Avesta”, that they must responsibly study sciences, discharge their duties, and absent from rash and hasty acts and deeds.

Beginning the development of science and higher education by our ancestors dates back to the Sassanid era of the beginning of the 3rd century AD. During this

period, it was traditional to receive higher and religious education, study philosophical sciences, natural sciences and medicine among the nobility and the clergy of those times.

At the end of the reign of the Ashkanid dynasty and the beginning of the reign of the Sassanids, Greek and Indian science and enlightenment spread in this territory. Especially during the Khusrav of Soson era (531-579 AD), scientific and fiction books were translated from Greek and Indian languages into Persian-Tajik language.

During this period, the Gundi Shapur Academy, established by Shapur the First, was especially popular among the representatives of the Iranian race. This institution of higher education was opened in 550 CE. The main work of the institution conducting research works on philosophy and medical science. Anushervon was constantly thinking about expanding the Academy, and for this purpose he sent his personal physician Barzuya to India to study medical science. Barzuya brought medical and fiction books from India, including the very famous book “Kalila and Dimna”, chess and Indian doctors. During this period, a group of Greek scientists arrived to the Gundi Shapur Academy for permanent work. The involvement of Persian, Greek and Indian scholars, scientists and doctors had a great influence on the process of teaching and translating books into the Persian-Tajik language. The basis of

literature, the foundations of law, economics, history, mathematics, astronomy, logic, medicine, pharmaceuticals, theology, plant science, music, zoology, etc. was taught at the Gundi Shapur Medical Academy. The library of the Academy was equipped with almost all kind of scientific and fiction books. The educational institution held scientific meetings and exams. Anushervon mostly personally participated in those meetings and exams. Even after being captured by the Arabs, Academy provided good service to the representatives of the Iranian race for several centuries. Not only Iranians, but also Arabs, Indians and Greeks studied medical science, inside the walls of this great educational institution<sup>7</sup>.

The rich heritage of our ancestors, which has a worldwide educational and upbringing significance, touched upon the problems of studying science, upbringing and ethics. Vivid examples of what was said above are given in the ethical and didactic work “Kabus-name” by Unsurulmaali Kaykavus, in which a separate chapter is devoted to astrology and geometry. This chapter says that: “Oh, my son, you must know and remember that if you are an astronomer, strive to work

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<sup>7</sup>Training and education during the period of slavery (Bactria, Port, Achaemenids, Sosonids) /

Email adress: <https://www.maorif.tj/tarih/talimu-tarbiya-dar-davrai-ulomdor-dar-davlatoi-bohtar-port-ahomanisho-ashkoniyon-va-sosoniyon>

hard on mathematical science, because the science of scientific predictions is very vast ...”. “...эӣ писар, бидон ва огоҳ бош, ки агар муначҷим бошӣ, ҷаҳд кун, то бештар ранҷи хеш дар илми риёзӣ бари...”<sup>8</sup>(Ey pisar, bidon va ogoḥ bosh, ki agar munajjim boshii, jahd kun, to beshtar ranji khesh dar ilmi riyozii barii...).

One of the very famous Persian-Tajik thinkers Mavlono Jalal-ad-Din Muhammad Balkhi said the following words about significance and importance of science:

You want to be happy and cheerful?  
Wherever you go, be cherished and useful?

Live righteously, be clean and study science,  
Be a crown, leave wisdom for your children.

In fact, the study of sciences not only gives a person a profession and a good and high position in the society, but it can also make him famous, revered and noble, science brings light, new strength, delicate taste and good mood to the heart and essence of a person and his life.

The Leader of the nation at the meeting with the intellectuals of our country emphasized: “For centuries, the Tajik people have been particularly respectful of science, education and upbringing, throughout the

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<sup>8</sup>Unsurulmaoli Kaykovus. Kabusname .Dushanbe, 2007. - P. 132.

history of mankind have given the world many outstanding personalities and geniuses who have made a huge contribution to the development of the world science. Especially in the era of the Samanids, along with literature and crafts, natural science also was also greatly developed, the legacy of famous Tajik scientists in the following centuries exploited world fame”.

The meaning of life – is science  
A lot of treasures lay upon that land.  
The spirit and body are weak without science,  
Only by wisdom the barriers will you break.  
The science is the evidence of a deep mind,  
A lot of great things with science can you make.<sup>9</sup>

Regarding the social significance of science, the German philosopher and Immanuel Kant said the following words: “...from the inside science has real intrinsic value, as part of wisdom. But even in such robe, science is very necessary for wisdom (prudence).”<sup>10</sup>

In fact, in a society where there are a large number of prudent, competent and comprehensively developed individuals, work, life and the existence of people take the appropriate social form and attractiveness. There’s no doubt, that cultured and educated people are always

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<sup>9</sup>Nihoni.Gonfalon of honor.Dushanbe: R-Graf, 2018. P. 232.

<sup>10</sup>I. Kant. Treatises and letters. –M. Science, 1980.- P. 712.

being respected and esteemed by others and attract everyone's attention.

It needs to be noted, that Tajik people are one of the most ancient nations of the world, they gained a worldwide fame and acknowledgement of their rich and colorful history literary heritage. Throughout our history, hundreds of representatives of the Tajik nation have made a worthy contribution to the development of world science, enlightenment, culture and education, leaving their treasury of knowledge and science with their rich heritage for the next generations.

In the IX-X centuries, in the era of the Samanids, the final formation of the Tajik nation was complete. According to the information of the trusted source, the ethnic composition of the Tajiks consisted of Sogdians, Bactrians, Tahoreans, Ferghanians, Khorasans and Saka tribes.

It was exactly in the Samanid dynasty, which was the era of the development of self-knowledge of the Tajik nation, that the great Tajik poet Abuabdullo Rudaki appeared as a social phenomenon in the literary and political field. He had strong ties and connections at the court of Ismail Samani and Ahmed Ibn Ismail, and at the court of Nasr ibn Ahmed Samani (914-943) he was awarded the high rank of "nadim" - an associate and

favorite person of the king<sup>11</sup>. Rudaki himself talks about this:

And thee who was awarded greatness,  
Oli Somon the greatness brought upon!

In the IX-X centuries, the science and culture of the nations of Central Asia widely developed. The development of science and culture of the Mediterranean and Hurasan was mainly promoted by the Tajik (Dari) language. Poetry began to improve on this language, which was embodied in the work of the founder of the Tajik-Persian classic literature Abuabdullo Jafar Rudaki, the brilliant poet Abulkasim Firdavsi and many others.

Rudaki is immortal in our hearts,  
And every single poet will approve it,  
He is the teacher of the poets of all kinds,  
His rhymes in all the situations fit.  
And it's no doubt that everything he wrote,  
Beginning of the rhyming fire lit<sup>12</sup>.

Another very important treasury of science and literature left to us by our ancestors, and which is very

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<sup>11</sup>Azimov Shukur. State and law of the Samanids. – Dushanbe: «Irfon», 1999. – P. 53

<sup>12</sup>Nihoni. Gonfalon of honor. Dushanbe: R-Graf, 2018. P. 278

well known all around the globe, is the immortal poem “Shahname” written by Abulkosim Firdavsi. In this great creation of all times we can see almost all kind highest human values such as knowledge and wisdom, science and philosophy, bravery and courage and etc.:

The pain of body should be tolerated,  
The path to knowledge is more painful.

At this historical period most of the fundamental sciences such as mathematics, astronomy, geography, chemistry, medicine, history, literature studies and etc. were greatly developed and the famous representatives of the great scientists of their times are these scientists-encyclopedists Abunasr Farabi, Avicenna, Abumahmud Khujandi, Aburayhon Beruni and others.

The big cities of the Central Asia – Bukhara, Samarqand, Balkh, Marv, Nishopur, Khujand, Bunjikat and others turned into the main cultural centers of their states. Scientists, poets, artists and other representatives of science and culture for all around the East were moving and visiting these cities, especially, the capital of the state – Bukhara.

Bukhara became one of the biggest cultural centers of the East. The city had one of the biggest and richest libraries, which was famous by the name of “Savon-al-hikmat”. The very rare books from all around the world were gathered and stored in the walls of that library. It



was valuable heritage of the local and foreign scientists about different aspects and spheres of science. Also there was a book market, where unique and rare scientific books and talmuds (big scientific works) could be bought.

More than that, it has to be noted, that science – is an inseparable part of human lives and activity, that is directed to preparation and arrangement of the objective knowledge and facts about the reality we live in.

Aristotle said the following: “The state can only belong to a person, that exists alongside with nature and who considers other human beings as a political phenomenon”. This means, that a healthy person, despite their social and political status is still a phenomenon that cannot exist out of politics. The whole essence of human beings is political. But representatives and followers of the scientific materialism still insist on this: “Illiterate person exists out of politics... First of all he has to learn the alphabet. Without literacy, no matter what, he cannot be a part of politics. Without knowledge and literacy there can be no politics but rumors, gossips, delusions and bigotry”<sup>13</sup>.

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<sup>13</sup>S. Yatimov. The Message of the Leader of the nation and problems of development of education/ Explanation of the Message of President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: meaning and main directions. December 26th 2019– Dushanbe: «Irfon», 2020. – P. 71

The President of our country emphasized in his speech, that the scientific discoveries and achievements of Muhammad Khorazmi, Ahmad Fergani, Zakariya Razi, Aunahr Farabi, Abumahmud Khujandi, Aburaihan Beruni, Abuali-ibn-Sino, Nosiri Khusravi Qubodiyoni and many others were used by the scientists of Europe and other countries throughout many centuries.

Next we want to give the reader some information about the activity and status of some masterminds of science and wisdom of their time.

**Abuabdullo Muhammad-ibn-Musa-al-Khorazmi.** Born in the end of the VIIIth century around the year 783 in the city of Khiva (Nowadays Khorazm) and passed away around the year 850 in the city of Baghdad. He was a great Tajik-Persian scientists, mathematician, astronomer and geographer, and he mainly focused his studies on mathematics, practical and theoretical astronomy, geography and history. Al-Khorezmi's Geographical treatise "The book of image of Earth" became the very first geographical achievement in Arabian language.

Among contemporaries of Al-Hkorazmi, that lived in Baghdad in those times, other famous and great scientists and astronomers can be named. They are Abulabbas Ahmad Al-Fergani and Ahmad-ibn-Abdullo Al-Marvazi (widely known as Khabash Al-Hasib).

The following books and works of this unrivalled person made it to our times: “The book of Indian calculation”, “A short book of comparative algebra”, “Astrological table”, “Book of image of earth”, “Book of astrological structure”, “Book of astrological basics”; “Book of solar clock”, “Treatise of compilation of Jewish holidays and traditions”, “Book of history”<sup>14</sup>.

**Abul Abbas Ahmad-ibn-Muhammad-al-Fergani** was born around the year of 798 and passed away around 861. Ahmad-al-Fergani was one of the most outstanding scientists of the Middle Asia in the IX century. He made a huge and significant contribution in the development of astrology, mathematics and geography. Alongside with a group of scientists made a lot of important scientific discoveries, some which are: calculation of the magnitude of the Earth meridian, calculation of the circumference of the Earth, star map(table) compilation, which contained the exact coordinates and description of thousands of sky objects<sup>15</sup>.

**Abubakr Muhammad Zachariah-ibn-Yahya Ar-Razi** (865-925) was born on August 28<sup>th</sup>, 865 in the city of Rai of Iran.

Abubakr Muhammad Zachariah-ibn-Yahya Ar-Razi, the great Tajik-Persian scientist-encyclopedia,

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<sup>14</sup> Abuabduullo Muhammad-ibn-Musa-al-Khorazmi / email address:: [https://tg.wikipedia.org/wiki/Мухаммад\\_ибн\\_Мусо\\_Хорезми](https://tg.wikipedia.org/wiki/Мухаммад_ибн_Мусо_Хорезми)

<sup>15</sup>Matveyevskaya G. P. The study of numbers in the middle ages at the Middle East.Tashkent. 1967.

philosopher, doctor, teacher, mathematician, chemist and nature scientist of the VIII-IX centuries. Alongside with Abuali-ibn-Sina(Avicenna) and Aburayhan Beruni left behind one of the richest heritages on medicine, chemistry, biology, philosophy and many other spheres of science. He was an author of 272 books, 22 of which are chemistry books. Ar-Razi is the first scientist-medic who tightly combined theory with practice. His treatises “About medicament making”, “About medicaments”, “About artificial medicaments”, “About purgatives” and other books and works contributed in development of today’s medicament making. His big encyclopedic works are “Kitob A;-Khavi” and “Kitob-at-tib al-Mansuri” (“Medical book, dedicated to Mabsur”).

Ar-Razi introduced the following innovations into medicine:

1. For the first time in the history of Middle East medicine began to mark the name, age, profession and the place of residence of the patient.

2. For the first time used the method of variegation for pox prevention.

3. Invented an mean for extracting foreign objects from the larynx.

4. For the first time in the history of medicine used cotton and bandages.

5. Introduced the concept of “One doctor cant work with all kind of patients and illnesses” into medicine.

6. For the first time created and published a manual for the lower layers of population “Medicine, for those, who doesn’t have a personal doctor”.

7. Wrote about the value of terrain properties for building hospitals.

8. Created a systematic guide on the Greek-Persian medicine.

9. For the first time in medicine used mercury based ointments.

10. The means, that he made for the pharmaceuticals were used by European pharmaceuticals up to XVIII century.

Zachariah Ar-Razi passed away on October 25<sup>th</sup>, 625<sup>16</sup>.

**Abunasr Muhammad-ibn-Muhammad-ibn-Tarhon-ibn-Uzlagi Farabi**, philosopher, mathematician, musicologist and scientist, recognized as one of the greatest representatives of the Middle age East philosophy. He was born in 870 in the city of Farab of Khurasan. When he was young he moved to Baghdad for applying for education and studied logics and philosophy from Matto-ibn-Yunus.

Al-Farabi became very famous as a scientist and philosopher in a very short period of time. In 941, he moved to Damask, where he spent the remaining time of his life still working on his scientific works. In Damask,

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<sup>16</sup>Zachariah Ar-Razi. The compilation of works. Dushanbe: Adib, 1989.

Farabi finally finishes his early work “Treatise about the virtuous city”. Farabi passed away at age of 80 at Damask approximately in 950-951. It is very clear from his books and works, that he had a great talent for studying philology, Mathematics, chemistry, astronomy, military science, music, nature science, theology, cultural studies, Muslim laws, logic and philosophy. In the sunnas (teachings) of the Islamic philosophy Farabi was named “The second teacher” after Aristotle who was “The first teacher”<sup>17</sup>.

Al-Farabi very early in his life, had the opportunity to get familiar with the originals of the best works of Aristotle, Plato and other ancient Greek philosophers, which helped him in his path of becoming one of the founders of Eastern **Aristotelianism**, in connection with which he received the nickname of “The second Teacher” after Aristotle. He left behind a very rich scientific heritage - about 200 treatises that cover a wide variety of different sciences. Farabi commented on the “Category”, “Hermeneutics”, “Topics”, “Category”, “Analytics” (1st and 2nd), “Sophistry”, “Rhetoric”, “Logic” and “Poetics” of Aristotle, as well “Introduction to Philosophy” by Porfiry and other works of the well-known ancient Greek thinkers. The most famous of the

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<sup>17</sup>History of Islamic philosophy. Part one. Khujand.2018, Olimov K., Sultonov U. Abunasar Farabi.The great scientist of the IX century.Education and culture. 1972.

original works of Farabi are the treatise “Pearls of Wisdom,” “A Treatise on the Views of the Residents of a Virtuous City”, “Philosophical Treatises” and “The Big Book of Music,” which brought him fame in medieval Europe.

**Abu Mahmoud Hamid ibn al-Khizr al-Khojandi** was born around 940 in Khujand and passed away in 1000. He was a famous mathematician and astrologer, and he made a lot of outstanding discoveries in these fields of science. In the “Book on the Past Hours of the Night”, al-Khojandi proved the sine theorem for a spherical triangle, which simplified the ways to finding solutions for several problems of spherical astronomy<sup>18</sup>.

**Abu Reikhan Muhammad ibn Ahmed al-Biruni** - was born on October 4th, 973 in the city of Kyat (now Khorezm), passed away on December 9th, 1048 in the city of Hansa (now Afghanistan).

He was the greatest scientist in the fields of history, geography, philology, astronomy, mathematics, mechanics, geodesy, mineralogy, pharmacology, geology, etc. Beruni throughout his extremely fruitful scientific activities wrote over 100 scientific works and treatises in Arabic and Persian languages. Al-Biruni's works are devoted to mathematics, astronomy, physics, botany, geography, general geology, mineralogy,

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<sup>18</sup> Abu Mahmoud Hamid ibn al-Khizr al-Khojandi / [https://ru.wikipedia.org/wiki/Абу\\_Махмуд\\_аль-Ходжанди](https://ru.wikipedia.org/wiki/Абу_Махмуд_аль-Ходжанди)

ethnography, history and chronology. In the "Chronology of Ancient Peoples" (1000) Al-Biruni collected and described all the calendar systems known in his time, and the ones that were used by various people of the world, and compiled a chronological table of all eras, starting from the biblical patriarchs.

In his treatise "Chronology of the Heritage of the Past," Biruni gave a detailed description of all the calendar systems that were existing at that time. Al-Biruni wrote 45 scientific treatises on astronomy, one of the most famous among them, is the book "Canon of Masoud according to astronomy and stars"<sup>1920</sup>.

**Husayn ibn-Abdallah ibn-Hassan ibn-Ali ibn-Sina** known as **Abuali ibn Sina (Avicenna)** was born on August 16th, 980 in a village of Afshan near Bukhara in a Tajik family, passed away on June 18th, 1037 in the city of Hamadan, Iran.

He is recognized as one of the greatest scientists and doctors of the Middle Ages, as well as an astronomer, chemist, music theorist, geologist, paleontologist, mathematician, physicist, psychologist, philosopher, poet, teacher and great Tajik-Persian writer.

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<sup>19</sup>Rozhanskaya M.M. About the reconstruction of the full text of Al Biruni's treatise on specific gravities. Historical and astronomical research №7.

<sup>20</sup>Rozhanskaya M.M. About the reconstruction of the full text of Al Biruni's treatise on specific gravities. Historical and astronomical research №7.



Abu Ali ibn Sina wrote over 450 scientific treatises, of which only 240 have been saved and made it to our times. Out of the remaining 240, 150 are devoted to philosophical science and over 40 to the medical science. His most famous works are “Kitabu-sh-Shifo” - “The Book of Healing” and “Kitabu-l-Konun fit-Tibb” - “Canon of Medical Science”. Both are recognized as the greatest scientific and philosophical encyclopedias of the world. “Canon of Medicine” – is the medical encyclopedia in 5 parts. It was reprinted in Latin about 30 times and for many centuries was a compulsory guide in Europe and the East. It was also translated into many European languages<sup>21</sup>.

In the foreword of the book “Ibn Sina. Selected philosophical works”, published in the eighties of the last century by the “Nauka”(“Science”) Publishing House in Moscow, states: “The name of Abu Ali ibn Sina (Avicenna), that was born in Bukhara, went down in the history of the world culture. And this is not a coincidence. He is recognized as one of the greatest scientists and encyclopedian of the Middle Ages. His scientific heritage is very extensive and covers various fields and sciences: philosophy, medicine, mathematics,

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<sup>21</sup> Akhadova M.A. The book of knowledge of Ibn Sina.1964.  
Dinorshoev M. Natural Philosophy of Ibn Sina.Dushanbe. 1985.

astronomy, botany, geology, philology, poetry and music”<sup>22</sup>.

Abu Ali Ibn Sina himself divided theoretical sciences into three groups:

The first – is a science of the highest category or primary science, it is also called a science that exists outside of nature.

The second – is secondary science, mathematics.

The third – is the science of nature.

In continuation to what was said, Abu Ali ibn Sina emphasizes: "Of all the sciences, the most understandable and the closest to people is the science of nature, but there is a lot of incomprehensibility in it."<sup>23</sup>

**Abu Muin Hamid ad-Din Nasir ibn Khusrav** was born on August 28, 1004 in Kubadiyan (Khatlon region). Passed away in 1088 in Yumgan province of Afghanistan.

Nasir ibn Khusrav became famous in the 30s of the XI century as an outstanding poet and scientist. For

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<sup>22</sup>S. Yatimov. The Message of the Leader of the nation and problems of development of education/ Explanation of the Message of President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: meaning and main directions. December 26th 2019– Dushanbe: «Irfon», 2020. – P. 72

<sup>23</sup>S. Yatimov. The Message of the Leader of the nation and problems of development of education/ Explanation of the Message of President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: meaning and main directions. December 26th 2019– Dushanbe: «Irfon», 2020. – P. 72-73

some time he served in the treasury at the court of the Sultan, Mahmoud Geznevi. The collected works of Nosir Khusraw consist of religious, philosophical and social odes (panegyrics), ghazalles(rhymes), rubyas (quatrains) and kitas(short stories) and comprise 11,000 beyts(lines). His masnavi (book, scientific work)“Rushnai-name” - “Book of Enlightenment” consists of 592 beits and “Saodat-name” - “Book of Happiness” - consists of 300 beits, which reflects problems of ethics, philosophy, instructive edifications, relationships between people, labor, seers and saints, scientists and thinkers.<sup>24</sup>

The beginning of the formation of science and knowledge among Tajiks and Persians dates back to the Sassanid era and even before the period of the Arab caliphate. At that time, as we have already emphasized before, the Gundi Shapur Academy gained worldwide fame. Scientists of this scientific center compiled an encyclopedia of three parts, filling them with their own tremendous achievements in the fields of medicine, chemistry and other sciences.

Only thanks to the ruthless, but fair onslaught of science, all phenomena of nature, society and thinking lose their mysterious essence, manifest and obey to Adam – Man. Serve him. As world experience shows,

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<sup>24</sup>Abul Afsor Ali Muhammad Balkhi. Poets of Balkh. Balkh, 1413 of lunar calculus. Muhammadikbol Sadridin. Writers of Balkh. Dushanbe. 2010.

there is no other such strength and support in the nature. In this case, Hegel specifically emphasizes: "In the hidden and mysterious essence of the world there is no power capable of resisting the onslaught of science: it must open up to science and expose the diversity of its depths and present the possibility of its uses."<sup>25</sup>

Science and knowledge developed and flourished in the Sassanid era along with other spheres, including literature. And in every field there were special people, special scientists. The greatest Ibn Kutayba in the field of history and literary studies, the most famous astrologer Abumuashshar Jafar ibn Muhammad Balkhi, Abubakr Narshahi is one of the most famous historians of the Samanid period, Abunasr Farabi, Abu Ali ibn Sina in the field of poetry and medicine this list can go on and on.

In the era of the USSR, science in the newly formed Tajikistan developed as Soviet science. The initial stage of development of science in Tajikistan coincided with a turbulent period of revolutionary transformations occurring in the years of 1917-1924. Formation of the State University of Central Asia played a huge role for the future expansion and development of scientific activity in the region.

At the second stage of reforms and transformations (1924-1932), a number of scientific expeditions were

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<sup>25</sup> G.V.F. Hegel. Encyclopedia of Philosophy. T.Z. - M.: Thought, 1977.-P. 243.

organized, the purpose of which was to study the production potential of the republic. These expeditions played a very important role in the development of science in Tajikistan.

The third stage (1932-1941) covers the period of creation of the branch of USSR's Academy of Sciences in Tajikistan.

In the period before the World War II, the problems of developing grammar and providing school textbooks were solved, first based on the Latin script, and later in the Cyrillic alphabet, preparing everything for the transition to the new alphabet.

The qualitatively new fourth stage in the history of science of Tajikistan marked the transformation of the Tajik branch of the USSR Academy of Sciences into the Tajik SSR Academy of Sciences in 1941, at which were established three institutes of natural sciences (geology, botany, zoology) and one humanitarian institute (history, language and literature). Despite the difficulties of wartime, great attention was paid to improve the scientific institutions and their compliance with the requirements of the national economy of the republic. In 1944, a graduate school was opened at the branch of the USSR Academy of Sciences, which began the training of scientific highly qualified personnel.

In 1948, Tajik State University was established, what made a huge contribution to the education and

preparation of scientific and pedagogical personnel for the republic.

The fifth stage was connected with the Academy of Sciences of the Republic of Tajikistan, established on April 14, 1951, the first president of which was Sadriddin Aini.

**Sadriddin Ayni (Sadriddin Sayidmurodzoda Aini)** - founder of modern Soviet-Tajik literature, writer, scientist, academician and first President of the Academy of Sciences of the Republic of Tajikistan (1951-1954), Honored Scientist of the Tajik Soviet Socialist Republic, Honorary Academician of the Academy of Sciences of the Uzbek Soviet Socialist Republic, National Hero of the Republic of Tajikistan (1997).<sup>26</sup>

Ustod(teacher, master) Ayni was a progressive intellectual who has devoted his whole life and activity to the service of his nation. From the first days of the formation of the Republic of Tajikistan, he connected his fate with it and rendered invaluable service for the development of the language and literature, science, education and culture of the Tajik nation.

Mirzo Tursunzade, recalling those fateful times, wrote the following:

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<sup>26</sup> Sadriddin Ayni. Free Encyclopedia. Email address: [https://tg.wikipedia.org/wiki/Садриддин\\_Айнӣ](https://tg.wikipedia.org/wiki/Садриддин_Айнӣ)

And the teacher became the flame and light,  
He guided his people through the darkest night.<sup>27</sup>

The hero of Tajikistan, ustod Sadriddin Aini, has lived his whole life selflessly and with full dedication to what he was doing. His life passed in endless struggle and clashes on the way to the revival of life, history, culture and civilization of the Tajik nation.

The title of alloma (mentor, teacher) to refer to ustod Aini was first used by the famous thinker Said Nafisi after acquaintance with Aini's book "Namunai adabiyoti tojik" (Samples of Tajik literature). Nafisi wrote: "The compiler of this book is the modern alloma Sadriddin Aini, the noble and famous literary figure of our region and an example of pride for our language in Turkestan"<sup>28</sup>.

The role of this great scientist, poet, writer and thinker in the formation and development of the modern Tajik language, literature and Tajik statehood is truly enormous.

The life and literary heritage of S. Aini was widely and comprehensively studied and researched by domestic and foreign scholars. His works have been translated into

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<sup>27</sup>Emomali Rahmon. Non-fading persons. – Dushanbe «R-graf», 2016. – P.311

<sup>28</sup>Ustod Aini was a living symbol of the Tajik literature / Sadoi mardum (Voice of people). №48 (4154) April 162020

12 languages of the world and scientists from all around the globe are using his studies in their own researches.

Regardless of the fact that the life, scientific and social activities of Sadridin Aini has been studied by researchers, many books, monographs and articles about him has been published, his works have been translated into many languages of the world, but there are still too many facts about his life and work remain unknown to this day. This problem may interest scientists. His creative heritage is enormous and much still has to be told about this great and wise man.<sup>29</sup>

After the formation of the Academy of Sciences in the republic, special attention was paid to the foundation and development of the republican scientific fund. After founding of the Academy of Sciences of the Republic of Tajikistan, scientific researches gained a huge boost in research institutions and higher educational institutions. New scientific institutions, like the Institute of Seismology, the Institute of Soil Science, Land Reclamation, and Irrigation were created at the Academy of Sciences.

It needs to be emphasized that alloma **Bobodzhon Gafurov** made a big contribution in the establishment of

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<sup>29</sup>The contribution of Sadridin Aini in formation of the new Tajik state  
/People's newspaper.  
[//www.narodnaya.tj/index.php?option=com\\_content&view=article&id=11203:2020-04-23-04](http://www.narodnaya.tj/index.php?option=com_content&view=article&id=11203:2020-04-23-04)



the Tajik State University (1948) and the Academy of Sciences of Tajikistan (1951).

With the effective support of B. Gafurov, a group of authors for the first time published the book of history of Tajik people in three volumes and five books, and later in the years of 1963-1965 they were published in the Nauka publishing house in Moscow. Academician Bobojon Gafurov is the author of almost 400 works and articles on the history of the Tajik people and world history, which were published in various publishing houses around the world. One of his works - the book "Tajiks", which has important scientific and historical significance, has become a representative and a true reflection of the Tajik nation.

In his Message to the Majlisi Oli of the Republic of Tajikistan, the Leader of the Nation, President of the Republic of Tajikistan, esteemed Emomali Rahmon, after emphasizing the importance of the book "Tajiks" for the national self-consciousness, and in order to study the glorious history of the Tajik people more deeply, instructed the Government of the Republic of Tajikistan to print this outstanding work of Bobodzhon Gafurov at the expense of the Fund of the President of the Republic of Tajikistan and before the 30th anniversary of State

Independence present one copy to every family on behalf of the Head of State.<sup>30</sup>

In accordance with paragraph 1 of the Order of the President of the Republic of Tajikistan No. AP-1347 dated February 6, 2020 for celebrating the 30th anniversary of State Independence of the Republic of Tajikistan, Bobodzhon Gafurov's book "Tajiks" will be published and presented to each family on behalf of President of the Republic of Tajikistan and this fact is a matter of pride and support.<sup>31</sup>

Studying and writing about the rich history of the nation is under the strict control of the Leader of the nation, and in all his speeches and messages he expresses his scientifically based views and suggestions on this topic. At the same time, he directs the country's scientists to the correct knowledge of history, propaganda of the spiritual heritage, folk traditions and customs that has been preserved in the historical memory of the Tajik people for many centuries.

Undoubtedly, the book is the most valuable spiritual asset and for all educated people in the world it's considered a precious pearl, a source of knowledge, an mean of training and education, inherited from

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<sup>30</sup>The Message of President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistanon December 26 2019 // email adress: <http://www.president.tj/node/21975>

<sup>31</sup>Disposal of the President of the Republic of Tajikistan// The voice of people, №18 (4124) February 08 2020

generation to generation. The world community has known the Tajik people since ancient times thanks to its science, literature and art, which they managed to preserve and convey to our days precisely thanks to the book and written language. In other words, knowledge is a door for approaching to the very essence of reality and getting into understanding the universe. And the key to this door is in the book, knowledge, school, which first depends on the will and desire of the student to receive knowledge, and then on the professionalism and responsibility of the teacher.<sup>32</sup>

First of all, a book is a great power. This is the greatest miracle created by man, which has absorbed all the knowledge about life and the world, the whole history of the formation of the human mind, all the hardships and vicissitudes of history and the experience of the people and nations of the whole world. The book is the most powerful weapon for the further development of the intellectual potential of mankind.

The science in the Republic of Tajikistan was at a relatively high level before the collapse of the USSR and the socio-political and socio-economic crisis that occurred because of the events of the early 90s. A strong

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<sup>32</sup>S. Yatimov. The Message of the Leader of the nation and problems of development of education/ Explanation of the Message of President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: meaning and main directions. December 26th 2019– Dushanbe: «Irfon», 2020. – P. 71-72

material and technical base for conducting scientific research has been created in the institutes of the Academy of Sciences, other research institutions and higher educational institutions of the republic, the scientific personnel in many areas of science have been trained, and higher educational institutions have been formed. All kind of researches were conducted in collaboration with the institutes of the USSR Academy of Sciences and other research centers.

After gaining State independence, the Republic of Tajikistan did a lot to protect and support the scientific potential of the country, reform and focus science on solving important pressing problems of the republic.

In 1992, despite the political, economic and social crisis, reason prevailed over feelings and emotions, and at the XVI Session of the Supreme Council of the Republic of Tajikistan in the city of Khujand Emomali Rahmon was elected as the Head of State. This worthy son of the nation saved the fateful ship of the Tajik nation from destruction and division. From the first days of his activity, he declared the sphere of education, training and upbringing to be the main strategic direction, calling it the most important factor in strengthening of the state and saving the nation, and did not allow the collapse of education - the great asset and wealth of a civilized nation. "Thanks to the wealth and the blessing of independence, despite the strong economic crisis that arose in the early 90s, they managed

to prevent a complete paralysis of the education sector and the collapse of scientific and cultural centers.”<sup>33</sup>

The reform of science continues at the present stage. Research institutions are gradually, moving to activities in the new conditions stage by stage. The state considers support and strengthening of scientific potential for the successful and sustainable development of the country as one of its strategic goals.

The Government of the Republic of Tajikistan adopted a number of laws and decrees that determined the state policy in the field of science and aimed at supporting the scientific potential.

During the period of State independence, in the light of the policy adopted by the President of the country, respected Emomali Rahmon, the following regulatory legal acts were prepared and adopted for the development of the sphere of science: Law of the Republic of Tajikistan “About Science and Scientific and Technological Policy” (1998); The Law of the Republic of Tajikistan "About the Academy of Sciences of the Republic of Tajikistan" (2002); Decree of the Government of the Republic of Tajikistan dated July 18, 1996, No. 331 “About the Council for the Coordination of Research in the Field of Natural, Technical, Medical, Humanitarian and Social Sciences”; Decree of the

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<sup>33</sup>R. Mirboboev and others. Development of education and science in the period of the State independence. Dushenbe: Eduaction, 2016. - P. 120

Government of the Republic of Tajikistan dated September 1, 1997, No. 395 “About the Formation of the Certification Commission of the Republic of Tajikistan for the Certification of Scientific and Scientific-Pedagogical Personnel of Higher Education”; Decree of the Government of the Republic of Tajikistan dated March 15, 1999, No. 87 “About the Concept of State Scientific and Technical Policy of the Republic of Tajikistan”; Decree of the Government of the Republic of Tajikistan dated February 3, 2000, No. 54 “About the procedure for state accreditation of scientific organizations”; Decree of the Government of the Republic of Tajikistan dated December 3, 2002, No. 482 "About the Academy of Pedagogical Sciences under the Ministry of Education of the Republic of Tajikistan"; Decree of the Government of the Republic of Tajikistan dated December 29, 2003, No. 571 “About approval of the Program for the Advancement of the Exact Sciences in the Republic of Tajikistan for 2005-2008”; Decree of the Government of the Republic of Tajikistan dated October 7, 2004, No. 385 “About the Activities of the Academy of Sciences of the Republic of Tajikistan”.

The Strategy of the Republic of Tajikistan in the field of science and technology for the years of 2007-2015 was prepared on the basis of the laws and decrees of the Republic of Tajikistan that were mentioned above.

The Leader of the nation constantly recalls that members of society, regardless of age, women, on a par

with men, must master modern sciences, master various professions and crafts. Enlightenment, mind and erudition are one of the greatest human qualities, because science, practice and knowledge are the means using which a person conquers the highest peaks and goals of one's life.

At a meeting with scientists of the country, the Head of State, speaking about the role and mission of historical figures among the founders of Aryan science and culture, history and literature, noted: "It is recorded in the historical sources and the legacy of famous thinkers and researchers that at one time Aryan Tajiks were at the very roots of intellectual transformations of human civilization. They made an invaluable contribution to the creation of united and powerful states, the creation of initial cultural values, a fair legal system, ethical and moral heritage, and the exposition of scientific treatises. "

From the Aryan we are kind, we have language  
and culture,

Knowing language will open lands of ancestors  
and masters.

Knowledge, science, wisdom – all it came from  
knowing language,

And the flower garden is showered with the sages

of old times. <sup>34</sup>

The acquisition of state independence created the conditions for the construction of a reliable foundation for the development of various modern sciences. Thanks to the creative initiatives and proposals of the Founder of Peace and National Unity, the Leader of the Nation, and the President of the Republic of Tajikistan, esteemed Emomali Rahmon at the period of independence, significant work was done in order to increase the level of intellectual potential and develop science and these transformations were made not only in the field of science but all spheres of life. The formation of educational institutions, institutes and universities, research institutions, colleges and lyceums testifies that the civilized Tajik nation continues the traditions of their ancestors, which has made and continues to contribute to ancient and modern world history.

It must be recalled that the Leader of the nation, as an outstanding person and an erudite scientist, in the recent years his messages pay special attention to the issues of education, obtaining and mastering knowledge, culture and spirituality, studying the experience of advanced states, gives instructions and orders for the development of modern sciences and raising the level of training and education.

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<sup>34</sup>Nihoni. The gonfalon of honor. Dushanbe: R-Graf, 2018. P. 121



At a meeting with workers in the field of science and education and the country's creative intellectuals, the Leader of the nation noted that the 21st century is an era of unprecedented progress of new science, technology and modern technology. In such circumstances, the further development and progress of the country entirely depends on the support and implementation of scientific achievements in production.

It should be emphasized, that from the very first days of state administration, the great Leader of the nation, esteemed Emomali Rahmon, despite the unfavorable political situation, in the absence of hope for the stability of the state and nation among the country's population, with a zero state budget of the republic, he created the foundations for ensuring security and political stability, universal unity of society, and the achievement of the strategic goals of the state, which to this day are still bringing fruitful results and the Leader of the Nation purposefully puts tremendous efforts for their successful implementation.

Of course, the practical implementation of these goals alongside with ensuring the decent life for the country's population, the growth of the national economy and increasing the country's authority and influence in the international arena, will create a real basis for the development of various branches of science in the country and the implementation of scientific achievements in production will help in this hard task. In

the same time, the development of all spheres of society, the achievement of the strategic goals of the state and, in general, strengthening of the country's defense potential also have an inextricable link with the level and quality of scientific achievements, analysis and study of the state of science, as well as with further raising the status of scientists and researchers, the intellectual layer of population of the country in general. It is not a secret that programming, analysis and study, forecasting and fulfilling the requirements of the level and quality of strategic goals of the Government of the country depend on the scientific worldview, in particular, on the development of natural, technical and mathematical sciences. The "Accelerated industrialization of the country" can be considered a good example of the words said above. Such a need exists in our country, and therefore, from the first days of the creation of our national statehood of Tajiks, the great Leader of the nation has put science, especially the fundamental sciences, on a par with other spheres of public life as the priority at the center of his creative policy of the state.

It should be noted, that today it is impossible to imagine the development of the different spheres of social life, especially industry and economy, without experienced specialists and professionals same as advanced technologies. And therefore, annually significant funds are allocated from the state budget for the development and prosperity of the field of education

and science to create favorable conditions and opportunities for vocational training of the professional specialists and to increase the level and quality of knowledge.

From the first days of independence, the President of the country, puts development of science and education, the study of modern technologies, strengthening of intellectual potential, and the formation of the language of science in the first place, considering education and knowledge to be one of the key areas of statehood.

At the same time, attaching paramount importance to the education of personnel and the strengthening of intellectual potential, he regularly reviews funding for the field of science that were aimed at fulfilling the strategic goals of the state.

In the speech of the Leader of the Nation, it was noted that according to statistics of the year of 1985, there were 868 candidates of science (PhD's) in the structure of the Academy of Sciences, however, at present day, only 360 PhD's are registered in this institution, which is almost 300 people less than in 1985.

Currently, the number of employees of the Academy of Sciences is over 2,000, including 32 academicians, 52 corresponding members, 190 doctors of sciences and 360 candidates of sciences (PhD's). 1,500 young scientists are enrolled in training In the magistracy and doctoral studies of the Academy of Sciences, including 650 people

or 43 percent in the natural, technical and mathematical sciences, and more than 100 young researchers work at the Academy of Science after completing studies and graduating in foreign scientific institutions and universities.

From the first days of the creation of the Higher Attestation Commission under the President of the Republic of Tajikistan, to date, 56 dissertation councils and 15 expert councils have been formed in the country. Over the course of three years, 651 dissertations have been submitted to this institution. Of these, 415 theses were approved and 30 people out of them received the degree of doctors of sciences, 379 - the degree of candidates of sciences (PhD).

Significant progress can be made, if this powerful force and intellectual potential will be attracted to the development and prosperity of the different spheres of life, especially economics and industry.

In fact, the study of sciences, discoveries, and the correct awareness of the laws of nature require tremendous work and effort. In this field, success can only be achieved if you are engaged in daily self-improvement, reading books, researching, studying the theory and its implementation in practice. Focusing on this, the Leader of the nation correctly noted that the road to science was never easy and cannot be passed through without difficulties. To those who have chosen science as their profession, the performance of duties that

are far from the chosen scientific topic, creates obstacles to obtaining scientific achievements. People must correctly recognize the philosophy of science, its essence and place in modern society.

Regarding the problem of plagiarism, the President of the country said in present day, with the development of the Worldwide Web, many dissertations and scientific works are being published on social networks, and some applicants who want to get an advanced degree in an easy way, just reap them off without changing a single word.

Over 40 plagiarized scientists found by the “Dissernet”<sup>\*</sup> internet portal(network) are those who defended their dissertations at the Dissertation Councils on Economic and Social Sciences, including political science, law, and pedagogy.

It is known that some Tajik applicants, choosing an easy and beaten scientific path, widely used scientific dissertations of scientists from foreign countries to write their own work and claimed that it was fully written by them.

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<sup>\*</sup>The free network community “Dissernet” is a voluntary network community composed of professional scientists working in various fields of science both in Russia and abroad, as well as journalists, civic activists, and volunteers.

The community’s activity mainly consists in conducting public examinations of candidate and doctoral dissertations defended in Russian scientific and educational institutions from the late 1990s, and with further the widest possible publication of the results of such examinations.

Of course, these situations cause the degradation of Tajik science and slow down the fundamental researches on important issues of public life.

The philosophy of science is expressed in a variety of true and erroneous concepts that offer one or another model of enlightenment and the development of science. It is aimed at determining the role, significance and specifics of science and distinguishes it from other types of educational activities.

The philosophy of science, regardless of what is aimed at studying the natural or social sciences, has the status of socio-cultural historical knowledge.

Naturalism in the philosophy of science suggests that philosophy of science has to be continuous with science itself and that it cannot produce useful a priori conceptual truths about explanation. Issues about the nature of explanation are scientific issues, albeit ones that certainly can gain from careful attention to clarifying the claims involved. Not surprisingly, the scientific issues surrounding explanation in economics vary according to the part of economics that is under scrutiny. Clarifying claims about economic explanation in the concrete can shed both light on the economics and on our philosophical understanding of explanation.<sup>35</sup>

The government of the state actually realizes that over the past years, the natural sciences, without which

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<sup>35</sup>Philosophy of Economics, Harold Kincaid, 2012

the economic and social development of society is impossible, have not received equal attention in accordance with modern and future social needs and requirements.

Indeed, for a long time the Tajik people were considered prone to study only the humanitarian sciences (“Баски коми тоҷиконро бо сухан бардоштаанд...” (Baski Komi tojikonro bo sukhan bardoshtaand)”) (Tajiks are committed to the word). Even the famous scientists, who have chosen physics and mathematics, as their primary aim, later in life would have change the direction of their research to the humanitarian sciences. And only wrote scientific material and defended thesis’s in this field. They completely pulled away, distanced themselves from their primary goals and objectives. This phenomenon is not natural and does not correspond to social needs, which are the basis of the requirements for determining the directions of scientific research. It is necessary to put an end to this situation at the level of making cardinal decisions. “Each and every single person is made for a specific cause” (Jaloliddin Rumi). “It is impossible to teach to write poetry” (L.N. Tolstoy). Specialists in the field of exact sciences can be counted on the fingers of

one hand. They must be selected, cherished and educated<sup>36</sup>.

The philosophy of science is made interesting because of the joy of research, the discovery algorithm, the dynamics of the development of scientific knowledge and research methods.

If the main goal of science is to obtain truth, then the philosophy of science is one of the most important areas of application of intellect for humans and a way to show their consciousness, perception, in the framework of which there is a polemic (discussion) about the ways to achieve truth.

Each person has three main types of thinking - scientific, fantastic and religious, but scientific thinking, the part of which is technical thinking, is directly related to the social and material life of people. And therefore, the development of this new type of thinking has a paramount importance for humans, especially for adolescents and youth.<sup>37</sup>

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<sup>36</sup>S. Yatimov. The Message of the Leader of the nation and problems of development of education/ Explanation of the Message of President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: meaning and main directions. December 26th 2019– Dushanbe: «Irfon», 2020. – P. 79

<sup>37</sup>Khurshed Ziyoi. The development of technical thinking as an important mean for achieving national strategic goals // Comments on the Message of the President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: its main significance and directions. December 26, 2019 - Dushanbe: “Irfon”, 2020. - P. 125-126



It was noted that in the present conditions, i.e, at a time when conditions for the development of science were created, it is necessary to provide all reasonable means and methods for the free competition of science.

One type of activity that helps to increase the level of knowledge and enlightenment, mastery of eloquence, communication and attitude - is reading books. One of the greatest utterances that can be found in the scientific and fiction literature of the Tajik nation is the appeal “to the treasure of culture” - reading books.

The educational thinking of the Leader of the nation, the veneration of science, education, mastery and profession, the work of intellectuals, the constant and universal emphasis on promoting the pursuit of knowledge and gaining a profession and mastery need a separate study. This issue has theoretical, practical, and political features in the activities of the Head of State.<sup>38</sup>

The head of state at all meetings constantly reminds about the book and reading books, focusing on the fact that all sectors of society, especially adolescents and youth, must read books, expand their horizons and know foreign languages.

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<sup>38</sup>S. Yatimov. The Message of the Leader of the nation and problems of development of education/ Explanation of the Message of President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: meaning and main directions. December 26th 2019– Dushanbe: «Irfon», 2020. – P. 84

The strength and power of the human mind depend on the number of books one has read. One of the greatest philosophers and playwrights of the world, Denis Diderot (1713-1784) said: "A person stops thinking if he stops reading books."<sup>39</sup>

A book - the source of wealth of myriads -,  
Hurry to plunge into the world of knowledge!  
The answers to all questions hidden there,  
You will achieve desires of your soul.  
Hey Nihoni, it is food for the mind  
The book will make in culture revolution! <sup>40</sup>

Scientists, historians and literary scholars were instructed to collect written monuments about the literature, history and culture of Tajiks in different languages, primarily in ancient Aryan, Hindi, Greek, Armenian, Arabic, Chinese and Russian. Translate them into Tajik and make them available to readers.

In all his speeches and messages, the Great Leader of the nation relies on scientists and thinkers of the past. in order to preserve and honor their memory and deeds

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<sup>39</sup>S. Yatimov. The Message of the Leader of the nation and problems of development of education/ Explanation of the Message of President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: meaning and main directions. December 26th 2019– Dushanbe: «Irfon», 2020. – P. 86

<sup>40</sup>Nihoni. The gonfalon of honor. Dushanbe: R-Graph, 2018. P. 234

festive events annually are held, the streets, avenues, parks, scientific and cultural institutions are named after them. Over the past 10-15 years, dozens of scientific and literary events of international and national level have been held. This is a tribute from the President of the country to honor the world-famous Tajik history and literature.

The Leader of the nation also noted that in recent years it has become a good and far-sighted tradition in the capital, when children and relatives of deceased scientists, poets and writers donate their books to the National Library, which are stored there in separate corners named by their names, and readers can use their books freely. So the books can be saved from extinction, and on the other hand, this will perpetuate the names and memory of these scientists and writers. In this aspect, he turned to venerable scholars, children of famous scholars and representatives of the intellectuals, to donate their books to the National Library, so that others could use them, and also receive spiritual food.

A good knowledge of history, traditions and rites, culture and literature is given through enhanced reading. It was noted that the language, culture, traditions and national culture of wearing clothes are the mental values, thanks to which the world community recognizes and acknowledges Tajiks.

Addressing to the social science scholars, the Leader of the nation noted that they should be at the

forefront in the study, research and promotion of the foundations and ideas of internationally recognized Tajik culture and literature, national values, which are the essence and foundation of national secular statehood, and protect them with a sense of patriotism and dignity , to be an example for the younger generation and youth in the consolidation, formation and expansion of national and historical self-awareness.

The architect and builder of the future is youth,  
More worthy for the country we will never find.  
With knowledge and ideas in life they cut a path,  
They strive for prosperity, all the barriers are  
nothing.<sup>41</sup>

Unfortunately, the unwillingness of a certain part of adolescents and young people to receive knowledge and education and their illiteracy has led them to commit illegal acts and crimes because of ignorance. They are ruining their lives. They also fall into networks of extremist movements and groups, creating problems for themselves and their loved ones.

The great Leader of the nation, respected Emomali Rahmon, noted in his speech that: "... prejudice, extremism and religious radicalism are some of the

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<sup>41</sup>Nihoni. The gonfalon of honor. Dushanbe: R-Graph, 2018. P. 238

phenomena that threaten the peaceful future of our people. Most people do not appreciate life and the present from the perspective of logic, science and the scientific worldview. From our point of view, this is one of the reasons for the ossification of their mind and thinking”.

At present, we are witnessing a fierce clash of globalization processes and currents of the revival of national values, which, using all elements of civilization, ignore everything except their interests. Naturally, various undesirable phenomena are expressed and used in this field, including ignorance and prejudices that impede the progress and stability of national states and serve as means of realization of the selfish goals of interested groups”.<sup>42</sup>

In this regard, each member of the society should realize and explain to the young generation, that Tajikistan has already seen it firsthand and experienced the terrible tragedy of Syria, Iraq, Tunisia, Yemen, the Arab Republic of Egypt, Libya and Afghanistan. The consequences of that destructive war have not yet been overcome, neither materially nor spiritually. It will take decades for the country to correct this historical error, the roots of which were inside of the country, in the anti-

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<sup>42</sup>The speech of the President of the Republic of Tajikistan, the Leader of the Nation, esteemed Emomali Rahmon at the meeting with the scientists of the country. March 18, 2020 // Email adress: <http://www.president.tj/>

national behavior of representatives of the same nation, primitive and following worshipping strangers and foreigners. And this branchy tree, independently received moisture and flourished, was fueled from abroad, and still has not yet completely dried up, and its weakened echo, reminiscent of the unpleasant croaking of a crow, can be felt sometimes to this day. The small groups of terrorists are being destroyed or detained from time to time.

One thing is indisputable that none of the external forces, will not finance people for personal gain, will not support cooperation, will not be able to destabilize the state and disrupt the peaceful life of citizens if they don't find traitors inside the state.

The state and nation should be united and whole in a spiritual, educational, self-conscious sense to such an extent that their historical fate could never depend on external factors. For national states, these kinds of threats are constant, eternal and endless. They arise in the form of various forces, dangers of worldviews, slogans and promises.<sup>43</sup>

During its existence and to the present, humanity has always tried to create favorable conditions for its life,

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<sup>43</sup>S. Yatimov. The Message of the Leader of the nation and problems of development of education/ Explanation of the Message of President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: meaning and main directions. December 26th 2019– Dushanbe: «Irfon», 2020. – P. 88

free from prejudice, fanaticism and, in general, from ignorance. However, in spite of these efforts and aspirations, there are interested circles and short-sighted persons - enemies of science and enlightenment, which impede the progress and development of society.

In the Explanatory Dictionary of the Tajik language, the word «*джахолат*» (jaholat) (ignorance, backwardness) is interpreted as ignorance, short-sight, uncivilized, darkness, savagery, barbarism, stupidity. In this regard, the word «*джахолатпараст*» (jaholatparast) - means ignoramus, a dark person, obscurantist, unenlightened, an enemy of culture, etc.<sup>44</sup>

The word «*таассуб*»(taassub) is interpreted in three meanings - full support or hostility towards a person, protector and supporter of something, abstinence from something, adherence to religious views and old national customs, fanaticism and vindictiveness.<sup>45</sup>

As it is very clear now, that the concepts of «*хурофот*» (hurofot) - (prejudice), «*чахолат*» (jaholat) - (ignorance) and «*таассуб*»(taassub)-(fanaticism) in all semantic meanings, are acquiring a negative

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<sup>44</sup>Толковый словарь таджикского языка. Душанбе.- 2008. - С. 58

<sup>45</sup>S. Yatimov. The Message of the Leader of the nation and problems of development of education/ Explanation of the Message of President of the Republic of Tajikistan to the Majlisi Oli of the Republic of Tajikistan: meaning and main directions. December 26th 2019– Dushanbe: «Irfon», 2020. – P. 283

connotation, impede the normal process of development of society, especially the scientific worldview.

Of course, fanaticism and prejudice also had a negative impact on the worldview and development of human society, especially during the European Middle Ages. However, the realities of life have proved that only by eliminating superstitions, religious dogmatism and using practical knowledge have saved the public worldview from negative influence and ensure the connection between science and production.

Tajiks as representatives of Aryan civilization, owners of a creative and humanistic culture gave the world the best spiritual and moral values. Although, in the presence of such cultural and spiritual wealth that have attracted the attention and interest of the world community, there are still greedy, fanatical and ignorant persons who are far from the essence of religion, and who by any means and ways, including misinterpreting the highest religious values and the intricacies of religion, leading society back to ignorance and dark times. A striking example of the words said above can be the tragic events of the 90s of the last century in our beloved Motherland - in Tajikistan. During these years, due to the intrigues and selfish goals of the internal and external masters (owners), Tajik society was plunged into the maelstrom of a civil war, which simultaneously with the human loss, moral and material damage, also suspended the development of science, brought ignorance and



fanaticism to unprecedented level. This all led to a difficult political situation and also endangered the security of the country's intellectuals, scientists and culture, thereby put the science in a difficult position. Those who were unfriendly and hostile to the people and the state, who became puppets in the hands of their foreign masters, in order to destabilize the political situation, especially to discriminate against the government, planned the destruction of famous people of the nation and country, especially scientists, and organized several attempts and killed few prominent scientists of the nation, including the president of the Academy of Sciences of Tajikistan, Muhammad Osimi, as well as two pillars of Tajik medical science, professors Yusuf Iskhoki and Minhodzha Guloyaev. In addition, during this period, a number of famous figures such as Safarali Kenjaev, Nurullo Huvaidulloev, Moyensho Nazarshoev, Murodullo Sheralizoda, Otakhon Latifi, Saif Rakhimzod, Muhiddin Olimpur, Karim Yuldashev, Khushbakht Khaidarsho, Davlatali Rahmonali and dozens of others were killed.

The civil war, which was gradually getting the tragic proportions and was on the way to annihilation of the nation, had grave consequences, caused numerous casualties, incalculable moral and material damage: tens of thousands of the sons of this Fatherland were killed, more than 1 million became refugees and forced

migrants. Total material damage amounted to more than 7 billion US dollars.<sup>46</sup>

Has to be noted, that it is impossible to ensure the national security without scientific knowledge. Without it (scientific knowledge), one can easily succumb and become an adherent of rumors, far-fetched, baseless, selfish statements, dangerous and baseless accusations and prejudices. But will never think of ensuring national security.<sup>47</sup>

The history of the human worldview and thoughts testify, that science and knowledge have never been enemies of religion and faith, on the contrary, they were opponents of prejudice, conservatism, inventions of ignorant and semi-literate religious figures. Not a single real thinker and sage of the past and present opposed religion; on the contrary, they criticized prejudice, ignorance and fanaticism.<sup>48</sup>

The envious people of the nation and state, fooled by the selfish ideas of interested groups who do not know that the long-suffering Tajik people, despite the fact that they have been subjected to exploitation, genocide and killings many times, as well as their treasures of culture and scientific and literary repositories were burned in

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<sup>46</sup>RahmonovEmomali. Independence of Tajikistan and rebirth of the nation. Volume VI.–Dushanbe: «Irfon», 2006. - P. 397

<sup>47</sup>S Yatimov.Science and security. Dushanbe: 2019. - P.22

<sup>48</sup>D. R. Komilov., D. Kh. Zabirov. Understanding extremism in the world society. Dushanbe. 2020. - P. 39

fire, were able to preserve for their inborn patriotism, spiritual and moral values and the experience of public administration to the present time.

The experience of history indicates that all foreign invaders sought to destroy the rich spiritual values of the Tajik-Persian culture. One of the historical periods that caused severe damage to our spiritual values was the attack of Alexander the Great. In this historical period "... the cities of Balkh, Bukhara, Samarkand, Merv, Girat and many others were turned into ruins. The robbers first of all, carried away the rich treasures of culture and enlightenment of the nations of Central Asia and Iran. They had a negative impact on the development of science and education of the people of Sogd, Bactria, Parthia and Khorezm. At the behest of Alexander, the rich historical treasury of the Iranians "Avesta" was burned to the ground, causing great spiritual damage to the people of Central Asia.<sup>49</sup>

According to the information of Diodorus (XVIII, 7) and Curtius (II, 16, 9), Alexander the Great took 120,000 talents from the treasury of Takhti Jamshed = 3840 tons of gold and silver.<sup>50</sup>

Alexander the Great in order to diminish the greatness of the Achaemenids and expose his strength

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<sup>49</sup>M. Mukhtorov, A. Rahmatulloev, the history of Tajik nation .Volume I. M.; 2002. - P.52

<sup>50</sup>Emomali Rahmon. A glance at the Aryan history and civilization. Dushanbe. 2008. - P.143

and victory robbed, and then burned down the city of Persepolis.<sup>51</sup>

This kind of situations existed and happened during all periods of foreign conquests and raids, including during the time of the Arab invasion, and Turkish-Mongol invasion, which dealt a deadly, devastating damage to the development of science, the formation of outstanding personalities of the Tajik nation, which shined like the brightest stars in the world of science and literature. They took our scientific, cultural and spiritual material heritage, and later they represented it on their own behalf.

In this regard, the President of the country, turning to political scientists, philosophers and social scientists in general, considered it necessary that they comprehensively study and analyze the causes and factors of fanaticism, exacerbation of religious extremism and their consequences, and proposed ways to eliminate ignorance and backwardness, determining all the internal and external causes and factors of the outbreak of civil war in the country.

One of the most famous publishing houses of The Great Britain published a dictionary called "The Penguin dictionary of Proverbs" (1999), which includes over 6,000 didactic words and terms. Some of the facts regarding

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<sup>51</sup>Emomali Rahmon. A glance at the Aryan history and civilization. Dushanbe. 2008. - P.151

knowledge begin with “Doubt is the key of knowledge”. Belonging to this term is attributed to our people. These words do not need comments or any further explanations. However, anyways, this statement is opposed to a blind following attitude to any event, worldview, idea, positioning, including extremist and fanatical thinking. Of course, the essence of science is knowledge of the material roots of the causes and questions “Why?” and “Wherefore?”. Science is defined as the observation, identification, description, experimental investigation, and theoretical explanation of natural phenomena. The book gives concrete answers to all these questions and problems.

During the period of the imposed civil war, which arose because of the traitors and ill-wishers of the Tajik nation, including the terrorist and extremist revival parties, the best scientists and specialists were forced to leave their homeland, and in addition to that it accused enormous damage and destruction to all spheres of life of the state and population, science and education were also suffering. So today, to prevent the recurrence of this kind of events, people must know the causes of that devastating war.

In the context of globalization, increasing geopolitical competition, growing manifestation of extremism, terrorism and other global problems, a comprehensive study of philosophical, legal, social, political, spiritual and moral thoughts are the

requirements of the time, the study of the material and non-material culture of the nation should be a priority area of scientific researches.

The aspirations of the Leader of the nation are aimed at bringing Tajik science to the world level. Therefore, all scientists and thinkers should direct their intellectual potential to scientific and technological innovations. With innovations and fresh discoveries they have to contribute to the development of spheres of life, including the economy and industry.

Culture – was the essence of the nation and remains,  
And in every corner, learning should be light of knowledge.  
Education, science, wisdom must be developed,  
And if science is inactive, consider it cold dead.

At the same time, it was emphasized, that the Academy of Education should pay priority attention to issues of forecasting the development of education and provide specific recommendations and suggestions on the role and place of a modern school, the level and quality of textbooks, should be introducing ideas of national statehood and public administration, study and analyze the value and mentality of the people in textbooks on humanitarian subjects and social science, the educational process, the proportions of academic hours, active teaching methods, effective ways of

studying the natural mathematical and exact sciences, the formation of the intellect of pupils and students.

His Excellency, paying attention to the selection and upbringing of capable and talented children, emphasized that this process should begin precisely in preschool institutions, the introduction of their targeted and promising education is very necessary.

The Presidential Schools were created in all areas and big cities with full support of the Leader of the nation. He always supports science and education, cares for the future of the nation and strives to help talented kids and teenagers with their education and studies. The continuation of this initiative is the foundation s of intellectual schools in the structure of the Academy of Science. The creation of target groups in the Presidential Lyceums at the expense of senior students was the next step of achieving those goals. The purpose of those groups is to study the exact, mathematical and natural sciences, with paying serious attention to the level and quality of knowledge acquisition, which is an important step in the development of science and education.

Philosophy, Politics, Algebra, Astronomy,  
Study all the sciences to theology and mathematics. <sup>52</sup>

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<sup>52</sup>Nihoni.The gonfalon of honor.Dushanbe.R-graph- 2018.P. 235

In order to study the advanced experience of developed countries in the field of science, as well as to familiarize our youth with the acquisition of knowledge in the well-known international institutions, the Head of State created the conditions for founding branches of authoritative universities of the advanced countries in Tajikistan.

At the same time, it was emphasized that specific measures had been taken to develop the energy sector, and special majors related to renewable energy sources, that is, “green energy”, “green economy” and “digital economy”, would be formed in higher professional educational institutions of the country. In the future, the role and place of higher education institutions should be assessed and determined not by the number of graduates, but by the number of graduates provided with jobs and their scientific achievements introduced into production.

The head of state annually pays special attention to encouraging pupils and students of educational institutions, setting privileges and presidential scholarships for the students with the highest grades. At various meetings and conversations, when young people and adolescents turn to the Leader of the nation for help for acquiring education, this is always positively perceived by the Leader of the nation, and he always lends a helping hand for their subsequent training in educational institutions. He always notes that he is very happy when young people turn to him with a request to



continue their studies. He's happy, because just a few years ago these appeals were mainly about life or material difficulties, but now it's different.

The Leader of the nation sincerely strives for the Tajik people to become highly educated and highly professional.

He considers youth to be the future of the nation and state.

At the annual meeting of this year, the Leader of the nation instructed the government to bring the number of nominees for the Presidential Scholarship of the Republic of Tajikistan, studying at secondary schools and showing good results in natural, mathematical and exact subjects from 400 to 3000 people and set its amount to 500 somoni starting from January 1, 2021.

He also instructed them to increase the number of recipients of the Presidential scholarship in higher professional educational institutions from 100 to 500 people and post-graduate students of higher educational institutions and scientific institutions from 15 to 50 people. Of the total number of Presidential scholarships, 70% should be directed to the natural, exact, and mathematical sciences.

Also, the scientific, teaching and educational staff of institutions and those who make a worthy contribution to training and education of students did not remain out of sight of the Leader of the nation. It was emphasized that it is necessary to discuss and solve the

issue of increasing the salary of teachers of natural, exact and mathematical subjects in the general educational institutions from September 1, 2021, especially paying attention to young teachers.

The Leader of the nation gives orders and instructions regarding the growth of the agricultural industry, increasing its productivity and preserving sown areas, orchards and vineyards.

The Academy of Agricultural Sciences, makes a worthy contribution to ensuring the country's long-term security, and also has achieved significant results in the development of innovations, implementation of international programs and innovative projects as part of their study of modern breeding methods, technologies for growing crops and animal husbandry, the construction of intensive gardens, methods of combating diseases and pests of crops and animals using funds from the Presidential Foundation for Fundamental Research. Emphasizing the rational and scientifically reasonable use of the rich nature of Tajikistan, the President noted that geology and mineralogy are among the sciences, development of which is highly required and there is a favorable basis for researches, discoveries and innovations in this direction. Domestic entrepreneurs annually spend over 20 million USD to import natural decorative stones into the country and the development of the above scientific branches will allow establishing further production of such stones within the republic.

The ways of developing science and improving the quality of scientific research have been specifically, simply and clearly explained, and giving the status of a “national” to the Academy of Sciences of the republic will help to represent Tajik science on the international arena.

Stimulation and encouragement of scientists and scientific researchers, such as reviewing the salaries of employees of the National Academy of Sciences, establishment of state awards for scientists and teachers of natural, exact and mathematical sciences, the annual awarding of 15 of these awards, comprehensive support for young teachers and educators whose students win prizes at national, regional and world competitions and have scientific and pedagogical achievements. These are factors proposed by the President of the country as a result of a real and visionary analysis.

Also, the formation of the Council on Science, Education and Innovation under the President of the Republic of Tajikistan, verification of the activities of research centers and institutions and the study of the position of departments of higher professional educational institutions contribute to the progress and development of science and education.

The creation of the TV channel “Science and Nature” will be one of the important sources for the development of science in Tajikistan, by watching which young people, teenagers and generally the population of

Tajikistan will be in touch with the scientific innovations, and in the same time this will increase spirituality and morality.

The President of the republic, pays serious attention to the language of science in his reports, and has suggested giving priority to those dissertations which were written using Tajik, that is, in the state language. At the same time, he emphasized that the scientists and thinkers in sake of the further development and progress of Tajik science need to learn foreign languages.

The Tajik language takes a decisive position in politics. It is declared a national mentality, a true factor in achieving state independence, the main foundation of national self-awareness and self-knowledge.<sup>53</sup>

In order to correct existing shortcomings and improve the quality of scientific research in all scientific academic institutes and centers, the Great Leader of the nation made concrete proposals and recommendations for the timely solution of these problems and for the future development of science within 14 points:

**First.** The Ministry of Education and Science, the Academy of Sciences of the Republic of Tajikistan, branch academies and scientific units of higher professional educational institutions, taking into account the prospects for the development of domestic science and new public relations, need to reconsider

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<sup>53</sup>S Yatimov. Science and security. Dushanbe: 2019. - P.83

custom topics once again and bring their structure in line with modern conditions.

**Second.** The Academy of Sciences, branch academies and scientific units of higher professional educational institutions need to implement the modern procedure of “program financing”, “financing of the state order” and “financing by attracting foreign capitals”.

**Third.** Research institutions of all scientific structures have to organize cooperation with state institutions, individuals and legal entities on the issue of introducing their discoveries into production and submit proposals on the implementation of their scientific orders for financing to these departments and companies.

**Fourth.** The Government of the Republic have to take measures to reorganize the structure of the Academy of Agricultural Sciences and submit its proposals to the Head of State within one month.

**Fifth.** The Ministries of industry and new technologies, agriculture, health and social protection of the population, energy and water resources, other industrial enterprises (regardless of the legal form and type of ownership), manufacturing entrepreneurs, local government of regions, cities and districts have to take measures to implement achievements of Tajik scientists and submit reports on their results to the Council on Science, Education and Innovation under the President of the Republic of Tajikistan every 6 months.

When assessing the state of the real sector of the national economy, the Ministry of Economic Development and Trade should develop and introduce, as an index of indicators, the use of scientific achievements of Tajik scientists and innovative achievements of Tajik producers that are implemented in practice and based on their results, annually submit information to the Government of the country.

**Sixth.** The Ministries of finance, economic development and trade should provide funding for the Permanent Foundation for Basic Research at the expense of the state budget in the amount of 3% of the total funding for the field of science.

The Academy of Sciences has to revise the system of financing of the scientific topics, allocate funds to resolve issues of paramount importance for socio-economic spheres.

**Seventh.** The Academy of Sciences of the Republic of Tajikistan should be given the national status, and hereinafter it has to be referred to as the “National Academy of Sciences of Tajikistan”.

In this regard, the National Academy of Sciences of Tajikistan is obliged to completely review its structure within three months, develop the relevant regulatory legal acts related to obtaining the status of “national” and submit it to the Government of the Republic of Tajikistan.

**Eighth.** In order to support scientists and development of science, after a complete review of the structure of the Academy of Sciences, instruct the Government of the country and the Ministry of Finance to take measures to review the salaries of employees of the National Academy of Sciences by the end of this year.

**Ninth.** In order to regularly study the real state of science and education, the process of implementation and monitoring of the industrial programs and the implementation of innovations of domestic science in practice, it is proposed to create a Council on Science, Education and Innovation under the President of the Republic of Tajikistan.

The Council should be convened at least twice a year and it should discuss current issues of science and education.

**Tenth.** The Executive Office of the President of the Republic of Tajikistan should create a competent commission with the involvement of specialists and experts of the field and check the activities of all scientific centers and research institutions over the past 5 years and, based on the results, prepare a report to the Head of State.

The Executive Office of the President of the Republic of Tajikistan will also create a special commission to check the status of departments of higher professional educational institutions and departments of scientific institutes in the field of natural, exact and

mathematical sciences, conduct certification of faculty and report on the results to the Head of State.

Entrust the Executive Office of the President to create a joint group out of the employees of the Executive Office, ministries of education and science, health and social protection, industry and new technologies, labor, migration and employment, and study the status of classrooms of secondary, primary and secondary pre-federal educational institutions, laboratories and training centers of higher educational institutions and research institutes of academies and provide the President with detailed information within 4 months.

**Eleventh.** The government of the country should establish a special state award for scientists and teachers of natural, exact and mathematical sciences, and annually award 15 people with this prize.

**Twelfth.** Under the decree of the Government of the Republic of Tajikistan dated May 3, 2006, “About the establishment of benefits for young teachers”, the heads of the local executive authorities of regions, cities and districts are obligated to support young teachers, whose pupils have won prizes in the republican, regional and international competitions, and also have scientific and pedagogical achievements and encourage them materially and morally.

**Thirteenth.** Students who graduate from secondary schools with a Presidential scholarship has to be enrolled to the natural, exact and mathematical majors of higher



professional educational institutions without passing exams at the National Testing Center.

**Fourteenth.** The Committee on Television and Radio Broadcasting is obliged to create a new TV channel named “Science and Nature” within 6 months, and organize training in natural, exact, mathematical and technical subjects and modern technologies through this channel and TV channel “Bahoriston”, with attracting of the experienced teachers for and industry experts, and in daily programs have to acquaint people with the achievements of domestic and world science and innovative discoveries. <sup>54</sup>

In connection with these problems, the Head of State gave specific and useful instructions to the relevant ministries and departments and scientific institutions for timely correction of shortcomings and prospects for the development of the country's scientific sphere. Undoubtedly, the proposals and recommendations made by the Great Leader of the nation are a key factor in solving the problems and shortcomings of the industry, they inspire the relevant structures and, in general, the country's intellectuals to devote all their intellectual potential to improving Tajik science.

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<sup>54</sup>Speech of the Leader of the nation, President of the Republic of Tajikistan, respected Emomali Rahmon at a meeting with the intellectuals of the country. 03/19/2020, No: 57

In his speech, the Leader of the nation objectively noted three effective factors in the development of science and education in the republic:

**First.**Acknowledgement of intellectual abilities. Undoubtedly, the support of intellectual abilities, which are characteristic to everyone in varying degrees, allows the individual to fully use his potential for the development of science and society. Recognition of intellectual potential can contribute to the birth of new faces in the scientific field.

**Second.**Creating healthy and free scientific competition. Healthy and free scientific competition is an important part of the scientific field, and it is a result of a scientific dispute where the absolute truth is born.

**Third.**The existence of responsible principles and honesty. These principles are one of the important factors in the development of society, and they should be the main source of their scientific activity for each researcher. For every person, especially the intellectuals, should remember their responsibility to the past, present and future generations, and strive to preserve the scientific heritage without change and what is more important, leave one behind.

In addition to this, he named three harmful subjective factors:

**First.**Rejection of true talent. Disavowal and repulsion of true talent in scientific life rises the

intellectual crisis and causes the disappearance of new abilities.

**Second.** Absolute self-confidence and rejection of one's mistakes. The self-confidence and rejection of one's mistakes is the death of science. Science exists where there is a debate. Only the results of disputes and discussions, the calm acceptance of opposing opinions and statements, the recognition of errors and their correction are an important step in the development of science.

**Third.** The introduction of self-interest in science and scientific relations. Such a factor, not only rises the hostility, hatred and contradictions among scientists, but also can serve as groundless and erroneous attitudes and lead to errors. This is a negative blow to the development of science.

In this regard, the Leader of the nation emphasized that in other words, free competition, objective criticism and a love for the creative work are the essence of real science. Also, our thoughts and opinions should not be afraid of criticism.

It would be right if these factors were observed by those who connect their life and future with science, those, who really want to become scientists and thinkers from the bottom of their hearts, and use these factors in their scientific activities and, most importantly, make them the slogans of their life.

Compliance with these factors and the adoption of the “National Strategy for the Development of Natural, Exact and Mathematical Subjects (Sciences) for 2021-2030” and the “State Program for the Detection and Development of Talents for 2021-2025 in the Republic of Tajikistan” will certainly make a worthy contribution to development, progress and prosperity of Tajik science.

Each meeting and conversation of the Founder of Peace and National Unity, the Leader of the Nation, the President of the Republic of Tajikistan, respected Emomali Rahmon with the intellectuals, representatives of science and culture, history and literature, industries and economics, law enforcement agencies is a testament to his tireless concern for the fate of the state, nation and population of Tajikistan.

## CONCLUSION

We can conclude from the analyzes and researches, that science is a complex of human knowledge about nature, society and thinking.

Tajiks as a civilized nation, for the entire period of their existence, were able to educate a galaxy of bright stars of world science and culture, create their own research centers, cultural centers, famous libraries and cultural areas.

From ancient times to the present the only goal of science is the practical implementation and systematization of the true knowledge.

The State and the Government, in particular, the Great Leader of the nation, respected Emomali Rahmon, identified the scientific sphere from the first days of the independence of Tajikistan as a priority direction for the development of society and the state, took concrete measures to practice the implementation of the main tasks, and significant progress was achieved in this direction.

The adoption of the State programs and strategies, regulatory legal acts, the creation of research centers, industry academies and the development of the scientific potential of the National Academy of Sciences of the Republic of Tajikistan, and in general, the analysis and consideration of the competitiveness of the scientific

sphere in the country are also aimed at the implementation of the requirements of scientific tasks .

Also the development of the sphere of education, training of scientific personnel, strengthening of feelings of patriotism, self-awareness and self-knowledge, respect for universal and national values, strengthening of public thinking in the understanding of the essence of modern trends, knowledge of the realities of religion and faith, struggle against the ideology of terrorism and extremism, withdrawal of public thinking from threats of fanaticism and prejudice and presentation of Tajikistan's achievements in the international arena and Tajikistan's contribution to solving the environmental problems of the planet and other important factors related to the development of science are included in the range of issues aimed at the practical implementation of the tasks of the scientific sphere.

At the same time, the traditional meetings and conversations of the Great Leader of the nation with scientists, thinkers, and the country's intellectuals is the most important factor that gives an impetus to the development of science, education and the intellectual abilities of the country.

The next meeting of the Great Leader of the nation, respected Emomali Rahmon, with the country's scientists, which took place on March 18, 2020, is a clear evidence of the attention of the Great Leader of the nation to the scientific field.

Indeed, , all aspects of the country's scientific industry, especially fundamental sciences, were analyzed and at this meeting. prospects for the development of the country's scientific sphere related to its competitiveness in the process of accelerated development of science and innovations were identified.

The important issues that were discussed at this meeting were the determination of the place and role of science, increasing the sustainable role of science in society, especially giving the status of the “national” to the Academy of Sciences of the republic. Of course, the activities of branch academies were also analyzed at the following meeting, was established the need for their existence and their position in the process of coordinating science and production, and were planned prospects for their future activities.

Another important issue that is considered relevant during the transient development of social relations is the development of science, strengthening of technical thinking, appeal of young people to the natural, exact, and mathematical sciences. This issue will be very important during the announcement of 2020–2040 as the 20 years of the study and development of the natural, exact, and mathematical sciences. For it is the natural, exact, and mathematical sciences that are the most important foundation of a secular worldview and the most effective means for educating a visionary and wise, free-thinking person.

Another aspect of the meeting of the Great Leader of the nation with scientists of the country, which is the decisive program for predicting the development of the scientific field and the individual activities of each scientist, is the connection between science and production and the training of personnel who meet modern requirements. The position and potential of the activities of scientific institutions of the country in connection with modern public demand were also comprehensively analyzed and reviewed at this meeting, and the prospects for their development were determined.

It is appropriate to emphasize that all the instructions and orders of the great Leader of the nation expressed at the meeting with the country's scientists were received by scientists and intellectuals with satisfaction and readiness for their practical implementation.



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