



## Development Of Science And Education System During The Timurid Period And Its Features Factors

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Article History	Abstract
Received: 15 September 2023 Revised: 05 November 2023 Accepted: 28 December 2023	<i>The article talks about the development of science in the Timurid era, its socio-political foundations, the development of the Tailim system and its specific factors. National and universal values of the Turan period of the reign of Amir Temur and the Timurids are highlighted on the basis of historical sources, monuments, science, art and the formation of human qualities.</i>
<b>CC License</b> CC-BY-NC-SA 4.0	<b>Keywords:</b> Lower Madrasah, Oliyad Madrasah, Ikhlosia Madrasah, Ulugbek Madrasah, Baburiy School of Miniatures, Mudarris, Ilmi Nakliya, Ilmi Akliya, Sanad, Gijduvan Madrasah, Mirzo Ulugbek, Ali Kushchi, Abdurakhman Jamilar, Gazizadeh Rumi, Giyasiddin Jamshid al-Koshi.

### 1. Introduction

Central Asia is one of the ancient centers of world civilization, and historically it is known that in the Turonian territory, from ancient times, elementary schools and educational institutions that provide education to adults began to form. In the IX-XII centuries, when the first Islamic Renaissance was considered, Movarounnahr became one of the cultural centers of the Islamic world. The scientific heritage left by our great ancestors who lived during this period also had a great influence on the development of universal civilization, setting the templates of the culture of the Islamic era. The fact that our great ancestors received their initial education in the major cities of Movarounnahr and Khorezm, known as the cultural and scientific centers of the Islamic world, is also clear evidence of the achievements of the educational system during this period. As early as the early Islamic period, primary schools and madrasas began to be built in Movarounnahr.

In general, the education system of the Timurid period has been recognized by a number of scholars, of which, I.M.Muminov B.Akhmedov, O.Buriev, A.Mukhammadzhanov, Sh.Uljaeva, was also examples include foreign scholars such as V. Bartold and A. Mes ("Мусульманский Ренессанс") [1]. It is worth noting that, despite the fact that the Timurid Court spoke Turkic, classes in madrasas were conducted in Arabic language and writing, scientific and badiy works were written in Arabic, for this reason, the morphology and syntax sections of the Arabic language were deeply taught in madrasas. Excellent study, mastery of Arabic and writing was required of the mudarris and the student.

During the reign of Emir Temür and Temüri, the emphasis on education in Movarounnahr and Khurosan, patronage of science, became a state policy. In all cities, madrasas of higher education institutions were established, and mature scholars and scholars of their time were involved in teaching Student Sciences[2]. The era of Amir Temur and the Timurians is significant as a period of high development of the subject and educational system, science in the ancient Turonian land. The development of the Renaissance of the Timurid

period was directly due to the fact that a system of fair governance was established in the vast kingdom founded by Amir Temur. Having relied on the traditions of ancient Turkic statehood and Islamic Sharia in building a powerful kingdom and an enlightened society, Amir Temur had a deep understanding that the basis of any development was a quality education system. Therefore, in the first time, Sahibqiran followed the path of proper education and upbringing, raising the status of learned, enlightened individuals in society. Many primary schools were established in all the urban and large villages of the vast kingdom. Historical sources indicate that during this period, the tradition of giving a boy to school at the age of 4 years, 4 months and 4 days was in force, and primary education covered all the cultural lands of the vast kingdom.

The subjects taught in madrasas were divided into two phases of education, depending on the Mudarris position, the age of the student, the level of learning. The first is called madrasa, ilmi naqliya (Quran, Hadith, fiqh, Sufism) – religious sciences are deeply taught, ilmi aqliya (rational knowledge - history, literature - poetry, philosophy, geography, exact sciences mathematics, geometry, ilmi hayat, ilmi aruz, engineering, Arabic language and its morphology, logic medicine, calligraphy art) – while the natural sciences are given general information. The student, who graduated from general education madrasas, worked at mudarris level in small madrasas, Imam level in mosques, mufti level in barracks and other fields. Talented student graduates from lower madrasa continued their studies at “Madrasayi Oliya”. “Madrasayi Oliya” was considered the highest level of education and was mainly in large central cities like Samarkand, Bukhara, Herat. Friday to the student was considered a day off. Training for the student lasts six months in a year, from September to March. The remaining months were holiday months, and the Student were busy with a variety of jobs. According to researchers, thousands of student graduates graduated from madrasas a year, including more than ten thousand student over a twenty-year period at the Ixlosia madrasa in Herat. In madrasas, competitions were held in which the level of knowledge of students was checked during the course of the lesson, and the gifted continued to study[3].

As during the entire Islamic period, madrasas with foci of higher education were built in the major cities of the kingdom, where madrasa education was the main place in the development of science in the country. The emphasis on education, the patronage of science, had risen to the level of public policy under Amir Temur and the Timurids. Sahibqiran's assignment to the royal administrators was “to build mosques, madrasas and khanakahs in every small town, every village”, “to set daily salaries for Mudarris and sheikhs”, “to keep the sayids, ulama, mashoyix, fuzalo, exalted ones dear”, is also reflected in the “Temur tuzuklari”. This assignment of the Sahibqiron was naturally performed within the entire kingdom. “I have appointed scholars and mudarris to every city, teaching Muslims about religious issues and teaching them interpretation, Hadith, Fiqh from the sciences of Sharia creeds and Islam”, “Sayids, Ulama, mashoyikh, sages, muhaddis, historians, consider attentive people and replace perfect tributes” emphasizes Sahibqiron in his arrangements[4].

By order of Amir Temur, the teaching of religious sciences (tafsir, Hadith science, fiqh, etc.) along with secular sciences (handasa-geometry, al jabr-algebra, riyoziyot-mathematics, logic, astronomy-ilmi nujum, literature, history, calligraphy, etc). The large-scale creative work carried out in the country created a great need for higher-level specialists in the exact sciences, in particular in riyoziyot (mathematics), handasa (geometry), architecture, engineering. Madrasas, higher education institutions in Turan country, performed with honor the function of major scientific centers, enlightenment foci under Amir Temur and the Timurians. Each madrasa in the cities was allocated waqf land estates, and the revenue from them was sufficient for the salaries of the mudarris and servants of the madrasas, library provision, maintenance and other works.

Under the Timurids, the duration of training in the madrasas varied. In particular, under Mirzo Ulughbek, knowledge in madrasas lasted up to twenty years, and curricula were drawn up on this basis. This information is reflected in the foundations that have preserved us until our day[5]. Some sources, however, reveal that the term of obtaining a document of graduation from the Madrasa of Ulughbek was also sixteen years. In particular, Shamsiddin Muhammad al-Balkhi's madrasa-issued document (sanad) cites these data[6].

During the Middle Ages, the student lived and studied in madrasa dormitories, notably, Mavlono Mir Husayn Mu'ammoi lived and was educated in the madrasa “Ixlosia”. In this document (diploma), the student were given lessons, rights. The Sanad (resolution or diploma) records the subject, field and works of the student. Highly capable graduates were taken to work in their madrasa, including Ali Qushchi, a famous scholar of his time-who was considered a fuzaolo, and Abdurahman Jami, who acted as mudarris in the madrasa of Mirzo Ulughbek[7].

The main mudarrist of the Mirzo Ulughbek school, Kazizoda Rumi, had won the right to teach in the madrasa of 1435[8]. The Uzbek translation of this manuscript, which is today in the manuscript fund of the Institute of Oriental Studies, is published by academician B.Ahmedov, publishing in his pamphlet “Ulughbek”, highlights the process of education and upbringing of this period in the following sentences:”... Shamsiddin Muhammad al-Balkhi volunteered to travel from his homeland to distant lands to study science. Endured the hard work of

the alien... He settled in Samarkand for sixteen years. He asked me to grant him permission with the supreme sanad. I accepted her request. Faqir ul-khaqir Musa Ibn Muhammad Ibn Mahmud, popularly known as Rumi in Qazizoda, was the middle of the month of Rajab 838"[9].

Amir Temur was recruited to teach in madrasas of prominent scientists ulama of the Islamic world to teach madrasas in Turan land. By order of Amir Temur, a library was established in Samarkand, the only one of its time, and during the reign of Mirzo Ulugbek (1409-1449), this library fund was further enriched and became the real center of knowledge of the country.

Hence, Samarkand madrasa scholars have created teaching textbooks in various disciplines. Of the scholars, Mahdumi Mavloni Fasihiddin Muhammad an-Nizami created a teaching manual, a textbook on linguistics. His treatises on philosophy and mathematics were used as textbooks by the madrasa Student[10]. The famous scholar Mavloni Sa'diddin Mas'ud at-Taftazani's more than forty works (concerning logic, oratory, and Arabic grammar) were taught as textbooks in Movarounnahr madrasas from the 14th to 16th centuries[11]. Mirzo Ulugbek madrasas contain records of training of civil servants, ambassadors, military warlords (ulumi aqliya, ulumi mamuriya, ulumi kharbiya) in addition to specialists in exact and natural sciences. A characteristic feature of all eras in madrasas, The Boyfriends of scientists and Mudaris were called. Such meetings discussed the knowledge of the student, what textbooks and works to teach. In particular, in the Samarkand Marasa, more than ninety scholars, the student gathered in 1420, Zainiddin Wasifiy gives the following information: "scientists say that on the day of the meeting, on the day of ninety allomas, Mavloni Khofiy taught "al-Majist"[12]. Also, as Zainiddin Wasifi writes: "When the builders stayed close to the completion of the madrasa under construction in Samarkand when they asked Ulugbek who would become mudarris to the madrasa, M.Ulugbek says that whoever is aware of all sciences will be the same person mudaris. After a man from among the builders stands and says "I am a mudarris," the people of the palace science, led by Mirzo Ulugbek, ask him questions from different fields of science. He will answer all questions in full. Thereafter, this learned builder, namely Mavloni Muhammad Khawafi, is appointed mudarris to the madrasa by the decree of Ulughbek". This historical event testifies to the fact that Ulugbek revered the value of man not according to his origin, but according to his spirituality, knowledge. At the madrasa in Samarkand, his teacher, Kazizoda Rumi, along with Ghiyosiddin Jamshid ibn Ma'sud, taught by Ulugbek himself. "Learning is a farce for every Muslim man and woman", in the madrasa building, was a deeply meaningful call calling on the people to learn[13].

During the Timurid period, the madrasas were given the position of Mutawalli, distributing the income from the Waqf lands belonging to the madrasa from the Waqf's Holdings (caravanserai, shop, mill), and making them pay to the mudarris of the madrasa, with funds for the student to live in the ranjab farms.

The fact that Timur, who highly appreciated the people's knowledge, quickly became a council with the olimu fuzalos is noted in historical sources. In particular, Sharafiddin Ali Yazdi in his work "Zafarnoma" notes that if Amir Temur wanted to solve an issue, he first consulted with knowledgeable specialists of the same field, scientists. Amir Temur was very fond of historical scholars, and by the order of Sahibqiron, the activities of scribes and historians were established at the palace. This led to a high level of development of historiography under Amir Temur and the Timurids. Thus, the scientists ulama had become a social stratum with great respect and status in the Amir Temür and Temüri dynasties, which brought the second Islamic Renaissance to the surface in Movarounnahr and Khurasan. It led to the transformation of Samarkand, Kesh, Bukhara, Herat and other cities into centers of enlightenment and science. International trade and cultural ties were restored along the Great Silk Road, cooperation in various fields of science was established, and ambassadorial relations were established with neighboring and distant countries. These changes were fundamental to the science, culture and art, the focus on the maorif, the patronage-oriented public policy that Amir Temür founded in land and which many timurid rulers continued.

The work of the scientist ulama, who came to Samarkand from different regions of the vast kingdom, their scientific activities in different areas of science and science, played a key role in the emergence of the new renaissance in the ancient Turonian land. From the history of the world it is known that the progress of science requires a large investment and state patronage. This was realized by the enlightened ruler Timurid rulers teran, who, in all regions of the vast kingdom, brought to the level of public policy the knowledge of the people and patronage of the people's creation. Funds were allocated to various fields of science, prominent scientists and scholars at the expense of state treasury, and their scientific activities were financed from the state treasury. As a result of this policy, the intellectual potential of the Islamic world began to flow to Samarkand, the capital of Turan, and other cities. Scientists have become an influential social layer of society. All conditions have been created for them to live and engage in scientific activities.

Amir Temur's policy of patronage of science was continued by his successors, notably Mirzo Ulugbek. Mirzo Ulugbek, although born in a distant Sultanate, was brought up in Samarkand, the capital of the kingdom,

who, through the efforts of his grandfather Amir Temur, made his first literacy in the same city, which became the prestigious center of science and enlightenment of the entire Islamic world. Mirzo Ulughbek (1409-1449) paid great attention to the establishment of madrasas that became major educational institutions of the Islamic world and to attract mature scholars and scribes of his time to teach in these madrasas. In this respect, Mirzo Ulughbek holds a special place within the Timurid rulers[14].

During the reign of Mirzo Ulughbek, an observatory was built in Samarkand, madrasas in Bukhara, Gijduvan and Samarkand. During this period, more than 100 scientists in the city of Samarkand alone made outstanding achievements in various fields of science. Among them were Taftazoniy, Mavlono Ahmad, Kazizoda Rumi, Ghiyosiddin Koshiy, Muhammad Hafovi, Mavlono Ali Qushchi, and other notable breeds that have become known as the "Aflotuni" of their time. At the initiative of Kazizoda Rumi (1360 Bursa - 1437 Samarkand), who came to Samarkand in 1410 and became a mudarris in the Madrasa of Ulughbek, which began work in 1420, Ghiyosiddin Jamshid al-Koshiy and other prominent scholars were later invited to Samarkand. The Ulughbek madrasa in Samarkand had about 60 scholars in various fields of science. Glorified by his contemporaries as "Aflotuni contemporary", in Kazizo, Rumi taught mathematics and astronomy at the madrasa and served as the head of the observatory after the death of Ghiyosiddin Jamshid. In Kazizoda Rumi also led the construction of the Ulughbek Observatory in Samarkand, participated in the creation of a star chart in Ulughbek's "Ziji Kurogani".

Thus, the olimu Ulama had become a social stratum with great respect and status in the Emir Temür and Temüri dynasties, which brought the second Islamic Renaissance to the surface in Movarounnahr and Khurosan. It led to the transformation of Samarkand, Kesh, Bukhara, Herat and other cities into centers of enlightenment and science. International trade and cultural ties were restored along the Great Silk Road, cooperation in various fields of science was established, and ambassadorial relations were established with neighboring and distant countries. These changes were fundamental to the science, culture and art, the focus on the maorif, the patronage-oriented public policy that Amir Temur founded in Zamiri and which many temüri rulers continued.

In general medieval madrasas taught etiquette, ethics as well as education. This tradition continues under the Timurids. In Particular, I. Hamdamov's research, Alisher Nawai's "Waqfiya" quotes the following social considerations about etiquette, order in madrasas: "Shart ulkim, madrasa mavolisi (egasi) madrasada batutat (kechasi yotib qolish) qilg'aylarkim, agar o'zga erda sokin bo'lub, dars chog'i hozir bo'lmasalar, muqarrar qilg'on vazifaning nisfin (yarim) olg'aylar va bu madrasa va xonaqohning mudarrisidin yo talaba va mutavalli va Shayx va huffoz va soyir amalasidin (amaldor) nomashru'amre sodir bo'lsa, ikki qatlag'acha shar'an har muvohazag'a (tanbeh) mustavjib bo'lsalar, anga ko'ra bo'lsalar, anga ko'ra ta'zir va ehtisob qilsunlar. Uch qatla vujud tutqondin so'ngra ixroj qilsunlar, dag'i o'nriga Yan kishi nasb qilsunlar" [15].

During the reign of Shohruh (1405-1447), Mirzo Ulughbek (1409-1449), Sultan Abu Said (1451-1469), Sultan Husayn (Boyqaro) (1469-1506), science and culture and Movarounnahr and Khorasan found fame as major cultural centers of the Islamic world. During the same period as Mirzo Ulughbek, the capital of the second part of the Emir Temür state, Khurosan (Afghanistan, lands from western Iran to Delhi), Herat became a major center of literature, fine arts and culture. Khurasan was ruled by Shahruh Mirza (1409-1447), the father of Ulughbek. As well as being a devout man, he also spearheaded the progress of Science and culture in Herat. His son Boysunqur Mirzo was a patron of the arts as well as being a palace Minister. As a mature calligrapher of his time, there has been information that he copied the book of the Quran with a beautiful letter. Boysunqur Mirzo Hirot, a large library of more than forty bookmasters, khattot, naqqosh, musavvirs, founded the Academy of arts of his time. Here in the library are the inventors of the Nasta'liq letter Mavlono Jafar Tabrizi, major scholar and poet Shahiy Sabzaboriy, musician Amir Shahiy, khattot, musevvir Mavlono Muhammad Pahlavi, khattot Mavlono Shams Boysunquriy, naqqash Bobojon Turbatiy, naqqosh, musavvir Ibrahim Astrabadiy, Ibrahim Tabriziy, Mavlono Zahiridin Azhar Tabriziy, khattot Nur Kamol, Abdulhai kotib Hirotiy, etc.the musicians worked. About this Iranian scientist Rukniddin Khumoyun Farrukh "...The foundation of the heretic school was laid by Shohrukh and Boysunqur Mirzo", which gave a correct assessment of the great merits of the temurians in the development of Biblical Art. The second half of the 15th century the beginning of the 16th century under Sultan Husayn Boyqaro and Alisher Navoi was the period of the rise of Herat Kitabat, the image art. Like Mirak Naqqash, Khattat Sultan Ali Mashhadi, Shah Muzaffar, Kamoliddin Behzad, Mahmud Muzahhib Khattat, musavvirs "Kalila va Dimna", A.Firdavsiy's "Shohnoma", N.Ganjaviy's "Xamsa", A.Jomiy's "Salomon va Ibsol", X.Dehlaviy's "Xamsa", Sa'diy's "Bo'ston", "Guliston", A.Navoiy's "G'aroyib us sig'ar" was created as one of the finest examples of biblical art[16].

Alisher Navoi is also known to have continued the traditions founded by Sahibiron by sponsoring many figures of science, art and literature of his time. In the creative activities of Kamoliddin Behzod, Sultan Ali

Mashhadiy, Husayn Uddiy, Kamoliddin Biniyy, Davlatshah Samarkandy, Husayn Voizs Koshify, Mirkhand, Zayniddin Wasify and others, the patronage of Alisher Navoi was great[17].

The last representative of the Timurid dynasty was istedodli sarkarda, scholar, poet, historian Zahiriddin Muhammad Babur Mirza (1483-1530), who, due to tragedy, becomes early estranged from his father Umarshaykh Mirzo (Governor of Fergana). As he ascended the throne at the age of 12, complex historical events forced him to leave his land and leave for India, where he founded The Empire of the Baburians. Continuing the Timurid dynasty, his child Humoyun, grandson Akbarshah, descendants of Jahongir, Shahjahan, Avrangzeb ruled India for three hundred years. The baburians were all lovers of the Fine Arts, a person who valued science. Khusuan, Humoyun, while a guest at the court of King Thaxmasp, got acquainted with the work of the musavvirs Mir Said Ali Termiziy and Khoja Abdusamad Sheroziy, invited them to India and took them with him. These two musavirs founded the “miniature school of the Baburians”. Also of the Baburian Princes, Akbarshah was an admirer of Science, a master of art – bearing fascination, and was passionate about painting in his youth. By the decree of Akbarshah, 50 artists of the Behzod school were recruited to decorate the Amir Hamza narratives with paintings, and the 12-volume collection of narratives was decorated with 1,700 miniatures. 145 artists of various nationalities worked at Akbar's court. King Jahongir was also a collector who collected miniature works, artistically decorated manuscripts and albums with great enthusiasm. The Jahongir library was composed by Abul Hasan, Mir Hoshim, Muhammad faqir Allahkhan, Samarkand musavirs Muhammad nadir and Murod Samarkandi, along with Indian, Iranian musavirs from Central Asia. Rajipur in India entered a synthesis with the finest traditions of painting, Timurid, Safavid miniature art, and the Indian miniature school “Baburians” was founded. In the 16th and 17th centuries, the Baburians played a huge role in the development of Indian culture. Books like "oyini-Akbari", "Akbarnama", "Temurnama", "Amir Hamza", "Zafarnomai Temuriy", "Shohnoma", "Jahongirnama", "Boburnoma" were decorated with exquisite miniature pictures at the world art enterprises of Akbar, Jahangir and Shahi.

In conclusion, the national and universal values of the Turonian period, dominated by Amir Temur and the Temurians, were embodied in the formation of historical sources, monuments, science, art and human qualities. During the Timurid and Temurid eras, a great cultural upsurge took place, based on values, which is still recognized by the peoples of the world today. The legacy of Amir Temur and his descendants is important in the processes of the national spiritual rise of today's New Uzbekistan in our youth, forming such qualities as love and ardor of the motherland, respect for adults, fairness, truthfulness, humanism and becoming a harmonious person.

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