

BICENTENNIAL TECHNICAL AND ENGINEERING HIGHER EDUCATION IN ROMANIAN 1813-2013

REMEMBER: GHEORGHE ASACHI

***Abstract:** The bicentennial anniversary of the founding of technical and engineering education in Romanian introduces the personality of the great Romanian school and culture founder, Gheorghe Asachi. Through the zeal of the great scholar, the princely charter of 15 November 1813, by which the Bordering and Engineering School at the Princely Academy of Iasi was established, is considered the birth document of the entire technical and engineering higher education in Romanian, demonstrating the total capacity of the Romanian language to allow the teaching of scientific knowledge at the highest level.*



Veneration of ancestors is a sacred duty and, at the same time, a genuine act of culture. In the history of the Romanian people, there are forerunners whose dedication remains a sacrifice in the lasting building of education and culture. Without their tireless work, without their talent and spirit of initiative, the Romanian spirituality edifice would have had delayed to rise. These creators of national science and culture strove to synchronize Romanian spirituality with the great European cultures, transforming the cultural act in a struggling means for the sacred ideals of the Romanian people.

Such a forerunner, was the scholar and man of school Gheorghe Asachi, rightly considered the father and founder of technical and engineering higher education in Romanian language, since the creation of which we celebrate 200 years.

Gheorghe Asachi was born on March 1, 1788 in the small town Herza of Moldavian parents of Transylvanian origin. His father Lazar (Leon) Asachi, a priest, was one of the most reputed spirits of the time, a man of chosen culture, knowing many foreign languages, askillful translator, who in various publications confessed his purest patriotic feelings, thinking and feeling like the Moldavian chroniclers, like the Transylvanian scholars, supporters of the Latin origin of the Romanian people. As a priest he held various positions, eventually becoming First Dean of Moldova. After his wife's death, he became a monk by the name of Leon, receiving the rank of Archimandrite. His mother, Elena Asachi, daughter of priest Nicolai Ardeleanu, was a cultivated person, a generous spirit, who devoted all her energies to the education of her four children, three boys and a girl, Gheorghe Asachi being the first of them.

Gheorghe Asachi was born in Moldova, at a time when modern national culture was only crystallizing, when education, press and literature were just blossoming in the vernacular, replacing the Greek language dominating at that time, when the ideas of the European Enlightenment were hardly recognized, when world literature penetrated with difficulty in the Romanian countries. Asachi receives the first teachings from his father, a cultivated man, in parallel with those from the Romanian Elementary School in Herza. The family moves to Lemberg (Lviv), the medieval town with schools and universities, which by the end of the 18th century had become an attraction for the young in the northern parts of the Romanian countries. Here, during 1796-1804, he attends a secondary school, the School at "Leopol", where the teaching was in Polish, Latin and German. These studies have guided him towards classical and modern languages, which he will later on use most easily. In the last years of residence there, at the University he attended courses at the Faculty of Philosophy, Letters and Sciences, and attended disciplines as logic, mathematics, national history, physics, architecture and ethics. Archival research in the recent decades have shown that Gheorge Asachi did not receive any Ph.D. in philosophy, or any title as an engineer or an architect. This, because he was very young by

the end of his studies and return home, being only 16 years old but also because he did not sustain all the examinations. But in all these years he has enriched his spiritual ken with ideas and concepts from the treasury of classical, Enlightenment, pre-Romantic literature of the time. In 1804, the family returns to Iasi, where young engineer Gheorghies, as he was called, put into practice his knowledge of architecture in the building of some houses. But because of his poor health, he is advised to change the climate. At the urging of his father and of the Metropolitan of Moldova, Veniamin Costache, who also helped him financially, in 1805 he leaves for Vienna, where he continued his studies interrupted at Lemberg. He studies astronomy, higher mathematics, with the famous astronomer Johann Tobias Burg, cadastre and painting. The events in Vienna of those years, enable him to get acquainted with the ideas of the bourgeois revolution in France, which he appropriates.

He goes to Rome, where between 1808 and 1812 he studies classical and Italian literature, archeology, painting and sculpture. Rome was considered metaphorically a „huge boyar or monastic estate”, to which all followers had to go, however scattered. Studies in Rome represented the most brilliant era of his spiritual training. Museums, libraries, archives and literary and political salons have offered him a wide field of information. The current political climate in Italy in those years, fretted by a series of movements that were going to prepare the Risorgimento, the Italian people's struggle for freedom and unity, would help strengthening the national consciousness of young Asachi.

The multilateral training acquired abroad, the knowledge of several classical and modern languages, the contact with European cultural values, made Gheorghe Asachi not only a man of vast culture and very broad-minded, but also a great patriot.

In August 1812 he returns to Iasi. An optimist, longing for work and confident in his powers, guided by the progressive liberal ideology and a strong love for the homeland, he was hoping to play an important role of „restorer” in his own country. He would have a number of daring cultural initiatives required by the economic, social and political needs of the time, committing to national education and culture, taking them to complete victory.

In the early 19th century, among the cultural issues that needed to be urgently solved, the most important was the right to higher education, to higher education schools in the national language. This requirement also corresponded to the direction of development of the European society, as Asachi noticed. Those who opposed this right, considered as a decisive argument the inferiority, the scarcity of the Romanian language as compared to the Greek, Latin or the other modern European languages. The socio-political realities of the country disappointed him. However, in Moldova that time there was a man of great ability, who worked for the advancement of Moldova: this was metropolitan Veniamin Costache. He had founded since 1803 the Socola Seminar, where for the first time Romanian grammar was taught, so that „*apprentices to learn perfectly the sciences and the dogmas of faith*”, had translated numerous religious books, encouraged prints of any kind. An enlightened intellectual of that time, Veniamin Costache expressed his patriotic ideas in numerous speeches, opening the way to a promising beginning of culturalization. But in the absence of the men of culture, the plots of the time did not offer Veniamin Costache the conditions for a success.

Being trained at well-known academic centres of Europe of his time (Lemberg, Vienna, Rome) where rationalist and enlightenment writings were extensively studied, Gheorghe Asachi was appointed by ruler Scarlat Calimachi, in February 1813, in the position of „referendar” (director) at the Department of Foreign Affairs. Moldova of that turn of the century continued to live under feudal, still unshaken rule by the great French Revolution of 1789 as the whole Europe. Here, acute problems were with the land: acquisition, sale, delimitation, heritage, numerous problems and often intricate, expecting solutions from the Ruler's Divan. Such issues dominated much of social life, constantly creating conflicts between boyars, other ones with the abbots of monasteries, between landholders, free peasants, merchants, all rushing in the Divan with deeds and papers („*zapises*’ and „*urics*’) citing ancient codices, with which to seek justice. To solve these processes, that had become more complicated over time, skilled people were needed, bordering engineers, able of performing the work of measuring land and familiar with „the language of old documents and old codices”. Most of these were written in Romanian, but in the old Cyrillic alphabet. Such professionals had to be trained in a certain school, where Romanian language connoisseurs to be able acquire bordering and engineering training, so that to stop the frequent bordering processes.

Gheorghe Asachi used these circumstances, finding a favorable opportunity to lay the foundations of the Romanian school. Accordingly, under the constraint of social requirements, at the

suggestion of Gheorghe Asachi, supported by Metropolitan Veniamin Costache, Ruler Scarlat Calimachi considering welcomed the idea of a bordering and engineering course in Romanian, decided to establish a „clas” of this kind, baking it by an „enlighted princely paper of November 15, 1813”. Bordering and engineering class was to be held at the Princely Academy of Iasi Metropolitan Church, where teaching was done in Greek. Later Asachi remembered: „*The Greek College which considered that study to be rather a job, did not put any hindrance for it to be held in its own building, while the prospects this new kind of career had opened soon populated the class with a large number of sons of boyards, among whom the son of the Prince himself.*”

Thus, it came, that at the Princely Academy, Gheorghe Asachi, appointed as a teacher, „*first time taught in the national language a course in theoretical mathematics with practical application of geodetics and architecture, as well as the needful research and interpreting of border documents*”. To keep this course, despite the lack of specialized technical terms, Asachi wrote in Romanian a complete manual of mathematics (arithmetic, algebra, geometry, geodetics, plane and spherical trigonometry, topographical and practical maps marking, raising plans of places and estates), which would be printed later, to be used in schools for a long time. Striving to provide textbooks in Romanian language, he sought to create the conditions required by modern education and to elevate the Romanian people to a higher level of expression. *For Asachi said, „to cultivate and refine the Romanian language, basing it on just its own elements, is one of the absolute requirements to lead it to the state of being an exact the organ of sciences.* For the purposes of practical work he has brought a number of instruments from Paris and Vienna. This class, where the only teacher to be appointed was Gheorghe Asachi, scored 32 sons of boyards, among the students being the Ruler’s son, Alexandru, his brother Petru and others. They were to become bordering engineers, a profession of great use at that time. The courses held by Asachi were particularly appreciated, the pedagogical merits of the teacher, the high scientific level being strongly highlighted.

The full deployment of the courses ended with the exam of 12 June 1818. The ceremony was framed in an exhibition of topographical plans, architectural projects and fortifications made by the school graduates. The exam was conducted in the presence of the school trustees, clergy, „of those on the political stage, foreigners with science”. The „anaphora” (letter) to the ruler, February 8, 1818, said that „many young sons of boyars, of other townspeople were investigated in the said sciences of theoretical and practical mathematics taught to them in Romanian language, so that, having conviction and living proof of their full knowledge, some of them were judged worthy to be engineers”. The final exam, shows Asachi, „was the first triumph of instruction in the national language”.

Young graduates of Asachi’s school were awarded diplomas and many of them occupied the position of engineers and architects until their death. The ruler’s son, prince Alexandru Calimachi was ambassador of the Ottoman Empire to Vienna.

Gheorghe Asachi’s merits have gained a first official recognition in the same anaphora sent to the ruler, which said: „Wherefore, becoming convinced by the difficulties, the diligence and the many strivings of him, Gheorghe Asachi, to perform such work, constituting for the first time in Romanian language a mathematics course and using it in such a short time for the common benefit, we feel indebted to our nation’s honour and zeal to witness him our full thanks and we judge him worthy of your heighness benevolence aa well as knowledge of patriots”.

Although they would have had, like the Ruler, to strengthen and to recognize this „certificate” due to Asachi, the Ruler gave no answer. This had its hidden meaning. The engineering course in Romanian was not well seen by the Greek teachers of the Academy, and since March 1816 when DP Gobdelas was employed as a director, he had led an action for the defamation of Asachi among boyards, and even to the Ruler. Although he had sent his son to Asachi’s course of bordering and engineering, the Ruler considered it more appropriate to refrain from a formal recognition of Asachi’s merits. As a result of this conspiracy, Gheorghe Asachi, although he kept his title of a professor, the librarian position and a dwelling in the Academy building, could not resume his course of bordering engineers. Undermined by these manipulations, but under the pretext that after 1818 the „clas” had not met the number of students established by law, Asachi’s school disbanded. However, he had demonstrated that „*high teachings can be taught in Romanian, moreover, that they can be delivered by native teachers*”. This outstanding concept will be even better implemented in the decades to come, when the national language, through the efforts of Moldavian intellectuals corroborated with those of

Wallachian and Transylvanian intellectuals, despite hindrances, will become the „organ of politics, science and literature, which in the foreign languages only after painstaking of thousands of scholars over many centuries, could have sprung”. The bordering engineers’ class enjoyed great success in Moldavian society.

An event of great importance for the Romanian school, was the approval by the Romanian Country ruler, I. Gh. Caragea, March 6, 1818, of the establishment of a class of bordering and engineering at the St. Sava school in Bucharest and the appointment of Gheorghe Lazar, an engineer coming from Transylvania, as a teacher of arithmetic, geometry and geography. This event was the beginning of Higher School of Engineering in the Romanian Country.

After the dissolution of the Bordering and Engineering class at the Princely Academy in Iasi, as a reaction against the enemies of the Romanian language use in schools, the Metropolitan of Moldova, Veniamin Costache, sent to Bucharest as scholars, six young Moldavians to learn at the „famous Parnasus of Muses of the multi-learned gentleman Gheorghe Lazar and of the Metropolitan of the Romanian Country, Dionisie Lupu”.

Despite his disappointment, Gheorghe Asachi started a real pioneering work in many areas of vital importance for the prosperity of the Romanian society. In the period 1813-1849, he was responsible for organizing schools in Moldova, having Metropolitan Veniamin Costache as adviser and mentor. Being also appointed „referendar” (director) at the Schools Trusteeship, a position which he performs a long time, his name is linked to the reorganization of the Socola Seminar, to the founding the Vasilian Gymnasium of the Three Hierarchs Church (1828), to the national county schools, the first institute of education of girls (1834), the School of Arts and Crafts (1841), organization of the agricultural and economic education, founding of the first public libraries. On 16 June 1835 the Mihailean Academy was inaugurated, a higher education institution, highly conceived, organized and supported by Gheorghe Asachi. In his view, it had to compete with the major cultural institutions of civilized Europe. Besides the high school courses and the three faculties: philosophy, laws and theology, for special knowledge „which will open useful careers to the youth”, first of all the „engineering school”, as attached to the Academy and the Institute of Arts and Crafts were „hatched”. The Academy courses have also been completed until 1847, with new disciplines: analytical and descriptive geometry attached to engineering, agronomy, mineralogy and geology. After 1847, the Academy and, in general, public education, crossed a critical period, restricting its activity. The crisis ended in 1849, with the election of Ruler Grigore Alexandru Ghica, the Academy resuming its former momentum.

It is worth mentioning that the Mihaelian Academy represented the fertile seed for the further development of the first universities and a boost to the national emancipation movement in which the first generation of intellectuals, educated in their mother tongue were trained and taught.

An organizer and a pioneer in most various fields, Gheorghe Asachi manifested himself with the same passion in achieving set goals.

He dealt with founding the press in the Romanian language in Moldova, editing the first political-literary journal „*Albina Românească*” (The Romanian Bee) (1829), an organ of affirmation and support for national ideas, also followed by other publications: „*Gazeta de Moldavia*” (The Journal of Moldavia), „*Patria*” (The Homeland), „*Icoana lumii*” (Icon of the World), etc. His vocation of a founder was proved by his setting up of a litho-printing, called „*Institutul Albinei*” (The Bee Institute) (1832), introducing printing in the Latin alphabet, because the Metropolitan Church only printed with Cyrillic letters. It was from Asachi’s litho-printer that all the books, journals, maps, historical paintings, *Buletinul Oficial* (The Official Bulletin) came out, until the closure of the Institute in 1860.

He established a new institution, the State Archives (1832), which had the aim to gather, organize, and give to use the country documents and archives.

Gheorghe Asachi was one of the great animators of cultural life, creating the Philharmonic-dramatic Conservatoire (1836), in order to provide the necessary staff for theatre and musical theatre activity. He organizes the first theatre (1837) and opera (1838) performances in the Romanian language, played by the Conservatoire students. The scholar also made himself noteworthy in the literary field (poetry, prose, drama), helping to refine the language, had an intense activity in the field of translations and adaptations, of music and fine arts criticism, founding the first public pinacothèque Moldova.

In the Moldavian society of the first half of the 19th century, Gheorghe Asachi led for many years, public education at all levels. In parallel, he was an active participant in the society life. Between 1822-1827 he served as Moldova's diplomatic agent in Vienna, sent by the land's ruler Ioan Sandu Sturza, representing his country, its interests and its rights successfully, with full dignity. During this period, he searched the libraries of Vienna and Poland, where he found part of the Moldova's archive, taken by Metropolitan Dosoftei in Poland in 1687, during the Turkish-Polish war. These documents, found at private persons, have been purchased and brought into the country.

In 1828, Asachi was appointed secretary of the committee for the drafting of the Organic Regulation, the first political constitution of the Romanian principalities.

Later on, he went to Petersburg, the capital of Russia together with representatives of the two Romanian Principalities, to submit for approval the Organic Regulation (1832), which rendered the principalities the representative government.

At the same time, Asachi, as a man of school, introduced into the Organic Regulation a number of provisions for schools: recognition of the schools' estates, as well as the obligation of the State of grants for the schools' fund, to support, equip them and increase their number.

Based on the Organic Regulations, two important law projects were issued: „*Project for the Public Bordering Codices*” in Moldova, under Ruler Mihail Sturza, and „*Project Touching Cadastral Measurement throughout the Principality*” in Wallachia under Ruler Alexandru Dimitrie Ghica. These laws were applied to a small extent due great estate owner boyards, who were not interested in knowing the actual areas according to which taxes had been set.

Gheorghe Asachi's contribution in organizing education in Moldova, represents a huge work, beginning with initiatives of building and modernization of settlements, programme drafting, making and publishing textbooks, defining pedagogical precepts, providing favorable conditions for instruction and education, up to the humanistic, high level content of public education.

The complexity of political and social events in Moldova of the first half of the 19th century, the 1821 and 1848 Revolutions and the struggles for the Union of the Principalities have not been understood by Gheorghe Asachi. A spirit of the Enlightenment, conciliatory of his generation, he could not have opposed to the romantic revolutionary rebellion of the new generations of young people, who cultivated a new ideology and aesthetics. His encyclopaedic training, his initiatives and toil have been extremely necessary to a period organizing a solid basis for the scientific disciplines, establishing the school in the national language, promoting cultural values, encouraging the arts and crafts, stimulating patriotic feelings.

After a life of fulfillment, tired, depressed by the long years of efforts in the service of cultural development of the nation, Gheorghe Asachi passed away on November 12, 1869. He was 81 years old. His and his wife Elena Asachi's remains lie at the base of the statue erected in front of the Primary School that bears his name, near the „Three Hierarchs” Church in Iasi.

The special merit of the School of Bordering and Engineering is this school's contribution to an increased prestige of the national higher education. It is about the fact that Asachi's school granted in 1818 the first "*engineer's certificates*" in the Romanian provinces, which were followed by the engineer's certificates issued by the applied departments of the Romanian Academies and Universities. This justifies the *acceptance of the appreciation that the princely charter of 15 November 1813, by which the Iasi School of Engineering was established, should be regarded as the birth certificate of the entire Romanian higher engineering education*. Also, Asachi's School contributed to an increase in the national prestige of Romanian higher education, since it demonstrated the total capacity of Romanian language to permit teaching scientific knowledge at the highest level.

With all the mistakes he made in the latter part of his life, Gheorghe Asachi's strong personality has to a great extent proved his right to the respect and admiration of his followers and, in particular, his right to be considered a symbol of a true devotion to the Romanian education. If the 1890 teachers honoured his memory by rising him a beautiful statue, the 1938 teachers glorified him by assigning his name to the higher technical education in Iasi, which had acquired its independent existence certificate: the "Gheorghe Asachi" Polytechnical School (1937-1948), later on the "Gheorghe Asachi" Polytechnical Institute (1948-1993), now the "Gheorghe Asachi" Technical University (1993-at present).

It is worth mentioning that after the foundation of the two Romanian engineering schools - the Gheorghe Asachi's School in Iasi (1813) and Gheorghe Lazar's School in Bucharest (1818) - a number of higher education institutions specialized in engineering training were also set up in some countries, considered today among the most developed in the world.

Gheorghe Asachi era was the man of his epoch, i.e. a man coming out from the needs of his time, he did not command the time, but put himself in its service with a remarkable wealth of skills. Living in an age of cultural undifferentiation, he belonged to the race of encyclopedists. In addition to his scientific culture he also had an artistic education, handling the lyre, the brush and the square. To humanities he has added polyglot knowledge, to music, engineering. In the chaotic phase of rebirths, encyclopaedism was a necessity. These urgent requirements were answered by the appearance of Gheorghe Asachi in Moldova, of Ion Heliade Radulescu and Gheorghe Lazar in Wallachia and of George Baritiu in Transylvania. They have contributed to the cultural elevation of the people, to the cultural synchronization of the Romanian space with the performances of the European culture and civilization, with the modern world pace.

At the bicentennial anniversary of founding the technical and engineering higher education in the Romanian language and celebrating 225 years since his birth, the school and culture ministers, the entire Romanian people, bring a pious homage to the great founder of the Romanian school and culture, Gheorghe Asachi.

Professor Ph.D. Eng. Gheorghe NISTOR
Technical University "Gheorghe Asachi" of Iasi
Faculty of Hydrotechnics, Geodesy and Environmental Engineering