CHAPTER FOURTH:

Economic and Educational Reforms of
Mohammad Ali Pasha
Mohammad Ali Pasha, the ruler of Egypt in the first half of the 19th century AD, known as the “Founder of Modern Egypt”. It is because of the fact that he introduced various reforms of different nature in all fields: social, political, administrative, military and economic as well as educational. He made great efforts to bring out reforms in the economic field. In his efforts he made a transition from the subsistence economy to a “Modern complex economy” that was prevailing in the beginning of the 19th century. This led the Egyptian economy to an “Export-oriented economy”. He introduced reforms in various divisions of economic field such as in agriculture, irrigation, planting of cotton, communications, trade and industry.¹

However, the first step in bringing economic reforms was in the field of agriculture which brought a revolution in the land tenure system. Simultaneously he abolished tax farming; and payments of taxes were made by the peasants directly to the government. Thus, Mohammad Ali was the first ruler in Islamic lands who made massive economic developments with the expansion of agriculture in the country that became the major source of country’s economic strength. However, with the assumption of power the first step that Mohammad Ali took was the abolition of the old system of “Multazimin” and the declaration of all the lands of Egypt as state property. Through this new policy all land were taken in the name of the state by dispossessing all the previous owners
who were mostly Mamluke Beys. After taking these lands, he distributed parts of it in the form of estates to members of his family and entourage. However, he retained most of it as state property that was cultivated by the previous tenants.

With the abolition of the system of tax farming he adopted a new method for the collection of taxes. In this method Mohammad Ali made a hierarchy of officials with their recruitments. These officials depended directly on the central government. These officials were also responsible for the control of irrigation and maintaining public security. This system led to the division of Egypt into provinces which were under ‘Mudirs’ or governors. Again these provinces or Mudiriyas were subdivided into ‘Markazes’. Each of these ‘Markazes’ was under an officer known as “Mamur”. These “Mamurs” had under them various ‘Umdas’ who were the heads of villages.²

It is important to mention here that Mohammad Ali Pasha’s agricultural policy was against tax farming and the tax farmers. There were two major reasons because of which this system of agricultural holdings had to be abolished by him. Firstly, due to the tax farming a large proportion of agricultural income remained away from the state. Secondly, the tax farmers exercised considerable powers over the cultivator peasants.
During the early period of his rule Mohammad Ali imposed taxes on iltizam lands. But with the passage of time tax-farmers faced difficulties in tax payments, especially at the time when they did not have good crops from their land holdings. In case of non-payment of the tax by the land owners the state started confiscating their lands. To break the Mamluke power and to put their influence to an end, Mohammad Ali took steps against them and massacred a large number of Mamluks. After the massacre of the Mamluks in the citadel their iltizam lands were confiscated. These lands were not transferred to the tax farmers but retained by him as state property with the objective to undermine those Mamluks and eliminate them. With this, he wanted to minimize their influence over the peasant cultivators. And moreover, Mohammad Ali’s policy of levying taxes on waqf land property, which excluded the buildings, gardens and Mosques, weakened the influence of clergy and other religious institutions. These included al-Azhar and its religious personalities. Such taxes were levied in 1809 and 1814. On the basis of 1814-1816 survey, a new tax system was introduced by which land was to be registered in the name of villagers who were responsible for the payment of taxes directly to the state. An important fact, regarding this system was that villagers who were fellahin did not acquire ownership or inheritance rights over land. The only thing that was given to them by the government was the lifetime rights to use the land owned by the state.
However, within ten years of his coming to power Mohammad Ali succeeded in nationalizing the lands in Egypt by destroying the agrarian position of the privileged classes.

Mohammad Ali, after destroying the whole iltizam system, distributed lands to the peasants and village headmen. Though peasants were allotted lands for cultivation yet they did not have the legal ownership of the land. Later, in the next twenty years, due to the economic condition Mohammad Ali eradicated the state’s monopoly over landownership in favor of private ownership. This led to the emergence of big land owners.

Later on, during 1829-30 Mohammad Ali started free grants of large tracts of uncultivated land to high officials of the state and others. With this he exempted them from taxes on the condition that the recipients would cultivate these lands and increase the agricultural production of the country. Such a land grant was known as ‘Ibadiyya’ which did not confer ownership of land upon the recipients. These recipients had the right only to use the land. Gradually by 1836 such land grants became inheritable by the eldest son, of the grantees. By 1848 they acquired complete ownership.

Regarding the land Mohammad Ali also adopted another system known as Ciftlik that was to gift large tracts of land buildings and other properties to his family members and relatives. This concentrated the
lands in the hands of the members of the ruling family. He also instituted the system of *uhda* lands by which high officials, army officers, provincial governors and notable personalities received control over the land covering whole villages in return for their assumption of the tax liability from the iltizam. In this way the *uhda* holder was to pay the tax decreed by the pasha and could not any further tax upon the cultivators. However, he acquired a parcel of land for each *uhda* that was not taxable. On this parcel of land, he was entitled to unpaid labour by the farmers.

In this way ‘*ibadiyya* ‘*ciflik*’ and ‘*uhda*’ were distributed by Mohammad Ali among the individuals that were not related to the state. All these contributed to the emergence of private ownership of land and large land estates in the country.³

After taking the cultivated land under his direct control Mohammad Ali started paying his attention to the irrigation works. He in this connection, issued orders to repair the basin walls, and redigging the canals, since agriculture in Egypt depended upon the basin system and largely, during the time when Nile flew high in August and remained under the floods for next six months. During the period of late October or November land was sown with the crop, known as winter crop or “*Shitwi*” crop, in which mostly wheat, barley, beans, barsim or clover, lentils and fenugreek were included. This *shitwi* land yielded one crop a year. However, after winter another crop which was grown needed
extensive irrigation, this was known as “Saifi”, that included rice, sugar-cane, indigo and cotton. Another type of crop which was grown during the rising period of Nile was called “Nile” that also needed irrigation by some source.

Due to the lack of water in summers certain irrigation projects were undertaken by the government to have good crop. In this season the government took two major steps. They were the digging of deep canals so that water would be flow from the low Nile and by the construction of dams to raise the level of the low Nile. Thus the major public works there were carried out by the government. In this way there built ‘Saifi’ canals. Among the canals the Mahmudiyya canal is said to be the major one which became a waterway various dams and barrages were also built in this project. According to Colt Bey, 32 canals (tira) were built of which ten were jars or dykes, in which one was 6 meters wide and 2 meters high: Furthermore, forty-one dams and barrages were built for irrigation purpose in the country. In all some 1,135,775 meters the canals were dug in length that stored 116,050,843 cubic meters of water.4

Since there was no water available for summer crops during the time when Nile was low, and when the land lay fallow, so it was not possible to grow the sub-tropical crops for which the climate of the Egyptian summer was suitable. In view of this Mohammad Ali, who was well aware of the industrial developments in Europe, explored the
possibilities of cotton cultivation in Egypt because of the invention of mechanical spinning and weaving. For this the Egyptian climate was suitable, and its transport to the sea-coast was cheap and easy. Besides this European markets were not at much distance. The government chose the Delta region for cotton growing. For this purpose deep canals were built and steam pumps were used to provide water from these canals to the fields of the region. So, in 1834 the construction of the delta Barrage was started at the branching of the Rosetta and Damietta channel that was some twelve miles north of Cairo. Later, due to some reasons this work was abandoned by the government.

The production of the long staple cotton was started in the country on commercial scale in 1821, for which Europe became an important market. The European markets had a strong demand for this long staple cotton where it was priced between two to four times as high as Egyptian short-staple cotton. During the period between 1821 to 1822 foreign experts were brought to Egypt and they were given the charge over several villages for the production of long staple cotton. This resulted into the production of high quality cotton having high prices in European markets. This encouraged Mohammad Ali to extend its cultivation, which required a proper system of irrigation. So, Mohammad Ali started a large scale program of public works to supply necessary water to the farms. Labors for this purpose were provided by the corvee. Initially,
Mohammad Ali induced the peasants to raise the crop by offering high prices and supplying working capital, such as 175 piasters per qantar but it declined to 100-150 piasters per qantar in 1826. This decline of prices on cotton resulted due to the peasants’ resistance against the government. In some areas they went to the extent that they removed the cotton seeds which they had planted on the pretext that the soil was not suitable for cotton cultivation. The government needed to send Army officers and soldiers to supervise their work in 1834. They were found by them very lethargic towards cotton cultivation because of two reasons. Firstly until 1836 they were not paid in cash, but rather in tax credits, secondly, due to the labor problems. It was due to the fact that cotton cultivation needed more manpower and the amount of labor power in the villages was declining due to conscription, corvee and flight.

Besides these Mohammad Ali laid down strict rules as to how cotton should be produced. These rules were based on the advice of his foreign experts. These were later codified in the “La’hat zira, ah al – Fallah” (Regulation of peasant agriculture). As per the orders of the government various intermediate government officials, called mamur, nazir, hakim al-khatt; were involved in this process. From these government officials’ orders were passed to the ‘qaimmaqa’ and village shaykhs. Village shaykhs were the direct supervisors of the peasant labor. It was obligatory for these shaykhs to visit the fields’ everyday so that
peasant labours could be inspected and work in the fields should be continued without any delay and carelessness of the labourers.

The government interfered in the peasant work to such an extent that peasants had to plant according to the government’s ‘order’. It also ordered them when and how to plant. They were also pressurized by the government to deliver the crops at the prices fixed by the government. Not only this, but peasants had to pay the transport charges of their product to the government depot. In the evaluation of their production in the depot agents often cheated them. This became the reason that these peasants became lethargic and sometimes the resistance on their part against the government was also seen.

Another important point was that during Mohammad Ali’s reign peasants had to work far from their hands. Often the situation came when they had to supply their own food, water and tools receiving few benefits in return to their work. This also resulted in their becoming lethargic and surreptitious resistance.

Although Mohammad Ali’s efforts of industrialization did not reach the top level of success, yet he laid down various schemes to build up a modern industry. He took a number of measures in the modernization of the industry that included the agricultural industry also. By 1930 machinery was started to be imported from Europe, along with technicians that helped in the production of cotton, woolen, silk and linen
textiles sugar, paper, glass, leather, sulphuric acid and other chemicals etc. Besides these government plants, arsenal, and simple machinery and spare parts were produced in these industries where 30,000-40,000 persons worked. However, in bureaucracy, army and, navy trained men were required so that they may be able to use modern techniques. For this purpose over 300 students were sent to Europe.

Apart from industrial developments trade, during Mohammad Ali’s period, was also monopolized by the government. By direct controlling the trade, crops were bought by Mohammad Ali from the farmers at low fixed prices which were resold to the foreign countries at great profits. For the promotion of trade Alexandria was developed and made a great center of trade. With this trade relations with Europe were strengthened. The construction of the Mahmudian canal concentrated all the import and export trade which was earlier shared with Damietta Rosetta, and Alexandria. Later it was connected by water with the markets of Cairo the villages of Upper Egypt and the Delta. At that time, Alexandria’s population consisted of foreigners among whom most were Greeks and Italians who settled there because of their connections with the port’s foreign trade. At the end of Mohammad Ali’s reign about 6,000 of the permanent Alexandrian residents were foreigners. Till the time of Mohammad Ali, the citizens of the towns were more or less exempted
from direct taxation but during his regime Mohammad Ali got success in imposing a head tax that was known as “jazieh” on the town-dwellers. 

**EFFECTS OF MOHAMMAD ALI’S ECONOMIC REFORMS:**

All these economic policies introduced by Mohammad Ali had some negative effects, though through these reforms he wanted to lay down the foundations of a balanced, diversified economy that would raised the level of living. The matter of fact is that it did not happen. These reforms disrupted the rural and urban life with diminishing impact on the lower strata. The social cost of these economic changes was borne by the rural and urban lower strata. The top socio economic class got benefited with these policies and changes. With this a small military administrative elite emerged with the commercial notability and along with a group of European merchants started getting maximum profits. These people were entitled to accumulate wealth and improve their position in society in return of their services to the Pasha. Moreover, health services were also enjoyed by the Ottoman Egyptian elite. Mohammad Ali was, primarily, interested in building up a modern army and navy to safeguard his position and to extend his influence, but his defeat in 1841 by western powers; and compulsory reduction of his armed forces, removed most of the incentives of industrialization. This also happened due to the “Anglo-Turkish convention” of 1838 that enabled foreign traders to extend their trade anywhere within the Ottoman dominions including Egypt.
Unfortunately due to European industry’s competition Mohammad Ali’s factories began to decline. The failure of Mohammad Ali’s economic policies failed due to the above factors. The economy of the country lagged behind which was not, in any way, in the interest of the country. This became a great obstacle in the economic development of Egypt. This obstacle continued until 1930 due to the lack of political autonomy. Besides this, economic development requires considerable aid in the form of tariff protection, tax exemptions, transport rates, cheap power, and special credit facilities to certain sectors, educational policies which could be provided by such a government that should be independent in political and fiscal field. But Egypt did not enjoy such independence except for a brief period. Even the tariff was fixed by the conventions concluded between the Ottoman government and the great European powers. At that time, Egypt was not in a position to impose direct tax due to the said convention on foreigners without their government’s consent.¹²

Mohammad Ali is said to be responsible for the reforms which included Egypt with the world economy. With it the international monetary system crisis of 1836-37 affected the cotton prices by bringing it down and dried up the Pasha’s credit sources in Alexandria. This created difficulties to the Syrian government. At that time the Egyptian administration became unpopular. The Increase in taxation, the introduction of a tight system of monopolies, a “gun control” policy, the
imposition of corvees and unrest resulted in a number of sporadic revolts. This lack of natural, technical and managerial resources affected the factories. By the late 1830s few plants were left working and because of this much revenue was lost to the state.

Having seen this economic crisis Mohammad Ali Pasha had to come back to his initial policy of direct administration. From 1838 he granted sizeable tracts of land to members of his family creating the basis for large landed estates "ciftliks". With this he also established the 'Uhda system' to distribute to the members of the Ottoman Egyptian elite the middle size-estates that comprised villages whose taxes had not been paid. These holders had to guarantee the amounts owed to the treasury in return for the right to cultivate with corvee labour for their own profit. This was a return to the old practice which the Pasha had eradicated during the period from 1810.\textsuperscript{13}

Whatever economic development was made during Mohammad Ali’s rule in Egypt like the growth of export, cotton, rice, indigo and crops, industries and trade etc, made possible the extensive employment of foreign experts, including Frenchmen, Englishmen and other Europeans. The reformed structure introduced by Mohammad Ali in the economic field was known as the "state capitalism". In this system the money was controlled by Mohammad Ali while working responsibility was on the Egyptians and foreigners who were hired by Mohammad Ali’s
government. Regarding these foreign servants, it is said that they were the servants and not the masters of the Egyptian state during Mohammad Ali’s rule. A distinguish mark of the period is his ruling that though he had to depend on foreign powers in various situations, but economically he was free from foreign dependency and that he dealt his own matters.\textsuperscript{14} It is clear from his system of monopoly that all the industrial craft and agricultural production that was made by Egypt was controlled directly by the government. This was a centralized regulation of the country’s economy. This system of monopoly developed during the period of 1816 to 1820 when the peasants and the artisan householders had to work under the supervision of the government officials. The government also possessed the right to purchase and sell whatever goods the country had produced. Along with agricultural products the government also monopolized the production and purchase of yarn, cloth, kerchiefs, salt, petrol, soap, soda, sugar and other goods. The state was the only supplier of Egyptian goods in the home market and the only exporter and the retail dealers in the towns turned into virtual government agents for trade monopoly.\textsuperscript{15}

Although Mohammad Ali’s reforms were of a progressive nature, with a monopolized system but due to certain reasons the government had to face various revolts. Basically Mohammad Ali was a true reformer including in the economical field. Through these reforms he wanted to
develop the country in all walks of life including industry, trade; and commerce. By his efforts the trade of the country became international when on the one hand, he exported the Egyptian products including the agricultural products to various countries, and on the other hand, he imported different things to the country. By his efforts and interest the agriculture of the country reached its height.

EDUCATIONAL REFORMS:

Introduction of various progressive reforms by Mohammad Ali, in almost all the fields also consist a number of educational reforms. Through these reforms, he wanted to develop Egypt into a powerful state. He made the European countries the model of education for his country and developed the educational system of the country on their pattern. For the purpose to modernize the education in the country he needed to employ a large number of experts and technicians who could import education to the Egyptians and at the same time established modern state school at various places. He dispatched Egyptians on educational missions to Europe so that they could receive education of modern science and their skills required by various departments could be provided.

At the initial stage Mohammad Ali’s educational policy had limited goals because he wanted to form a group of experts with the capability of performing specific tasks for the state, particularly for the armed forces.
As Mohammad Ali’s prime goal of introducing educational policy was to make the Egypt a powerful country, it required strong armed forces. However, he insisted upon the total government supervision, as well as over the selection of students for the schools who were at that time treated as soldiers under military supervision. With his efforts it seems to be clear that Mohammad Ali brought educational reforms in order to strengthen the Egyptian army with the help of the experts who were trained by the foreigners.

Though himself not a very educated person, Mohammad Ali is credited with developing education during his period to a high extent. He was the first person to divert his attention to the development of western education in Egypt so that the country might also develop on their pattern. His period was first in the history of Egypt when scholarly and intellectual development began for the purpose of the development of education, two greatest achievements are ascribed to him. They are the foundation of the schools of languages and translation; and the founding of a printing press.

Italy had strong commercial relations with Egypt since the middle Ages and Italian language was the first foreign language that had influenced Egypt during the rule of Mohammad Ali. In this regard Yaqub Atin pasha remarked that Italian was most commonly used foreign language in Egypt until 1820. It had influenced Egypt to such an extent
that it became the first foreign language taught to the officer cadets in the early citadel school erected by Mohammad Ali. Not only this, but the first Egyptian students were sent to Italian cities like Leghorn, Milan, Florence and Rome. Their mission was to learn printing, letter-making and shipbuilding. The first educational mission of 1809 to 1816 was said to be the period of training the Egyptians in the art of printing. This resulted in the establishment of the state printing press in 1822 that started operating at Bulaq. In the same year the first book was printed in this press and published. Furthermore, an Italian Arabic dictionary was also prepared by Rafael Takhur.

Mohammad Ali’s interest arose in the establishment of a government press at the time when he became concerned for the issuance and wide distribution of laws, regulations, order and ordinances throughout the country. Apart from this he was also concerned with the provision of newly founded schools. In this connection, the required materials for printing press were first imported from Italy that included the Arabic, Italian and Greek letters. Due to the efforts of Mohammad Ali it did not take much time for Egypt to become capable of manufacturing ink and paper. Both the press and the factories of paper and ink required technicians who were first recruited from amongst Syrians, Armenians and Italians. Mohammad Ali viewed the printing press as one of the best means of transferring European knowledge to Egypt. Gradually, with the
development in this field smaller printing presses were established in the military schools and other government administrative departments.

Establishment of the printing press, for the publication of government decrees, orders and regulations, played a significant role in establishing a regular communication between central authority and the provinces and making administration more effective. Later on, Mohammad Ali viewed the printing press as another important facility for strengthening his rule in the country. Nicola Masabki became an important person who was sent to study at Milan in the techniques of printing. He studied there for four years. After completing his study he returned to Egypt and setup the first Arabic press “Sahib al-Saada” in the Alexandria Arsenal. This press later moved to Bulaq. Other printing presses were established in the Tura Artillery School, in the Medical School at Abu Zabal, in the Cavalry School at Giza, and in the Citadel.

It 1827 the “Khedivial Journal” was printed in both Turkish and Arabic at the citadel press. This Journal was contented with the news covering the ruler’s decrees and decisions as a daily report issued by the office of the Pasha. Besides this the official Gazette namely “Al-waqa’il al-misriyyya” was published. This was a more detailed report of the events, decisions and regulations throughout the country. Like this Khedivial Journal, the Gazette was also published in both Turkish and Arabic languages. This Journal was not published daily in the beginning
but more than thrice a week. Another paper namely "Le Moniteur Egyptian" also appeared in French language during 1832-1833 at the Ras al-Tin press in Alexandria. This paper was founded by the members of the foreign community residing in Alexandria with the support of Mohammad Ali. He supported it with a view that it would serve as an organ for the defense of his policies to foreign readers. As "Le Moniteur Ottomans" was issued to propagate against Mohammad Ali in Turkey, he wanted with "La Moniteur Egyptian" to counter it in the same language in his favor among the foreigners especially franks. But this paper did not appear after March 1834 until its revival by khedive Ismail in 1874.

**ESTABLISHMENT OF SCHOOLS AND COLLEGES:**

Along with focusing on the printing press in Egypt Mohammad Ali also formulated policies for the establishment of the schools of languages and Translations. The professional schools in the course of engineering, agriculture and medicine were established in different parts of Egypt to educate the people of the country. For this purpose Europeans and Levantines were appointed in these schools. Alongwith this preparatory schools were founded by Mohammad Ali Pasha to prepare recruits for the higher professional colleges. These colleges were also to be supervised by European experts and professionals for a long time. In a medical college founded in 1827 European instructors were appointed to teach the Egyptians but language was a major problem in imparting education to
the Egyptian students. To combat this problem Mohammad Ali Pasha founded a school of languages namely "Madrasat al-alsun" in 1835 in order to train the translators both for the classrooms and for preparation of manuals and texts to be studied by the students. These schools were founded because all the Egyptian students could be sent abroad to study the required foreign languages. However, an elaborate scheme of groups of translators was devised for each professional school. The first trainee of the school was Azhar students and teachers who had the knowledge of Arabic language. The need for the translation of texts and their availability to the state school generated an interest in Mohammad Ali. The students studying abroad collected European books which became the basis of the creation of the first small state libraries in the country. To the first state library contribution was made by Uthman Nur al-Din who was one of the first Egyptian students sent to France to study there. He brought a collection of French texts with him which he put in a library at Bulaq palace of Ibrahim Pasha which became the first state library in the reign of Mohammad Ali.  

Along with all these reformative activities in the educational field Mohammad Ali founded a number of schools and colleges in Egypt. In the foundation of such schools he had to face certain difficulties. Although he opened schools all over the country but unfortunately the parents of the children did not agree to send their children to those
schools, not even with the declaration of the facility of feeding and
clothing for them at the expense of the state. However, Mohammad Ali
declared that all children attending schools should receive monthly stipend
in cash. This was in fact pocket money and a sort of bribe to the students.
As there was no educational atmosphere in Egypt, Mohammad Ali
wanted to make education common, therefore, the children were
frequently brought in chains to the schools. The schools that were
established at various places could accommodate about 9000 children.
The colleges, established at various places, were about 1500 in number.
Mohammad Ali’s own sons were also brought up there. Such was
therefore, called the “school of the princes” however, Mohammad Ali
established the following sixteen outstanding schools in different parts of
Egypt:

➢ School of Military Music in 1824
➢ Preparatory Military
➢ School al Qasn al-‘Aini’ in 1825
➢ School of Medicine al Abu za ‘bal’ in 1827
➢ School of Infantry in 1831
➢ School of Cavalry in 1831
➢ School of Artillery in 1831
➢ School of Navy in 1831
➢ School of Veterinary in 1831
School of Mining in 1831

School of Engineering in 1834

School of Midwifery in 1837

School of Accountancy in 183

School of Languages and Translation in 1837

School on Industry and Arts in 1839

One of the important features of Mohammad Ali’s education system in Egypt was that it was based on “Mosque schools” namely ‘Madarsa’ and ‘Kuttab’. Kuttab was the place where young boys were taught. There they learned to read and write. There they were made to memorize and understand the holy Quran. It is worth mentioning that the Kuttab were not like a formal school in which students took admission at a prescribed age, but it was place where students came at any age and in an irregular manner, and stopped attending the Kuttab whenever they memorized the Quran. On the other hand, a formal educational institution that became the most important ‘Madarsa’ was founded in the ‘Al Azhar mosque’ which became a great religious and cultural center throughout the Islamic world. This educational structure was financed privately by the wealthy Muslims. Its income was also from the religious endowments called “Awqaf”. From this it is evident that this educational structure was not controlled by the government. Students went there from all the corners of the Muslim world. Its organization and studies were not based
on the modern pattern but was medieval and outmoded. Though it produced ecclesiastical lawyers but it never intended to produce statesmen and administrators. Moreover the education given in Al-Azhar had no connection with the western education. Under his educational mission Mohammad Ali sent eleven successive missions of students to Europe that began in 1813 and continued until 1847. In this mission three hundred and nineteen young Egyptians were sent to different educational institutions in all to acquire the knowledge of different fields including medicine, law, civil administration, physical science, chemistry, mathematics, engineering, mechanics, printing, mineralogy, agriculture and irrigation, textile and dyeing industries, military science and the manufacture of arms and navigation and ship building. In this mission more students went to France, while some other went to England, Italy and Austria. The criteria for the selection of candidates for educational missions were not of religious or social standing. Most of these students were from poor families and travelled at government expense. Some of the early students sent to Europe to acquire knowledge included Petru Effendi, Yusuf Istifan, Mohammad Ahmad al-Falaki, Paul George Jiyani, and Yusuf al-Nabarawi etc.

Mohammad Ali was very much concerned about their studies abroad. To monitor their studies, he asked to them to send regular reports of progress which he personally read and directly corresponded with the
students to motivate them to acquire all the knowledge without wasting their precious time, so that they could contribute towards building a powerful Egypt. Results were seen in 1833 when a polytechnic was established with a teaching staff consisting of two Europeans only. One was for chemistry and the other for mathematics. There were four Armenians, one of whom had spent ten years at Stoneyhurst, and six Muslims. Three among them had been educated at Paris and three in England.\(^{21}\)

In fact, Mohammad Ali’s educational reforms were not only for the reason that he wanted an “educated country” or he was very much concerned with the literacy of Egyptians, but also because he had a pragmatic approach: he thought that these very bright young men would serve as a basis upon which the ruler could build a viable government infrastructure. This approach becomes very clear from his statement to his son Ibrahim Pasha when he requested his father to open new schools to educate native Egyptians, that “he had no intention of spreading education among the masses in Egypt. He told his son to look at what happened to European monarchs when they attempted to educate the poor. He added that he should satisfy himself with educating a limited number of people who could assume key positions in his administration and give up ideas about generalizing education.”\(^{22}\)
The viceroy strongly advised against spreading education beyond the recruits for the state service:

"What Europe is suffering from is the result of generalizing the education among all levels of society so they are involved ...... they have no chance of avoiding what happened so if this is an example in front of us, so our duty is to just teach them how to read and write to a certain limit in order to accomplish satisfied work and not to spread education beyond this point."\(^{23}\)

When Mohammad Ali came to power in Egypt, he brought the educational facilities under the direct supervision of the government. Educational reforms were introduced to upgrade its quality. Both forms of education, one as apprenticeship, and the other as formal schooling were kept and supported during Mohammad Ali’s rule. \textit{kuttabs} were left in the hands of the Sheikhs and continued to provide basic education to Egypt’s young. But along with this a new educational system was built from the top down. Such a new educational system was started with advanced technical schools and ended with primary schools. In Egypt, it was necessary to graduate specialized students who could then become teachers for those at the elementary level. Students studying in the \textit{kuttab} only had inadequate knowledge for either the specialized schools or the various needs of a modern state. However, a new class of preparatory schools, to be attached to the specialized schools, was started.\(^{24}\)
Mohammad Ali’s goal was not mass education, but it was limited and specialized education. He founded modern professional schools like “Qasr al Ainy”. Through it he wanted to create a trained and competent group of Egyptian civil servants who would serve his expanding bureaucracy. Some important professional schools opened by him were:

- School of Engineering- 1820
- School of Medicine- 1827
- School of Law- 1867
- Teacher training college- 1880

Over the period of his reign Mohammad Ali founded a number of specialized schools, of higher education. Important Military colleges were also appeared. Among seven military colleges six were located at one spot “Khanka”. Four Medical schools were opened, three of them constituted different departments of a single school. The “School of Engineering” was earliest school that was opened by Pasha, for to graduate engineers, to build the infrastructure of a new Egypt that included railways, roads, irrigation projects and factories. These specialized schools were not established all at once but at the beginning each was setup separately and was given opportunity to grow on solid premises based on its own particular needs before being centralized under one governmental body.
These specialized schools brought the Egyptian society on the verge of change in its structure and outlooks during Mohammad Ali’s rule. As a brand new class was to form by lower classes who graduated from the specialized schools. Thus the new class was defined as the middle class, the educated, “Afandi” means a person having capability to read and write; it was used as a title like ‘Mr’. The Afandiya represented the future professional classes as well as the government bureaucracy. These Afandiya were sent to Europe for advanced training and returned to serve their nation. Professionalism was the characteristic of this class who belonged to different professions. These people had a new outlook based on specialized knowledge which distinguished them from other Egyptians who respected them for their exclusive and specialized knowledge. Apart from these Egyptians Mohammad Ali’s educational reforms also extended to elite Turkish groups in the country. These Turkish elite were more sophisticated in their knowledge and outlook than the Egyptians. They paid their educational expenses themselves. In fact, these Turkish elites were given preference by Mohammad Ali in recruitment for his schools. But they were not interested in any institution. In military field, they were well qualified and were given leadership posts as officers.26

After the establishment of specialized schools, primary schools came into bring with a responsibility to formulate rules and regulations for the system. In Cairo and Alexandria first five schools were to be
opened in the provinces having 100 students each. Forty schools were established in Lower Egypt and twenty six in Upper Egypt. Each school enrolled 100 students who were aged eight to twelve years, the period of study being three years.

About students’ strength in schools, it was said that there were some 9,000 students in Egypt in 1839-40, divided as:

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<th>Schools</th>
<th>No of students</th>
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<tbody>
<tr>
<td>Special school</td>
<td>2,761</td>
</tr>
<tr>
<td>Primary school</td>
<td>4,971-5,500</td>
</tr>
<tr>
<td>Preparatory school</td>
<td>2,111</td>
</tr>
</tbody>
</table>

All these students were supported by the government in the form of free education, books and supplies, expenses of for lodging food and pocket money.

Most of the schools were organized under ‘consultative body’ that was given the responsibility to supervise their administration and development. This committee was established by the “Diwan al Jihadiya”ie. (Military council) so, it was thought that these schools were under the authority of the diwan. But reality was that the civil schools were controlled by another body, the “Diwan al-ali”ie (Supreme council). The matters of recruitment and transfer of students and the appointment of teachers were decided by the diwan al-ali, but orders were issued by the diwan al-jihadiya. A conflict took place between the
diwan and school administration as diwan put supervision over the schools. However, by 1838 a diwan was created for educational facilities, and to fulfill all responsibility for the school whether it was administrative or technical. The establishment of diwan became the foundation of the ‘centralized system of education’ which was the main feature of Mohammad Ali’s educational policy in Egypt.28

A medical school, at Abu Zabal was founded by Mohammad Ali in 1827 to train doctors and provide service to the health needs of the Egyptians. It became an academic institution which played a crucial role in the creation of medical professionals in Egypt. About this, one of Egypt’s foremost doctors, Naguib Mahfouz (1882-1974) stated that it was in the era of Mohammad Ali that medicine had its true beginning as a modern institution in Egypt. From here Egypt’s school of Medicine and adjoined hospital, Qasr al-Aini, and its foundation role in creating a medical profession starts.29 This medical institution was opened with a hundred students who were chosen from al-Azhar, consisting of eight teaching staff as physicians who were French and held posts in the army. There was a provision of interpreters, who were assigned the duty to assist the professors through attending their courses and translating their lectures into Arabic. The program of the French medical education was followed by the Cairo school. The course was of six years as in Paris. Such a school’s structure included a hospital, a library, a museum and a
botanical garden for medical plants and herbs. Besides this school, there were several other schools also with the medical sciences; ‘a School of Midwifery’ a ‘School of pharmacy’ and another of ‘Veterinary Science’.

Certain medical missions were started by Pasha, under which students were sent abroad. The first medical mission comprised of twelve students who went to Paris in 1832 accompanied by Clot Bey, who was the Director of the Medical school. This mission carried on up to eight years. After coming back to their country some of them were appointed professors in the school of medicine while remaining got the opportunity to be placed in army and hospitals. These first medical pioneers contributed in the urgent task of translation that resulted in the translation of a considerable number of important medical books into Arabic within two decades.

However, two major difficulties were encountered in the field of medicine one was the language of teaching; and the other was the practice of dissection. Thus, to solve the teaching language problem a special commission was composed which was given the task of translating into Arabic of those text books which were necessary for medicine. Thus fifty two books were translated. Regarding this difficulty one of the later directors of the school of Medicine stated on the occasion of the reopening of the school of Medicine in 1869 that:
"When Mohammad Ali entrusted to Clot Bey the foundation of the school of Medicine, Clot Bey accepted the glorious mission and unhesitatingly set himself to work. The difficulties were at that time almost surmountable. The Egyptian populations were them mostly illiterate. No one could be found who knew a European language except one Syrian (Monsier Anhoury) who knew Italian. He was employed for this purpose, and all the French text-books were first translated by him into Arabic”.

Since Egyptians were ignorant of the European language, so lectures in Medical school were given by the professors in French and then translated in Arabic by interpreters and then dictated to them. Clot Bey viewed this teaching method and realized that students remained cut off from all medical literature and that is why they could not progress beyond a certain point. However, he made the provision to teach French to all students of medicine compulsory. For this purpose a small school was established near the hospital where Monsieur Vcelli taught French to the students.

In this way, with the passage of time the number of student sent to Europe for higher education grew day by day and reached to 319 since 1813 to 1834. During Mohammad Ali’s reign the number of diploma students from the school of medicine increased to 1500.30
Clot Bey was appointed by Mohammad Ali Pasha to the school of medicine in 1827. The reason, behind appointing Clot Bey to the school of Medicine, was Mohammad Ali’s vision to apply the Ottoman or western models that would serve his state building project, making Egypt a powerful country. Achieving this purpose, Mohammad Ali brought Clot from Marseilles so that he could organize the Egyptian medical system. Within a short period Clot Bey suggested the formation of a “Health council” which consisted of three foreign counsels in Egypt to direct all the health services in the country. After a certain period he himself became a member of the council. Initially, he was appointed as the physician and surgeon in-chief of Ali’s new army that numbered 150,000 soldiers who were spread over Cairo and other parts of Egypt. Not only this but also at Sennar, Kordofan, the Hejaz and Crete. During first two years of his service Clot reorganized the medical service in order to provide facilities to the army; and to sanitary reforms due to the spread of plague through Cairo in 1824. He wanted to employ more doctors in order to supply the needs of army of 150,000 and to cope with the ravages of cholera and small pox. As it was not the easy task to call the physicians, sanitary officers and pharmacists from Europe because they were not aware of Arabic language and needed the interpreters who could understand French. But they were not easily available. Thus, he paid his attention towards creating a hospital to meet the immediate needs of the
army. For this, he chose a village located 700 meters from the military camp on the northern outskirts of Cairo. This village was known as “Abu Zabal” which became the location of the new military hospital. It was constructed in 1827. Its architecture was planned by Clot himself, and it was meant to be “equipped and staffed according to most modern principles. Each side of the new building measured 200 meters. It could hold 800-1000 patients. About 150 European officers and apothecaries and assistants mostly Italian and French were appointed. In the central courtyard of this one-storied hospital he planned a large botanical garden, which became of great use to the students when the school of medicine was founded”.

Another military hospital was also established by Mohammad Ali, in the same year i.e. the ‘naval hospital’ in Alexandria. But later on he directed his attention towards the general population which resulted into the conversion of a large service hospital of Cairo and Alexandria from military to civil institutions. He founded small, hospitals in Egypt’s principal cities in order to provide medical services to the employers in government factories. This work was done by him after a tour of Upper Egypt in 1846. Apart from these government workers hospitals, he also setup civil hospitals in Rosetta, Damietta, and Suez ‘Uzbekiyah’ was Cairo’s first civil hospital.
Along with these civil-hospitals, Mohammad Ali also setup free clinics to treat Egyptians. Four clinics were established in 1845 and another four by 1848. These were assigned the duty of more extensive preventive measures. The Ministry of Public instructions was given the responsibility to provide staff of trained doctors. These doctors were to provide treatment to all, especially to the poor. These centers were fulfilling their responsibility to have a proper health care by vaccinating children for smallpox and taking appropriate steps to prevent plague outbreaks, and also offered free consultation for all the city’s inhabitants.

Thus, the medical and educational institutions established by Mohammad Ali in Egypt are praiseworthy. At the period of French invasion the science of medicine had declined into ignorance and imposture.35
REFERENCES:


32. Amira el- Azhary Sonobol, op. cit., p. 32.


35. Hibba Abugideiri, op. cit., pp. 26, 47.