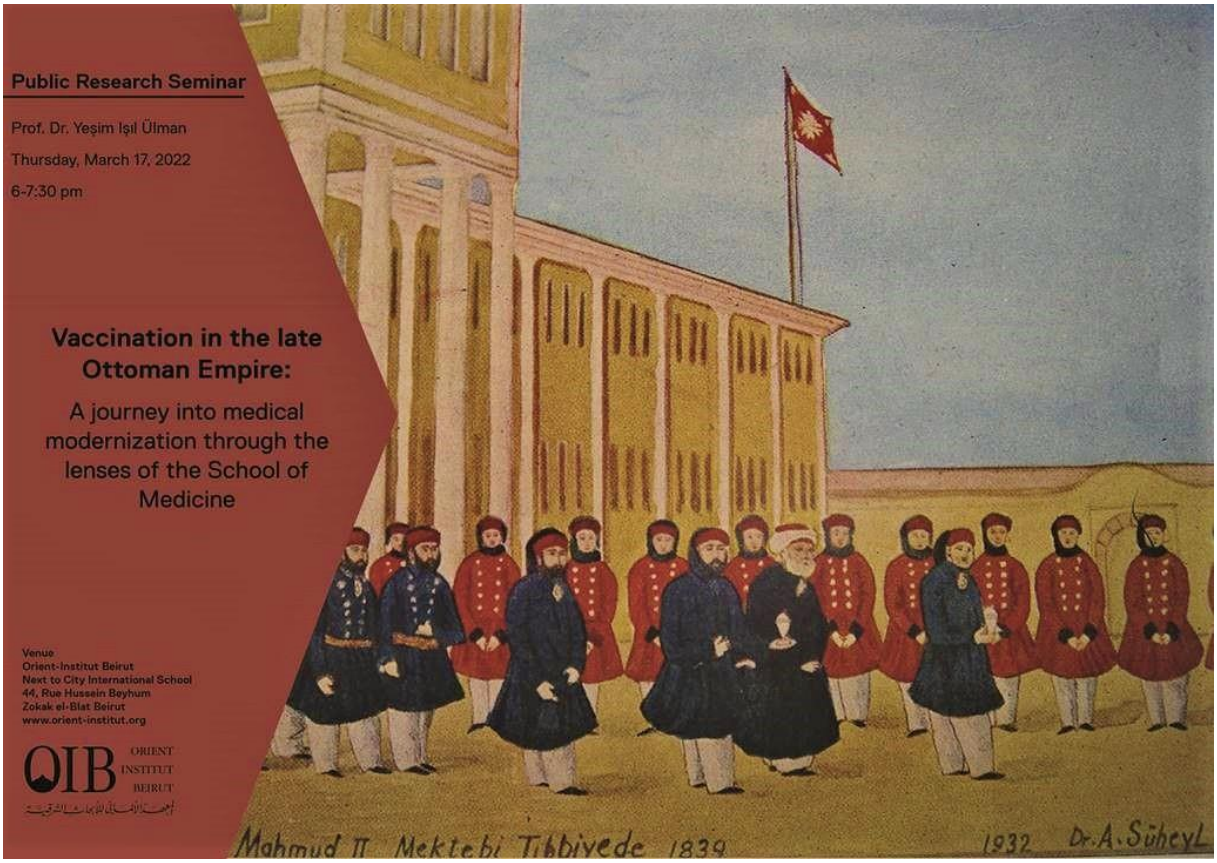
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THE IMPERIAL SCHOOL OF MEDICINE OF GALATASARAY, AS AN EXAMPLE OF MEDICAL MODERNISATION IN TURKEY (1838-1848)*

Yesim Isil Ulman**



Introduction

The nineteenth century was a period of reformation for the Ottoman Society as a whole; the determined efforts for modernisation beginning in the first decades had its reflections in the field of education, as well. Modern institutions of higher education started with the establishment of the Military Academy (1773), the Naval Academy (1793), and the School of Medicine, *Tıbhane-i Amire*, (1827) which was combined with the School of Surgery, *Cerrahhane-i Mamure,* later in 1832. Soon after, Tıbhane-i Amire ve Cerrahhane-i Mamure (School of Medicine and Surgery) failed to cover the needs of contemporary medicine and brought about demands for educational reform and for a more functional education system necesitating a larger building. An old palace school in Galata Saray at Pera (Istanbul) was

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** Prof. Yesim Isil Ulman, PhD. Acibadem University School of Medicine, History of Medicine and Ethics Department Istanbul / Turkey. Contact: yesimul@yahoo.com

modified and rebuilt to that aim, and the institution began to serve as the Imperial School of Medicine (*Mekteb-i Tıbbiye-i Adliye-i Şahane*) (1838), named in honour of the Sultan Mahmud II, *Adli*, the Just and Equitable.

In reference to its location, this institution was mentioned as "Ecole Impérial de Médecine de Galata-Sérai" or "Medical College of Galata-Sérai" or "Galatasaray Medical School" by foreign sources. The Imperial School of Medicine operated there as a modern medical institution for ten years.

Location of the School

The botanical garden, comprising medicinal plants indigenous to Istanbul, was maintained by Dr. Salih Effendi, a graduate of the School. Including a modern library, there were museums of natural history, zoology, mineralogy, and anatomy providing materials for lectures. The library, museums and laboratories were described to be equipped with the latest pieces, instruments and devices for analyses that could be found at any contemporary medical school in the West at that time. The collections were enriched by scientific excursions into the diverse regions of the Empire and also by donations. The intern students also took part in those excursions led by scientists. Mehemed Ali Pasha, the Egyptian Khediv, founder of the Cairo Medical School, donated a large collection to the zoology museum in 1843 on the occasion of its inauguration. Profs Hyrtl and Meyer from Graz, Austria sent a large set of preserved human anatomical parts to the School.

Foreign visitors praised the strategic placement of the school buildings specifically designed for the needs of professors and students, alike. The modern atmosphere of the School was particularly admired for its ability to gather together students from all religious communities of the Ottoman Empire. After mutual consent of the community, Jewish students were also admitted to the school for the first time in 1846.

Organised in a grandiose manner in the Sultan's presence, the annual activities of the school were regularly presented by a report during the ceremonial final examinations, by the end of each academical year. Together with the Sultan, high ranking officials and delegates of foreign missions participated in the graduation ceremony where students were examined from all branches of medicine and surgery. Finally candidates (including pharmacists and midwives) were given their diplomas, and were sworn to professional oaths on their respective sacred books, and investiture of doctoral robes followed thereafter.

Education

The teaching language of the School was French. As modern high schools were lacking in the Empire, then, additional education was required for entering students and therefore the preparatory classes were initiated at the Imperial School of Medicine (Galatasaray Medical School). Prior to the medical courses, students were required to take preparatory classes on the French language, history, geography, science, Turkish and Arabic languages in order to benefit more from their higher education courses. The graduation and dissertation examinations were also carried out in French. Yet the adoption of French as the teaching language at school was criticized by some circles and it was shown as contributing to the scarcity of graduates. Later in 1846, a minor surgery course was taught in the Turkish language to teach health officials. But the debate between proponents of French and defenders of Turkish, as the education language, continued well after the Galatasaray period of the Imperial Medical School until 1870, when Turkish was officially adopted in place of French.

In the beginning, the education period was for three years at the preparatory level and four years of medical classes. The period was later extended to nine, and then to eleven years. All branches of medicine were included in the curriculum, and the teaching staff had access to the latest medical knowledge.

In 1841, the Imperial School of Medicine at Galata Saray witnessed a ground breaking step on the fourth year after its inauguration when dissection on human cadavers was officially permitted due to the efforts of the Hekimbashi, Chief Physician of the Empire. By the 1841's report we learn that the students first started to dissect a human body acquired from local residents at the Dockyards. This helped the medical students to consolidate clinical information with pathological findings and to benefit from the anatomy training. The forensic medicine department was initiated at school in 1846 led by Dr. Servichen Effendi. Nevertheless the lack of autopsy practice for forensic courses was noticed by the professorial staff. It is reported that some non-muslim parents voluntarily agreed to donate the corpse of their deceased children for the forensic education at school.

The hospital of the Galatasaray Medical School achieved an impressively low rate of mortality. Many operations were carried out successfully such as extirpation of osteo-sarcomas, tonsils, fistulas, lipomas, polyps, regenerative malformations; as well as lithotomy, lithotripsy, tenotomy, herniotomy, rhinoplasty; amputations by licensed physicians. The academic staff treated patients at school hospital every week. The students benefited from hands on experience supervised by their professors at the School hospital. The intern students were also allowed to carry out various operations on ears, laryngas, pharyngas, eyes, lips, and abdomens.

The medical staff was comprised of a mixture Ottoman and western medical school graduates. However by imperial decree, Dr. Karl Ambroise Bernard (1808-1844) was hired to reorganize the educational system. As Chief of Staff, he also directed the internal medicine and surgical departments. Through the impetus of Dr. Bernard, the school gained a new identity and higher level of respect within the international medical community. While at the School, Dr. Bernard wrote four books dealing with such topics as: botanics, methods of physical examination, health benefits of hydrotherapy, and a codex for health care in the military. Upon Dr. Bernard's unexpected death, Dr. Sigmund Spitzer (1813-1895), from Austria, was appointed in his place, who directed, for years, the surgical ward and anatomy dissection courses. Of equal note, was Prof. Constantin Caratheodory, an Ottoman citizen of Greek origin, who became famous as an able surgeon and clinician of the School through his skillful operations. Some of the Ottoman physicians who comprised the staff were graduated from medical schools at Pisa and Paris. Others had already served at the previous medical school *Tıphane-i Amire* and *Cerrahhane-i Mamure.* This medical team helped to raise the modern corps of doctors and surgeons to meet the needs of the Ottoman society both in the army and in civilian life.

Even though it is originally a military medical school, this institution initiated public health services movement. The School not only produced but administred vaccination against contagious diseases such as smallpox on children and adults both muslim and non-muslim. They were vaccinated for free against smallpox every year by trained vaccinators. For instance, the number of vaccinated children (Turks, Armenians, Greeks, Jews, foreigners) in 1843 was 2295. The number rose to 12.000 three years later. Likewise the School encouraged the endorsement and participation of the Sultan in the promotion of the vaccination programme.

Department of Pharmacology developed and distributed free medication. Lastly public health clinics were established where free medical service was provided. For instance it was reported that 8000 outpatients and 823 inpatients were treated in 1843. Beginning in 1843, female practitioners were provided a course in midwifery. Likewise in 1846 a two year pharmacology programme was initiated and made requirement for graduation.

Intended as being representation of the diverse community of the School, four graduates of Galatasaray, one Muslim (Dr. Arif Musa), one Armenian (Dr. Stephan Ilias), one Greek (Nicolas Nikifore), one Jew (Dr. Gregoire Yanovitch) were taken to the final graduation examinations at the Vienna School of Medicine in February 1848. The four young doctors passed the exams successfully, proving the high level the School had attained since its establishment.

Only a year after its first surgical use in Great Britain, the first experimentation and application of chloroform began at Galatasaray. Chloroform as a chemical and anesthetic substance, started to be taught in the curriculum, experimented on animals and humans, and administered in surgical operations at Galatasaray Medical School in 1848.

On the night of October 11th, 1848, the flames of the Great Pera Fire devoured the timber campus buildings. This was not only the ruin of a most revered institution, but also a blow to the bright period of medical education in the Ottoman Empire. Yet the school immediately moved to Humbarahane Barracks which was reorganized both as a medical school and a hospital in 1849.

Nonetheless, the School was not without its critics. First only males were admitted as inpatients. Thus depriving students of a complete education to overcome this deficit, students would visit non-muslim female patients in the neighbourhood. Not until the end of 19th century were gyneacological and obstetrical wards opened at the School of Medicine. The maternity ward allowed students of medicine and midwifery to gain experience in birthing and newborn care.

Likewise it was not until 1867 that the official language of the medical school was changed from French to Turkish. A civilian medical school began to teach in Turkish in 1870. The prior use of French as the official teaching language was said to have caused a serious lack of qualified graduating students.

The success of Galatasaray Medical School was mainly based on the State policy to support modernisation in the Ottoman Empire together with endorsing reformation in the education system that subserved revolutionary steps in medical education. Reorganised and reformed to satisfy the needs of the society for covering the techniques and knowledge of contemporary medicine and the allied sciences, the School drastically increased its rate of providing qualified healthcare providers and addressing public health needs. Yearly reports allow us to follow this advancement quite clearly and learn more about this period of the School's history. Despite changing venues over the subsequent years, medical education continued until present time.