

**T.C.
UNIVERSITY OF SAKARYA
INSTITUTE OF EDUCATIONAL SCIENCES
HIGHER EDUCATION PROGRAMME**

**COMPARING HIGHER EDUCATION IN ROMAN EMPIRE & IN ITS
ISLAMIC ARABIAN AND ASIAN COUNTERPARTS IN EARLY
MIDDLE AGES**

**MASTER THESIS
SEDA ERKOÇ**

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**SUPERVISOR:
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**T.C.
SAKARYA ÜNİVERSİTESİ
EĞİTİM BİLİMLERİ ENSTİTÜSÜ
YÜKSEKÖĞRETİM PROGRAMI**

**ERKEN ORTAÇAĞDA ROMA İMPARATORLUĞU İLE ARAP VE
ASYA EMSALLERİNDE YÜKSEKÖĞRETİMİN
KARŞILŞATIRILMASI**

**YÜKSEK LİSANS TEZİ
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2014**

BİLDİRİM

Hazırladığım tezin tamamen kendi çalışmam olduğunu, akademik ve etik kuralları gözeterek çalıştığımı ve her alıntıya kaynak gösterdiğimi taahhüt ederim.

DECLARATION PAGE

I hereby declare that I have written this thesis myself and that I have studied in accordance with academic rules and ethical conduct and that I also have fully cited, referenced all materials and results that are not original to this work.


Seda ERKOÇ

JÜRİ ÜYELERİNİN İMZA SAYFASI

“COMPARING HIGHER EDUCATION IN CATHOLIC ROMAN EMPIRE & IN ITS ISLAMIC ARABIAN AND ASIAN COUNTERPARTS” başlıklı bu yüksek lisans tezi, Eğitim Bilimleri Anabilim Dalında hazırlanmış ve jürimiz tarafından kabul edilmiştir.

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.../.../20..

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□

PREFACE

We always hear what world heritage of science owes to Ancient Greeks or Romans; how the philosophy enabled sciences to emerge; how the literary culture preserved itself etc. It is even impossible to avoid the name of Homer while studying poetry or not to hear Euclid in the history of Geometry or Galen while studying history of medicine. Western society is very acquainted with how classical works formed the base of present day science, medicine, art, music etc. But to what extent do we hear about how much our present day accumulation of scientific data owe to Islamic science, especially medieval Islamic scholars? It was the Ancient Greeks which came first and followed by the Romans. These two civilizations included all these happenings up till the emergence of the Dark Ages after which there were a few monarchs in Europe like Charlemagne and King Alfred (almost a century after Charlemagne) who took an interest in reviving the scientific and literary knowledge and wisdom of the ancients. But were they efficient and prolonged in their reformist efforts? The answer of which will be found during the course of the study.

Looking at the very depth of what we exploit in scientific milieus today, one can not ignore the Islamic contribution in present-day literature of various branches of science. For instance what we have come to use as numbers today is the system of Khwarizmi whose numeric system replaced the blundering Roman numeric system (he also invented zero). Thanks to arithmetics we have algorithms which is the building block of computer systems today. The famous work of Avicenna *The Canon of Medicine* was used as the basic source of the field for centuries and paved the way to many medical applications today. It was, again, an Islamic scholar who measured the surface of the earth: Al-Biruni in the 10th century. So there was science happening simultaneously in two different continents in the Early Middle Ages at different parts of the earth but when compared to each other, how were they in approach and in quality? This question was one of the facts which gave impetus to a comparative study for me.

I believe that these kinds of comparisons always occur in the minds of people who read on medieval and ancient civilizations and try to compare the simultaneous historic turning points and how they affected our world today. This was the main motive of the topic for which this thesis was determined. It took more than a year to scan and made some conclusions, draw

some deductions about the two contemporary empires and I was able to arrive at some points but most of them are from my personal point of view.

There are some names to whom I am grateful for their contributions to the course of this study one way or other. First of all, as his student, I'd like to express my gratitude to my supervisor, Professor Güleç, for his guidance, encouragements, support and foremost for attending seriously to every little detail and every topic in this study. But for his support and counseling, this study could not have been complete. I owe him a lot and to his insights about the topic in questions. I am also thankful to parents, especially to my brother, for their support. I would also like to thank to Neslihan Özdemir Demiriz, an open-hearted and sharing friend whom I can name as my companion on the path of this almost-twin-like studies which share the same essence of the Middle Ages.

Seda ERKOÇ

23. 02. 2014

ABSTRACT

COMPARING HIGHER EDUCATION IN CATHOLIC ROMAN EMPIRE & IN ITS ISLAMIC ARABIAN AND ASIAN COUNTERPARTS

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What we have inherited is a result of what early civilizations all around the world have left behind. It is certain fact that science has never ceased being developed but it is thank to the accumulation of data, wisdom and knowledge coming from the very early days of the humanity. Apparently it all started with Ancient Greece like the works of Homer and it was oral in the beginning. It all evolved with the art of Philosophy. Education was there from the very beginning; most of the basic bits of information we use in our modern day scientific and educational processes belong to what Greece cultivated in ancient times. There came a time when Greece lost all its glamour and Roman Intellect took it over. Starting with the rise of Islam another intellect arose, especially in terms of theology and the both underwent aparalleled and authentic processes in Middle Ages. The starting point for this thesis is to signify the similarities and differences between their intellectual approach and how they handled all these renovations, the implementation process of their higher educational and intellectual policies. It is highly observable that all these renovations were deeply influenced by the economical and socio-cultural background of their antecedants as in the case of al-Ma'mun. So, to extend which the wealth and prosperity facilitates the scientific & intellectual efforts will also be dealt within the course. The study starts with the character of higher education at ancient times and takes it to what happened in the higher educational environments in Rome and Islamic lands before the Dark Ages hit. At that point, Charlemagne and his intellectual renovations interfere with the monastic circles and this enabled him to bring scholars to his court and that will be the starting point of a renaissance before the actual one in Italy between the 14th and 16th centuries. He reformed educational field of his empire along with the scientific and intellectual activities both in his court and at monastic circles. He even provided lay boys at the time a chance of studying Liberal Arts in

the body of his abbeys. At the very same period, in 8th Century there were some turmoil in the Islamic milieus in Arabian and Asian Peninsulas. Al-Ma'mun was one of the Caliphs who was eager to be deeply engaged with science and even provided patronage to scholars on any branch of science from any nationality. He was “the golden boy” of Islamic scientific study in his own era; he even excavated Egyptian tombs with the hope of acquiring ancient but new to day bits of Ancient Egyptian wisdom. He enhanced Bait al-Hikmahs and started a translational movement. All these things aforementioned occurred simultaneously at different parts of the world. The study following, examines the structure of higher learning, institutes of higher learning and how they worked then.

Key Words: Greek, Roman, Higher Education, Madrasa, Charlemagne, Alcuin, al-Ma'mun, Abbasid scholars, Carolingian, Islamic Science, higher learning, Liberal Arts.

ÖZET

ERKEN ORTAÇAĞDA ROMA IMPARATORLUĞU İLE ARAP VE ASYA EMSALLERİNDE YÜKSEKÖĞRETİMİN KARŞILŞATIRILMASI

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Bugün bize miras kalan her şey, dünyanın farklı yerlerinden medeniyetlerin geride bıraktıklarıdır. Bilimin gelişmeye asla ara vermediği mutlak bir gerçektir fakat bu, insanlığın çok eski dönemlerinden itibaren süregelen bilgi birikimi ve enformasyon sayesinde. Anlaşılacağı üzere her şey Antik Yunan medeniyeti ile başladı ve başlangıçta sözeldi; tıpkı Homeros'un eserleri gibi. Her şey felsefe sanatı ile gelişti. Eğitim ise her zaman mevcuttu; günümüz bilim ve eğitim süreçlerinde kullandığımız çoğu bilgi zerreciği Yunanlıların antik çağlarda geliştirdiklerinden süregelmiştir. Gün gelmiş, Antik Yunan entellektüelizminin yerini Roma anlayışı devr almıştır. İslamiyetin doğuşu ile birlikte özellikle teolojik açıdan daha farklı bir eğitim anlayışı ortaya çıktı ve her ikisi de eğitsel açıdan paralel, aynı zamanda özgün süreçler yaşadı. Bu çalışmanın ortaya çıkış noktası bu ikisinin entellektüel yaklaşımlarındaki benzer ve farklı noktalara; yenileşme hareketlerine; yüksel eğitim ve entellektüel politikalarının uygulama süreçlerine işaret etmektir. Tüm bu yenilik hareketlerinin el-Maymun örneğinde olduğu gibi kendinden önce gelenlerin sosyo-kültürel ve ekonomik altyapısından derinden etkilendiği gözlemlenebilir. Bu yüzden refah ve varlığın, bilimsel ve entellektüel girişimleri ne derece etkilediği de çalışma içinde ele alınacaktır. Çalışma antik dönemlerde yüksek eğitimin karakteri ile başlayıp Karanlık Çağlar başlamadan önce Roma ve İslami eğitim ortamlarında olup bitenlere değinmektedir. Bu noktada, Karolenj hanedanına mensup Frank Kralı Şarlman'ın entellektüel reformları manastır çevreleri ile kesişir ve bu durum onun sarayına birtakım akademisyenleri davet etmesini sağlar ki bu durum 14. yy ile 16. yy arasında gerçekleşen İtalyan Rönesansı'ndan evvel erken bir rönesans için bir hareket noktası olacaktır. Şarlman sarayındaki ve manastır çevrelerindeki bilimsel ve entellektüel etkinliklerle krallığın eğitsel alanlarını yenilemiştir. Hatta ruhban sınıfı dışındaki çocuklara da manastırlar bünyesinde Beşeri Bilimler okuma

fırsatı tanımıştır. Aynı dönemlerde 8. yy'da Frank İmparatorluğu'nun Arap ve Asya emsallerinde karmaşa söz konusu idi. El-Maymun bilimle uğraşmaya hevesli halifelerden biri idi ve hangi milletten olursa olsun akademisyenlere ekonomik hamilik dahi sağladı. O kendi dönemindeki islami bilimsel çalışmaların “altın çocuğu” idi ve bu altın çocuk, Eski Mısır bilgeliğinin kendi zamanı için yeni fakat aslında eski bilgi zerreciklerine ulaşma amacı ile Eski Mısır mezarlarında kazı bile düzenliyordu. Beyt-ül Hikme'yi geliştirdi ve bir çeviri hareketi başlattı. Tüm bunlar dünyanın farklı yerlerinde eş zamanlı olarak gerçekleşiyordu. İşte bu çalışma o dönemdeki yüksek öğretim yapılarını, kurumlarını ve nasıl işlediklerini incelemektedir.

Anahtar Kelimeler: Yunan, Roma Yükseköğretimi, Medrese, Şarلمان, Alcuin, el-Maymun, Abbasi Akademisyenler, Karolenj, İslami Bilimler, Beşeri Bilimler.

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INTRODUCTION

The Aim and the Importance of the Study

This study aims at specifying the details of the Western and the Islamic evolution of science and its reflection to higher learnings; specifying their early and late stages, their essence, what they produced and how they affected each other. It is also among the reasons why this thesis was written to specify the points they are similar and different from each other. The study starts from analyzing Western European Science from the early times of Ancient Greece and the emergence of Islam as paralleled to the rise of Islamic science and cover prominent phases both of the two and tracks them up till the 10th century pursuing the study of Liberal Arts in theological milieus. Apart from a few prominent names like Geroge Makdisi, there are few works in literature that tries to compare or contrast the these two civilizations's higher educational processes which is why this study is important in sense of enriching the present data on the topic in question.

The Model Of The Study

Comparative Historical Research was used during the course of this study. Generally, it involves comparisons of social processes across times and places. Comparative historical research can also help to identify the causal processes at work within the nations or other entities (Skocpol, 1984:374–386).

Problem

Carolingian Empire and Abbasid Caliphate were counterparts and contemporaries at a point during the course of Early Middle Ages. How was the level of higher education at the time in the two ?

Sub Problems

1. Till when does higher education go back in the two?

2. How did they evolved paralleled with the Carolingian and Abbasid Empire?
3. What was the role of Charlemagne and Al-Mamun during the course of intelectual evolutions?
4. What were the elements affecting their development (ecumenical-religious, political, social, economical, etc.)?
5. What were the institutions, educational content, techniques, curriculums, student-lecturer profiles like?
6. At which points did they differ from and resembled eachother?

Definitions

- a) **Carolingian Empire** (800–888): it was the final stage in the life of the Frankish realm which was ruled by the Carolingian dynasty.
- b) **Charlemagne** (748?- 814): *Carolus* or *Karolus Magnus* or Charles the Great. He ruled between 768-814.
- c) **Carolingian Renaissance**: Intellectual efforts realized by Charlemagne and his companion monk Alcuin.
- d) **Umayyad Dynasty (661-750)**: Second Caliphate after the death of Prophet Muhammad. Damascus was the capital.
- e) **Abbasid Dynasty/ Caliphate (750-1258)**: Third Islamic Caliphate after the death of Prophet Muhammad. Baghdad was the capital and it was home to Bait al-Hikmas during the time of Abbasid Caliph Harun al-Rashid. Following him, his son al-Ma'mun reigned the Caliphate and directed the Bait al-Hikmahs.
- f) **Bait al-Hikmahs (House of Wisdoms)**: were like library, translation institute and academy established in Abbasid-era Baghdad, Iraq at the time of Harun al-Rashid and his son al-Ma'mun.
- g) **Abbasid Revolution by al-Mamun**: Al-Ma'mun provided patronage to scholars of all sciences and started a translational movement by which he aimed to achieve a high level of intellectual accumulation. It was his personal zeal like Charlemagne's.
- h) **monastery**: the term dates back to 4th-5th century Egypt where hermits started to live together. They are buildings, complexes of buildings or facilities differing in size and population (nuns or monks) in which liturgical rituals and seclusion dominates.

- i) **madrasa:** educational institution in Islamic part which provided the highest level of Islamic science with Jurisprudence, Fiqh, Sunnah, Jadal, Hadith, etc. in the Islamic Lands in the aforementioned eras.

CHAPTER I

GREEK ORIGINS OF HIGHER EDUCATION AND THE DEVELOPMENT OF ROMAN HIGHER EDUCATION IN MIDDLE AGES

Reading and reasoning the works that have been produced about the origins of the higher education today, for a researcher it is possible to imply that the Greek educational system has still been observed as ‘the Roots of European Education’. Because it is where it has fostered from the very beginning. The educational history of ancient Greece and Rome illuminates the origins of western culture and education (Ornstein & others, 2011: 68.) From the very earliest period when the Greeks acquired the alphabet from the Phoenicians in the eighth century, they used writing for pragmatic, everyday functions, and it never became the exclusive skill of a scribal caste (Christides 2007: 314). The modern academic disciplines of education, art, science, medicine, and many other aspects of society can trace their roots to the Greeks. Our own educational system, aesthetic values as expressed within the fine arts, and of course, our quintessential philosophical presuppositions about life have Greek heritage (Anthony & Benson, 2003: 43). In a long and glorious history, ancient Greece gave the world a wonderful legacy of art and literature. The invention of an alphabet that allowed for the development of sophisticated prose and poetry led to the invention of the theater and complex drama (Hunt, 2008: 7). So at glance, ancient Greece seems self-evidently a society which relied extensively on the written word, which included a very large number of literates among its population, and which, in short, could be considered ‘a literate society’. After all, it is these literary achievements of Greek civilization which Western society has inherited (Thomas, 1992: 3). In ancient Athens, the line at which someone is seriously disadvantaged by poor writing skills can be drawn very low, but that does not mean that he was on an educational and political level with the elite. The educated elite, who overlapped considerably with the political leaders, had advanced literacy and cultural attainments that included ‘*mousike*’, music, literary knowledge, and literary composition (Johnson & Parker, 2009: 16). In short, it is possible to say that the Greeks were the first in history to produce the intellectual life in

accordance with artistic values and following the Greeks came Romans who almost copied their education. For a while, they highly respected the Greek inheritance as an educational sum, applied it for almost centuries, later developed their own systems, it wasn't far from the Greek essence, though. What we see in our universities today, is not far from The Greek and Roman essence, either. We are still entangled with Liberal Arts and we still depend on Philosophy to interpret the existing branches of science. It is possible to say that the Greeks were the first in history to produce the intellectual life in accordance with artistic values and following the Greeks came Romans who almost copied their patterns of education. For a while, they highly respected the Greek inheritance as an educational sum, applied it for almost centuries, later developed their own systems out of it; it wasn't far from the Greek essence, though. What we see in our universities today, is not far from The Greek and Roman essence, either. We are still entangled with Liberal Arts and we still depend on Philosophy to interpret the existing branches of science. Today in our educational systems we have primary, secondary, tertiary and higher education phases. We can't speculate the content is somewhat similar but mankind also had a three-staged education at the time as well. As Criore (2001:16) states traditionally, historians of education have maintained that students pursued a full course of literary instruction in antiquity in a somewhat similar system, passing through three successive stages supervised by separate teachers: they learned reading and writing in elementary school, grammar and poetry at the school of the grammarian, and the art of speaking in the school of rhetoric.

1.1 GREEK TRACES ON SCHOLARLY STUDIES & ITS EFFECT ON EARLY ROMAN EDUCATION

1.1.1 Phases Of Greek & Roman Education Systems During The Ages, The Origins Of Higher Education At The Time

Within this context, to be able to fully comprehend the historical evolution of higher education in the middle ages during the Greek and Roman Periods, we need to examine the early stages and the conditions or factors which led to that evolution. Drever (1983) writes that one of these factors- when compared to other antique nations- was their being imaginative, intensely intellectual, endowed with a fine sense of proportion, harmony and restraint and intensely human. And it should be noted that all these led to intellectual culture

and individual freedom. Another factor is counted as social and political conditions of the country, its being composed of independent city-states and not being able to establish federation. So each has formed its civic life, gave importance and developed its own educational thought. He also states that other factors can be counted as religion, literature, art, philosophy, commercial relations with other people, etc. During the ages 1000- 800 B.C., there had been many city-states or as it used to be called ‘polises’ and each had their own characteristic in sense of administrating the education. And especially two city-states, Athens and Sparta, were of high importance during the “Homeric Period” which constitutes the largest part of The Old Education.

Chart 1: Periods of Greek Education & Scholarly Studies at the Time

Old Greek Education	The New Greek Education
<p>1. Homeric Period from 1000 to 800 B.C.</p> <p>* <i>Educating the physical and intellectual character on basic level</i></p> <p><i>Homer’s works as a core</i></p> <p>(No higher study at all)</p>	<p>1. Transition Period from 450 to 300 B.C.</p> <p>* <i>Evolution in the view of education with Sophists: Plato, Socrates, Aristotales</i></p> <p>* <i>Fist traces of University in Europe</i></p> <p><i>The University of Athens & Lyceum of Aristotales</i></p> <p>Rhetoric as higher study</p> <p><i>(The exact origin of Trivium)</i></p>
<p>2. Historical Period from 800 to 450 B.C.</p> <p>* Physical and intellectual character</p> <p>AND</p> <p>* <i>As two recognized subjects:</i></p> <p>gymnastics & music</p> <p>(No intellectual higher study at all, scholarly studies only concentrates on gymnastics and music at ‘paedias’)</p>	<p>2. Hellenistic Period from 300 to 529 A.D.</p> <p>*<i>Higher education curriculum with the inclusion of “ Liberal Arts”</i></p>

About the Old and the New Greek educational approach, Power (1991: 8) says that old time was very changeable to be able to leave a historical picture. Only what society said was thought and the common curriculum lacked need for literary and commercial skill; it was physical and oral with literature added for good measure. He goes on about the Old Education as follows:

Old time schools heeded music and sport and did their best to harmonize them. New schools emphasize literature and gave some attention to music, but their promotion of mental formation threatened the status of physical development. Despite vigorous thrust and artistic appeal, the critics expressed a minority opinion that lacked the vigor to impede educational change. Citizens thought only on their education, and towards the close of the fourth century B.C., the population of Athens was about twenty-one thousand citizens, ten thousand resident aliens, and 120.000 slaves.

According to Marrou (1956: 36-37), from the seventh century on, there had been almost a homogenous understanding of education all around Greece with the same civic and military ideal, the same total subjection of the individual to the society. But about a century and a half later, it turned out to be more centered on the civilian, military education ceased being the educational focus of the youth.

For the *Athenian Higher Education*, is possible to say that it had been exposed to many changes during the fifth and fourth centuries depending on the social and political status quo of the period and more than Spartan education had been. The most importantly, this was the period, the first universities or at least traces of universities is observed in the history owing its existence to the movement that is called *sophism* during the fifth century B.C. All schools were private schools. The state only provided education between the ages of sixteen and twenty, almost wholly a direct preparation for military service. Until the age of seven, the training of a child was in the hands of his family. For the next eight or nine years, the Athenian boy attended two public schools- the music school and the *paleastra* (gymnastic school). At about age sixteen, he discontinued all literary and musical instruction to attend the gymnasium, where for two years he prepared for the life of an Athenian citizen; the last two years (*ephebic* or *cadet* education) were under the direct control of the state officials (Marrou, 1956: 4). The institution originally had been for military training, but during the Hellenistic age, this aspect fell into the background and it became a training ground for public life (Ferguson, 2003: 111). Either following the primary school and preceding the music school or operating in concert with them, the *paleastra* limited its course to physical conditioning,

dancing and games. So it didn't provide any higher study apart from the physical ones. But with the decline of the military and political supremacy losing its supremacy in Greece, Power (1991) says that the emphasis on physical fitness and military skills lessened it shifted to literary formation and intellectual development with no focus on sports. Priorities changed along with ephebic education. Ephebi collected books, read them in the *ephebeion* and argued about the novelties they contained. He adds that ideas honed the intellect and made ephebia remember the courts, the arena, the schools and the libraries.

In Spartan educational systems what strikes most and what differs from the other Greek state-cities' system is that education was obligatory and it was under the state-control. Families were forced to send their children to the state schools for education after the age of seven which, for the Greek, drew the line between a child and the threshold of the adolescence to be future citizens. So Spartan education was compulsory because as a result of its military character, the State always needed regular amounts of soldier and it wasn't free, it wasn't a civic service provided by the State. Parents were also obliged to afford their students' expenses called *syssition*, in other words; contributions which were collected by leaders called *syssitias*.

Of the Greek cities Sparta is surely the one where education played the greatest role, because the model of the citizen was particularly demanding and exerted a very strong pressure on individuals; in particular, one of its principal missions was to make them as far as possible the same, which implied that the process should be identical for all. Education is, therefore, at the heart of Spartan ideology and practice (Ducat & Others, 2006: 43).

There were somewhat equivalent higher educational centers for healthy and agile Spartan boys called *agoges*. They were like the counterparts of Athenian *paideias*. "The agoge began for a Spartan boy at the age of seven. We are not nearly so well informed about the education of Spartan girls, but there is reason for thinking that they, uniquely in Greece, did undergo some sort of formal, communal and public educational cycle. To some extent this seems to have resembled the 'primary' education given to Athenian boys, but in other ways, especially the physical exertions, it was *carbon copy* of the Spartan boys' curriculum, and that is presumably an important clue to its meaning and the function." (Cartledge, 2003: 83)

Ducat, in his *Spartan Education* (2006) says that some aspects of *agoge* makes it a *paideia*. It covered reading, writing and arithmetic. He also mentions that a child could be excluded from *agoge* if his father was no longer a citizen or he doesn't have any more money to afford his

son's education. He also counts some features of *agoges* that were covered in Xenophone's¹ and Plutharch's² writings as; being obligatory and identical for all, being based on age classes, segregation, having test as far as torture, including combats, stealing and supervision, having pederasty as an institutional aspect and participating in festivals.

Spartan education was unique in its inclusion of girls. Xenophon notes that in other Greek states girls were taught moderation, wool work, and how to remain sedentary, that is, to stay indoors. In Sparta, girls exercised outdoors in the aim of making them healthy mothers. Unlike boys, however, Spartan girls lived at home until they married (Roisman, 2011: 102). The goal of the educational system devised for Spartan girls was to create mothers who could produce the best hoplites and mothers of hoplites. Because all the girls were expected to become the same kind of mothers, the educational system was uniform (Pmeroy, 2002: 4). Patriotism and obedience, although in different measures, were exacted from men and women. Women lacked equal status with men, although they enjoyed more freedom than Athenian women, but were respected nevertheless for the contribution they made in bearing, healthy children. Spared military training and the ordeal of combat, their moral strength and resolute patriotism sustained their soldier husbands and sons and urged them to the battlefield with the admonition to return home with their shields or on them (Power, 1991: 17).

1.2 PHILOSOPHY, ITS EFFECT ON SCHOLARLY STUDIES AT THE TIME, ATHENS AND PLATON'S *ACADEMIA* AS THE EARLY UNIVERSITIES OF EUROPEAN HIGHER EDUCATION HISTORY

There was nothing corresponding to the secondary, let alone higher education in this state. Because there was no need for it in a warrior society. But Athens especially after the Persian War, new social and political needs created the demand for new kinds of education and the demand was satisfied by men known - often derogatorily- as 'sophists' (Joint Association of Classical Teachers, 1984: 175). Graves (2004: 173) states that as a result of the Persian war, a revolutionary tendency has occurred in Ancient Athens' ideals and practice and philosophy also shifted its focus from reality to man. He writes "To meet these demands, a new set of teachers, who called themselves *sophists* (wiseman) came into prominence. Individual

¹ Xenophone of Athens (c.430- 354 BC) Greek writer.

²(c. 46 – 120 AD) Greek biographer and historian, Middle-Platonist in character. After he became Roman citizen he was named as Lucius Mestrius Plutarchus.

sophists came from all over the Greek world and many though not all of them continued to travel extensively as a part of their professional activity. Nonetheless they all came to Athens and it is clear that Athens for some sixty years, in the second half of the fifth century B.C. was the real center of the *sophistic movement* (Kerferd, 1981: 15). Athens, being in this condition about the middle of the fifth century, there is nothing to surprise us in the fact that a new kind of teacher comes upon the scene, the Sophist, who possesses to meet the new demand for a higher education, which should be in keeping with the spirit of the time (Drever, 1912: 31). From their unsystematic instructions developed the ancient schools of *Rhetoric* and other disciplines. Similarly the conversations of Socrates led to the *Philosophical Schools* of the fourth century. Learning became systematized, embodied in regular courses of instruction and in textbooks (Clarke, 1971: 1). Sophism was a type of teaching philosophy which concentrated on excellence and character in speech and the word itself meant “the one which delivers or does wisdom.” It exploited techniques of rhetoric. Thus was the first systematic occurrence in Ancient Greek’s educational sphere and it was, to some extent due to the emergence of the individuals of a movement called *sophism*.

When the Greek Period came to almost an end the philosophical teachings in progress had been turned into systematic teaching in the *University of Athens* (Cordasco, 1976: 4). Or the Academy of Athens. Before long, the Hellenic world boasted other universities, such as those in Rhodes, Pergamon, Alexandria, and Rome. Nevertheless, Athens, until almost 300 A.D., remained the chief intellectual center of civilization. It offered the best opportunities for philosophical, scientific, literary, grammatical, and rhetorical work, and continued to attract students from all parts of Roman Empire (Graves, 2005: 219). “Finally, in certain privileged centers- first Alexandria, then in Pergamus, and later, under the Empire, in Athens- there appeared, as a sort of crowning point of the whole system, establishments like the Museum, where the most highly qualified men of the day engaged in research, and gathered young disciples around them to form genuine institutes of higher learning” (Marrou, 1956: 103). The university of Athens was established by Greek Philosopher Plato who lived between 427- 347 B.C. Its name derives from the fact that school activities took place in meeting rooms located in gymnasium called the Academy, on the outskirts of Athens. Plato had required a small property near this gymnasium, where the members of the school could meet and even live together (Hadot & Chase, 2004: 57). His reasons for setting up the academy were connected with his earlier ventures into politics. He has been bitterly disappointed with the standards displayed by those in public office and hoped to train, in his Academy, young men who would

become statesmen. Plato believed that these men would be able to improve the political leadership of the cities of the Greece (Marrou, 1956). The school founded by Plato in the gardens of Academy quite close to Athens can be named as the first organized institute. It had classrooms, a library and dormitories. It transformed philosophical studies. As it was a systemized school with programs, many disciples and students came there from all parts of the country to take the courses. Many of these, had graduated from the Academy, which were studying the ideals of Plato- especially the political ones within the Mediterranean parts. Men and women were admitted on equal terms to the academy, the two requirements being a good understanding of mathematics, particularly geometry and wealth- the school was free but relied on the donations of wealthy alumni. Mathematics formed the core of the curriculum: arithmetic, geometry and related subjects such as astronomy and music. Plato and Socrates' technique of the dialogue supplemented by lectures and discussions (Lawson, 2004: 1). But the tendency of higher education there was toward the study of rhetoric alone; and, while the great teachers like Isocrates had been able to maintain the union between the education and real life, even after style rather than knowledge had become the object, artificiality grew apace, the decay finally resulted (Graves, 2005: 220). Not long after Plato, Aristotle managed to establish a school: The *Lyceum*. And in the 3th century B.C. two other schools emerged: *the Stoicism*³ and *the Epicureanism*⁴. These four schools survived its founders over the centuries and its influence was kept alive throughout the middle ages. The philosophies of these schools, especially those of the two new ones, addressed the problems occasioned by the political collapse of the *polis* and the emergence of a new cosmopolitan society. Yet it was the Stoics' new interpretation of logic that most directly influenced the development of liberal arts (Wagner, 1983: 3). Isocrates (436–338 BC) was another prominent sophist at the time. Isocrates' school followed the development of the schools of sophists, but unlike the older sophists, he didn't travel; he required students to come to him and stay for an extended period. This gave his school a stability that the wandering sophist lacked (Kennedy, 1999: 39).

1.2.1 The Fusion Of Greek And Roman Higher Educations & The Introduction Of 'Rhetoric' As Higher Study

³ A school in Hellenistic Philosophy which concentrates on indifference to pain and suppressing the feeling of pleasure.

⁴ A philosophy based on the teachings of Epicurus, an atomic materialist (341–270 BC) which concentrates on deriving the greatest joy and pleasure from life but doing it moderately not to indulge in the addiction of such a pleasure.

It is known that rhetoric has its bound with politics and originated in Ancient Greece which highly valued public participation in politics. So it would not be wrong to state that politics and rhetoric as an art are interrelated. What we meet the early traces of rhetoric in the epics of Homer and his Iliad is considered as one of the earliest forms of oratory (a form of rhetoric). Though, its educational preeminence was new, rhetoric had deep roots in Hellenic culture. Indeed the significance of oratory antedated the classical city-state, the frequent speeches in the Iliad, attesting to its importance in the society portrayed by Homer. Oratory continued to play an important cultural role in the centuries following Homer- in the Homeric hymns, and in the works of the dramatists and historians (Wagner, 1983: 6). It must be noted that rhetoric exists only for interpreting and this way enhancing the science. It was used only for scientific development not for convincing or making the interlocutor agree. It was an art, a subject on its own but also was the prime subject to have been studied before going on with the others. Ballard (1989: 102) notes that if rhetoric is an art of persuasion it mustn't be misinterpreted, that is not an art of persuasion or manipulation of one's thoughts for other's good. It is a relatively free art; it depends on another art, the servant of another's end. So long as Rome remained what she was for nearly centuries of her national small Italian state, with only rare and limited contact with the rich and fertile world of Greek culture- the education of her children aimed at no more than at the development of those virtues and capacities, the value of which was recognized in daily life (Wilkins, 1905: 1). After the Roman conquest of 146 B.C., Greek civilization in general was rapidly appropriated by the Roman conquerors, and Greek education extended its boundaries without changing its character (Cordasco, 1976: 10). Rome was no longer just a city or an Italian nation. It was becoming an International empire. A Mediterranean world that was previously Greek, following the conquest by Alexander the Great, was now Roman politically and militarily but Greek culturally and educationally (Estep, 2003: 5. 3). The general appropriation of Greek culture by Romans was by adoption of Greek educational institutions (Cordasco: 1976, 15). Roman higher education was also Greek education, almost the higher schools based on the Hellenistic and age (Sharma, 1997: 35). Similarly Wilkins (1905: 2), in his book *Roman Education*, notes that Greek methods and models became dominant in Rome and it was due to Greek teachers. He writes that later that wasn't enough, so they accepted and adopted Greek culture and training both for the mental development and the demands of public life; a higher stage of education was pursued by all whose means and leisure was enough and by that, Greek philosophers and rhetors supplied an essential part of the higher education of a young Roman 'noble'. For Romans of the classical period, education was a Greek import, and they somewhat mistily contrasted an education

founded on literary texts and conducted by Greek speakers beginning in the 3rd century B.C. (Bloomer, 2011: 3).

Estep (2003, 5: 1) notes that Roman education can be divided into four main periods as:

1. *Native Roman* (8th-4th century B.C.),

2. *Transitional Roman* (3rd -2nd century B.C.),

3. *Greco-Roman* (2nd – 1st century B.C.)

4. *Roman Education* (from 1st century B.C to 5th century A.D.) And he states that during Native Roman, education was purely Roman; free from the Greek influence, adding that for the Transitional period, the Greek influence got ‘plainly’ obvious.

Some other type of classification is possible by some other authors. The history of Roman education falls into great periods.

The periods and the characteristic achievements of each are as follows:

Chart : 2 Periods of Roman Education & Scholarly Studies at the time

<i>Native Roman</i> (8 th – 4 th B.C.)	<i>Transitional</i> (3 rd – 2 nd B.C.)	<i>Greco-Roman</i> (2 nd – 1 st B.C.)	<i>Roman</i> (1 st B.C. – 5 th A.D.)
*Pre- Greek Period	*Post Greek Period		
<p>* <i>The only existing type of education was elementary and family-dominated</i></p> <p>*<i>Teaching ideals - ‘virtues, gravitas, pietas’ to be a qualified citizen (The Twelve Tablets were used as an educational cult for centuries)</i></p> <p>*<i>Schools were only at elementary level, no proper secondary and higher education existed at the time.</i></p>	<p>*<i>Literary culture began to emerge</i></p> <p>*<i>A system starting to be shaped under the influence of Greek scholarly studies</i></p>	<p>*<i>Competency in teaching Latin and Grammar</i></p> <p>*<i>At this period Christ existed</i></p> <p>*<i>The emergence of the Christian Church and the effect of Christianity on education</i></p>	<p>*<i>The higher study of law and medicine became prominent in universities</i></p> <p>* <i>Antiquities came to an end</i></p> <p>* <i>Middle ages began and university teaching started to spread and transform.</i></p> <p>* <i>The enhancements in subjects completing Liberal Arts as Trivium + Quadirivium</i></p>

1. From 753 B.C. (traditional founding of the city) to 275 B.C. Children were taught

principally at home by their parents and servants (usually educated captured slaves). Entry to public life was by participation in civic, religious and military affairs. Schools were only on the elementary level.

2. From 275 until 132 B. C. the Romans developed a literary culture and a system of higher education patterned the Greeks.

3. From 132 B.C. to 100 A.D. Latin literature and grammar were perfected. Medicine and law were taught on a systematic basis. Roman treatises on architecture and oratory were produced. Schools were private but a beginning was made of public subsidies to education. The government became an empire. Jesus Christ was born, lived and was crucified, and the Christian church was established.

4. From 100 A.D. to 275 A.D. law became a university subject. Medicine took form and it kept this for 1400 years. Government increased its subsidy for learning.

5. From 275 A.D. to 529 A.D. The government established a monopoly of education. Teachers were required to be licensed. Christianity became tolerated, then it became the official religion of the Empire. Textbooks were written. The ancient world went to pieces and the Middle Ages were ushered in (San Mateo & Tangco, 2003: 13).

Higher education consisted mainly of *rhetoric* or *communications*. For example, students learned the parts of a well-constructed speech. With the help of standard textbooks, they memorized model speeches and passages that could be inserted into any speech as needed. They learned lists of possible ways to say anything about any topic. The most characteristic form of instruction was the public lecture. Well-crafted public speaking was considered the sign of a polished and educated person. The lesser-educated public knew how to judge plays, recitations and public lectures. All the major philosophical schools practiced similar principles of rhetoric.

1.2.2 Rhetoric as a Higher Study in Roman Education as a descendant of Greek Scholarly studies

Following these periods came the Hellenistic age lasting from the 300th B.C. The generalization of Rhetoric as a higher study at the time almost corresponds to the Hellenization of Roman education system.

The first teachers of rhetoric were the itinerant lecturers of fifth century Greece known as sophists; beginning with the Isocrates, in the fourth century, regular schools of rhetoric became common, and throughout the Greco-Roman period the study of rhetoric was a regular part of the formal education of young men (Kennedy, 2009: 3). A Roman boy started rhetorical study at the age of fifteen and completed it when he was about twenty. At this stage formal education of the Romans ended. It was after their education that they were ready to enter public life and to serve the State in various positions. But if any Roman boy wanted to study further he could continue the study of oratory or could take up law, medicine or philosophy (Sharma, 1997: 35). During the life of the Republic, the orator found many opportunities for the constructive use of this ability, and all young men ambitious to enter law or politics found the training of these schools a necessary prerequisite. They were attended for two or three years by boys over sixteen, but the only wealthier and more aristocratic families could afford to send their boys to them (Cubberley, 2004: 52).

Instruction in Rome began with Latin exclusively. Romans then studied Greek and moved to a bilingual higher education (Greek and Latin). However, once, education in Rome was no longer dependent upon Greek education, they returned to strictly Latin instruction (since the Roman educational system had advanced to the point of self-sufficiency no longer reliant on Greek literature and philosophy) (Estep, 2003: 5.4).

1.2.3 The Content of Rhetorical Study

In rhetorical education use was made of *declamation*. The student was assigned a *thesis*, an abstract general theme, or a *hypothesis*, a particular person or situation, on which to develop a speech. The initial stage of instruction in the rhetoric involved the study of preliminary exercises, the *progymnasmata* (Ferguson, 2013: 120).

The students began by composing and delivering short speeches about mythological topics. These were simply descriptive essays. In the next phase, they prepared comparisons. Some topics included comparing Homeric heroes such as Achilles and Odysseus, seafaring with agriculture, or town versus country life. The next step up in complexity was for the Students to put themselves in the place of a famous mythological character and compose a speech he might have given in a certain situation. This exercise emphasized psychological insight and imagination (Aldrete, 2004: 65). At first, there was no institution beyond the schools of the rhetoric and, for a Roman to obtain university education he had to study abroad at Athens,

Alexandria or Rhodes. Vespasia⁵, in 75 A.D., put up a library and developed a school of learning called *Athenaeum* which would constitute higher education (San Matheo & Tangco, 2003: 15).

Chart 3. The Evolution of Higher Education in Europe in the Early Middle Ages

<ul style="list-style-type: none"> • <i>3th- 6th AD Monopoly in Roman Education, fusion of Christianity within the Roman education and its getting solid in educational facilities.</i>
<ul style="list-style-type: none"> • <i>6th and 7th AD Intellectual decline in European Higher Education known as “Dark Ages” – no solid innovation or reform in scholarly studies at all.</i>
<ul style="list-style-type: none"> • <i>7th AD on Educational Innovations of Charlemagne for the sake of educating qualified king, qualified nobility and clergy.</i>
<ul style="list-style-type: none"> • <i>In the Early and Late Middle Ages, knowledge continued to be organized around the scheme developed by Roman writers as “trivium & quadrivium, it constituted the main system of nobilites and free men’s higher education.</i>

1.2.4 Liberal Arts As Higher Study In Early Middle Ages

There are many deductions in literature on why they were called ‘Liberal arts’. We can state that at the periods that have been mentioned above, education was clearly an activity of the ‘free’ men and within this description we generally come across with aristocracy. It wasn’t something for slaves. Knowing the fact that in Latin, ‘liber’ means ‘free’, we can deduce it could mean “for free people only”. Another presumption can be counted as the idea that education makes people more intelligent, more able and less ignorant. And less ignorant they are, the better lives people lead thanks to the information they gain by the science. And freer minds they will have. This thought claims that one gets free and liberal if he has the ability to manipulate the world around himself within the light of the education he got. So both explanations sounds perfectly appropriate for reasoning the use of the adjective “liberal”.

The sophists played an significant role in the evolution of the medieval liberal arts that would greatly alter the educationof the Roman age and the education of important figures like

⁵ Roman Emperor (from 69 to 79 AD).

Cicero⁶ and the Quintilian⁷. Wagner writes that it was Pythagoreans⁸ who first linked the four arts of Quadrivium. Their principle was that “all is in number”. Wagner also adds that the fact; given the preeminent role of number in their philosophy, it is not surprising that the early Pythagoreans emphasized the study of arithmetic and geometry. They also supposed that there was a link between the numbers and the universe which corresponds to universe reflected in musical and mathematical harmony (1983: 2).

Grammar is always the first-named subject in any list of the liberal arts, even though the next two- rhetoric and dialectic- sometimes change their position in the catalogues. Even if it were to be viewed simply as a mere preliminary study in the use of words, grammar would be an important part of the medieval concern for the arts of discourse (Murphy, 1974: 138). Before 1000, quadrivium subjects were given a minimal emphasis as they were deemed inessential for the training of a body of literate clergy. Sometimes they were wholly omitted from the syllabus or at best treated in a rudimentary factual way. The need to master enough arithmetical skill to calculate the dates of movable church festivals was often the sum total of quadrivium expertise absorbed by the average student priest (Cobban, 1975: 11). We see that Quadrivium was the second phase of The Liberal Arts but it wasn't still as highly respected as Trivium, towards the end of the Middle Ages that Quadrivium gained its authority in higher education fully. As there was not more than Seven Liberal Arts in the early Middle Ages, there was teaching of grammar, rhetoric, logic and arithmetic, astronomy, geometry, and music, the academic curriculums consisted of these seven subjects only.

Thinkers relied heavily on the authority of the past writers, rather than their own observations. The rudiments of classical scientific thought survived but in most watered-down form. The works of Plato, Aristotle, and the Hellenistic scientists were no longer accessible. Only a very few exceptional individuals had any knowledge of Greek or any awareness of the achievements of ancient Greek scientists. Knowledge continued to be organized around the scheme developed by Roman writers of four mathematical arts (geometry, arithmetic, astronomy, and music) and three language arts (grammar, dialectic/logic, and rhetoric), collectively known as the seven liberal arts, but the scientific content of the mathematical arts and the more advanced sciences has almost entirely dropped from view (Whitney, 2004: 7). We know that in rhetoric schools during the Roman Periods and early middle ages Liberal

⁶ Marcus Tullius Cicero, (c.106-43 BC), Roman politician, orator, lawyer, constitutionalist.

⁷ Marcus Fabius Quintilianus, (c.35-100 AD), Hispanic rhetorician.

⁸ Supporters of a religious movement called Pythagoreanism which assumes that universe can be understood through numbers (c. 500BC).

Arts used to be studied commonly and quadrivium flourished as common scholarly studies. In addition to oratorical and some legal training, these (rhetoric) schools included a further linguistic and literary training, some mathematical and scientific knowledge, and even some philosophy. The famous seven “Liberal Arts” of the Middle Ages- Grammar, Rhetoric and Dialectic: Music, Arithmetic, Geometry and Astronomy- all seem to have been included in the instructions of these school. The great studies, though were the first three and some law, Music being studied largely to help to help with gestures and to train the voice, Geometry to aid in settling law suits relating to land, Dialectic (logic) to aid in detecting fallacies, and Astronomy to understand the movements of the heavenly bodies and references of literary writers (Cubberly, 2004: 52).

1.2.5 The Inclusion of the Ecclesiastical View into Higher Education

In 600s AD came a period which is called the Dark Ages, in which the intellectual production almost came to produce nothing but repeat the old teachings and scholars produced almost nothing in sense of scientific information. It was a result came by the fall of Roman Empire. The hints of the Roman Empire’s collapsed came in the 300s AD and here started to emerge Middle Ages so it can be called Early Middle Ages. The transition continued and enlarged itself gradually during centuries. The effect of the some other religions and cults, mysticism dominated the society but the Seven Liberal Arts remained the same and continued to be included within the curriculum of the higher education. A new current called Neoplatonism⁹ was felt. At that period came handbooks and the writings of encyclopedists. They were far from originality, creative thinking was suppressed by the wordly pursuit especially during the fall of the empire, though rhetoric remained the core of the education. But rhetoric at this time, he depicts as rhetoric on declamation with strict stylish embellishment (Wagner, 1983: 10). So it seems to have been something more than rhetoric not the rhetoric that was basic for interpreting the Quadrivium. He adds that there were also encyclopedists and their works were the most “distinctive genre” of the 7th Century AD. They combined the new stream of Neoplatonism with the Christianity. So the canon of the Seven Liberal Arts be established at the center of the medieval intellectual life. Here we can say that *Trivium* and *Quadrivium* were separate teaching topics, trivium as the basic abilities to accomplish others. But from then on, 7th century AD, all came to be pronounced **as a canon, as a unit**.

⁹3rd century movement based on the the spritual aspects of Platonism, largely focused on the spritual and cosmological aspects of Platonic thought

Chart 4: Trivium & Quadrivium

TRIVIUM : Liberal Arts of Rhetoric, Grammar and Dialectic	
Rhetoric:	
Master art of trivium (effectiveness in speech)	
<ul style="list-style-type: none"> ✓ <i>Dates back to Hellenistic Age of Greece,</i> ✓ <i>Developed by the effect of Sophists and formed the basis of Liberal Arts during the Middle Ages.</i> ✓ <i>Makes use of Grammar and Dialectic.</i> ✓ <i>Its effect was felt on Liberal Arts in 5th century</i> ✓ <i>It still constitutes a part of higher education systems.</i> 	
Grammar	Dialectic (Logic)
<i>A set of rules for correctness in phonetics, spelling, syllables, words and sentences</i>	<i>Dialogues between the two to Achieve the Truth, Getting into the reality by reasoning</i>
<i>First appeared in 4th century B.C., there were Grammr Schools and Gammatists in Transition Period</i>	<i>Plato (427- 347 B.C). used it fist in technical sense it literally meant discussion.</i>

QUADRIVIUM: Liberal arts of Arithmetic, Geometry, Astronomy and Music

Arithmetic	Geometry	Astronomy	Music
<ul style="list-style-type: none"> ✓ <i>Flourished in Europe in Hellenistic Period</i> ✓ <i>5th Century B.C.</i> <p><i>(Phytagoreanism)</i></p>	<ul style="list-style-type: none"> ✓ <i>Greeks derived their knowledge of Geometry from Egyptians,</i> ✓ <i>Euclides was a highly respected teacher in the 300s B.C.</i> <p><i>(Phytagoreanism)</i></p>	<ul style="list-style-type: none"> ✓ <i>Dates back to even pre-Hellenistic Greece period</i> <p><i>(Phytagoreanism)</i></p>	<ul style="list-style-type: none"> ✓ <i>Was the core of Greek education from 800- 450 B.C.</i> ✓ <i>Lost its importance in</i> <p><i>(Phytagoreanism)</i></p>

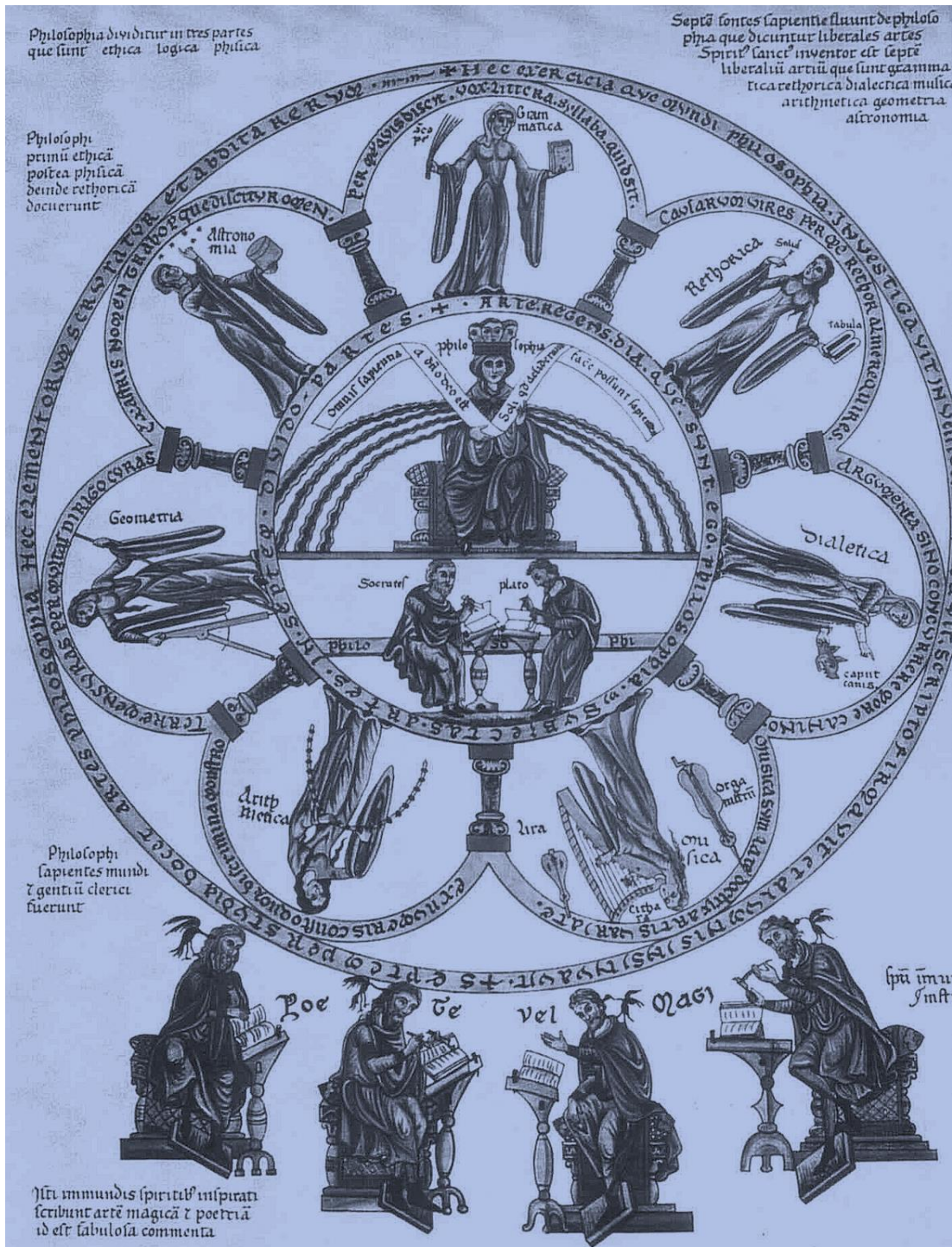


Illustration I: An illustration for Seven Liberal Arts: **Septem Artes Liberales** from "Hortus deliciarum" by Herrad von Landsberg (about 1180).

1.3 INTELLECTUAL EFFORTS IN FRANK EMPIRE AFTER THE FALL OF WESTERN ROME & THE EFFECT OF CHARLEMAGNE'S EDUCATIONAL RENOVATIONS ON THE CLERGY

Roman education came to its own at the 100- 275 A.D. Greek essence lost its impact and that was result of the fact that Roman scholars had already structured their literary base of education. Roman government became so strict that free will or free speech became intolerable which eventually led to the end of Roman higher education in 529 AD under the reign of Emperor Justinian.

For nearly three centuries after the fall of Rome, the inroads of the barbarians and the disintegration of the Roman civil organization, culture, and system of education went on. But by the eighth century conditions had settled somewhat, and a new social order and grouping about a Frankish king had come to pass. The Franks' consisted of a confederation of German tribes that alone had succeeded in establishing a permanent kingdom which was neither taken by other barbarian tribes nor by the emperor (Graves, 2004: 25). That century was on the verge of a transformation of intellectual life which would not be too long but a period of enlightenment on Liberal Arts and intellect, during the lifetime of the Frankish emperor from the Carolingian clan: Charlemagne. And it was going to start with the clergy.

1.3.1 Palace School of Charlemagne

Charlemagne, the great Frankish King who established a European empire in the 8th century, capitalized on these developments. Charlemagne's rule brought an increased level of peace and security and with these a modest intellectual renaissance. As part of a program to *increase the level of learning among clerics (who doubled as his royal bureaucrats)*, Charlemagne legislated that every monastery should teach writing, computation, and grammar and that authoritative texts of important works be authenticated and copied (Whitney, 2004: 8). Before the time of Charlemagne the only thing that the Frank was taught was how to fight. The schools which Charlemagne founded were intended to teach the Frank to respect knowledge as well as valor. They were literally schools, in which at first the program was very elementary, the nobles and clerics who attended being taught merely the arts of reading and writing and the rudiments of grammar. The Project of forming these schools seems to have suggested itself to Charlemagne during his sojourn in Italy, where the traditional

learning was in part preserved by masters who taught the grammar of Priscian¹⁰ and Donatus¹¹, and read the works of Virgil¹², Cicero, St Augustine¹³, Boethius¹⁴, and Cassiodorus¹⁵ (Turner, 2007; 207). But although it was Italy that inspired Charles with the idea of founding schools throughout the empire, it was Ireland that sent him the masters who were to impart the new learning. Ireland, which had never formed part of the Roman Empire, and which had escaped the invasions of the barbarians, had preserved since the days of its conversion to Christianity the tradition of ancient learning, a knowledge of Greek and Latin which was now to astonish continental Europe (Turner, 2007; 207). Charlemagne's travels and conquests around Europe had brought him a heightened reputation, but also an awareness that there was more to the greatness of an empire than military prowess. He saw in Lombardy, both in his original conquest in 774 and after his suppression of the rebellion in 776, the richness of the art, architecture, and scholarship. In Spain, he witnessed much the same. In both places, Charlemagne experienced a culture still maintaining direct connections to the ancient glories of Rome that no longer existed in Francia (Butt, 2002; 155).

Following the Dark Ages in the intellectual world, in the 7th century A.D. and onwards we see the effect of Charlemagne and his council on higher education which can be considered as the First Renaissance or the Renaissance before the Renaissance itself. The arrival of numerous scholars with their books stimulated learning throughout the realm, especially at the highest levels of society, where the renaissance had its greatest impact, as Alcuin and others began to teach and establish schools associated with cathedrals and monasteries. The new emphasis on learning contributed to the increased production of books, so central to the renaissance, and the numerous books of Christian and pagan antiquity were copied in Carolingian monasteries. Indeed, one of the greatest achievements of the renaissance is the preservation of an ancient Latin literature, and the earliest versions of many ancient Latin works survive from copies done by the Carolingians.

Most writers of the literature in question definitely mentions Charlemagne's intellectual efforts and his zeal while writing about history in Europe; it never escapes especially if the topic is dealing with the educational renovations:

¹⁰ Priscianus Caesariensis, Latin grammarian in Rome inc. 500 AD.

¹¹ Aelius Donatus, known as rhetorician and a Grammarian in Rome in the mids of c. 4th century AD.

¹² Publius Vergilius Maro, (c. 70-19 BC). Roman poet.

¹³ Augustine of Hippo, (354-430 AD) Born in Algeria. Christian theologian & important church father.

¹⁴ Anicius Manlius Severinus *Boethius*, (480-524 AD). Roman Philosopher.

¹⁵ Flavius Magnus Aurelius Cassiodorus Senator, (485-585 AD). Roman writer and statesman.

In Guizot's *History of Civilization in France* there is a list of the names and works of twenty-three men of the eighth and ninth centuries who have escaped oblivion, and they are all found grouped about Charlemagne as his own habitual advisers, or assigned by him as advisers to his sons Pepin and Louis in Italy and Aquitania, or sent by him to all points of his empire as his commissioners (*missi dominici*), or charged in his name with important negotiations. And those whom he did not employ at a distance formed, in his immediate neighborhood, a learned and industrious society, a school of the palace, according to some modern commentators, but an academy, and not a school, according to others, devoted rather to conversation than to teaching. It probably fulfilled both missions; it attended Charlemagne at his various residences, at one time working for him at questions he invited them to deal with, at another giving to the regular components of his court, to his children and to himself, lessons in the different sciences called liberal, grammar, rhetoric, logic, astronomy, geometry, and even theology and the great religious problems it was beginning to discuss (Guizot & de Wit, 1902: 195).

As little do we find, to support the theory of a kind of Athenaeum or Academy, composed of the adult members of Charle's court... The narrow limits of the studies of the time, a range so limited that a Maritanus or Isidorus seemed a sufficient compendium of knowledge, rather make it probable that an intelligent youth of 16 or 17, receiving that training which Charles himself had not received in his early years, must soon have stood on a level with the best scholars in the royal court- Einhard, perhaps, alone excepted. For our present purpose it is sufficient to be able safely to conclude, that Charles regarded the restoration of letters in his empire as a work only second in importance to the maintenance of the empire itself- that with this view he assembled round him the noble youth of his court, destined to high Office and Church preferment, to form the Palace School- that this school accompanied him wherever he fixed his court- that he obtained for it the instruction of the ablest teacher of the age- and that, whenever the affairs of state and cessation from military operations permitted (which was chiefly in the winter time), he himself was wont, along with the more intelligent of his courtiers, to take his seating the midst of the learners, stimulating their ardour by his example, and gratifying his own thirst for knowledge by discussion and enquiry (Mullinger, 1911; 61-69).

We know that Charlemagne was fluent in Latin and Greek while he would have to learn writing in the minuscule his renaissance was going to produce. We will read that he kept a tablet under his pillow to master writing before he went to sleep, though his biography by Einhard says he wasn't very able.

In the western world of education of Christianity, before the time of Charlemagne there had been some types of schools. As Wiltsch (1859: 258) states with him in the west arose en

entirely new epoch in the educational system, inasmuch as that monarch instituted four classes of schools, and caused a different organization to be given the only one among them that had previously existed. They were these

- His domestic school
- The pariochal schools
- The monastic schools
- The cathedral or episcopal schools

So we can deduce from all these that there was an interior school for the courtiers and lay man within the court and other types of schools that were also implemented within monasteries and cathedrals based on the reformist charters of Charlemagne. To be able to fully comprehend the concept of Palace School of Charlemagne, we need to specify what that so-called “Palace School” of Charlemagne was and how it functioned.

Which of the children who received the rudiments of an education at the parish level went on to monastic and episcopal schools for further religious instruction and a more rigorous education? Those who had connections, like the relatives of the priests in the diocese of Orleans or Hincmar of Rheims’ nephew, the younger Hincmar, had the best opportunity. But an ecclesiastical career and with it higher education must also have been available to the children of the poor, otherwise Notker’s classic account of Charlemagne examining the talented low-born and lazy noble pupils of Clement Scottus would have had its intended effect (McKitterick, 1995: 716). The education provided in these schools may be described as a kind of minor to the Benedictine major. In the range of subjects it probably went little beyond the teaching of the schools of Cassian¹⁶, but its method was more careful and efficient. We may picture to ourselves a group of lads seated on the floor, which was strewn with clean straw, their waxen tablets in their hands, and busily engaged in noting down the words read by the *scholasticus* from his manuscript volume. So rarely did the pupil, in those days, gain access to a book, that to read (*legere*) became synonymous with to teach. The scholars traced the words on their tablets, and afterwards, when their notes had been corrected by the master, transferred them to a little parchment volume, the treasured depository, with many, of nearly all the learning they managed to acquire in life (Mullinger, 1877: 131).

When the word ‘Palace School’ is uttered one can deduce that it was a solid school that was established within the court of Charlemagne’s Palace of Aachen but that seems to be wrong.

¹⁶ The author of two monastic work, he used to retell the teachings of desert fathers in Egypt.

When we revise the literature in sense of Carolingian history, we come across with some facts that imply the contrary which will be held in the next sections.

1.3.2 Charlemagne's Renovations On The Higher Education Of Courtiers (Accompanied By Alcuin)

In fact, the reason why Carolingian Renaissance was that easily set up was closely related to the nourishment at his time. So it can be mentioned that it was due to his political success which contributed to afford intellectual efforts his time. There was now available a vast reservoir of confiscated property in the newly-subjected provinces, all available as rewards for political services. There was also the accumulated treasure of kingdom. At least a part of church property, such as important bishoprics and abbeys, could now be distributed for non-political purposes. In fact it was used to attract poets and scholars, theologians and teachers-or men who were all of these-from the provinces, and even from Spain and England, and to attach them permanently to the intellectual circle at the Charles's court. The newly-acquired wealth made the so-called 'Carolingian Renaissance' possible: it served not only to draw the men but also enabled Charles to commission buildings and luxurious manuscripts (Fichtenau, 1957: 82).

1.3.3 Economical Well-fare at the Time Which Facilitated Carolingian Renaissance

Bishop churches and abbeys, whose real property in the ninth century was equally important, had built up through gifts of kings, aristocrats and ordinary people, an immense patrimony mostly consisting of manors. The abbey of St Germain-des-Prés had 25 *villae* listed in the famous polyptych of abbot Irmino from c. 825–9, which was a minimum. Together they represented about 30,000 hectares of land and woods. Smaller abbeys had ten to twenty *villae* with several hundreds of hectares of arable land each (Verhulst, 2002: 32). So the abbeys and churches were one of the main economical sources themselves and we already know that an abbey was very easily able to stand on its own even save money as after the inversion of St. Gall's plan into to monastic realm, an abbey had every social unit like a tailor, market, blacksmith, etc. Verhulst (2004) also mentions the contribution of Agricultural facilities which was conducted by independent peasants. Agriculture was a crucial source of income for the state as well.

Charlemagne had his own cavalry system, though not very well-organized which enabled him to gain success in his invades in other lands. Though not firmly true, it is even attributed to him, the emergence of chivalry. But apart from his and his ancestors barbarian and despotic character, he was one of the rare emperors of his own period that cared about phylosophical and intellectual studies. However we can't ignore the fact that it was a barbarian empire and what pillage and plunder, also taxes from the invaded lands should be counted as one of the main economical sources that feeds such a wealthy piece of land that strives to nourish intellectually as well. About that Butt writes in his *Daily Life in the Age of Charlemagne* (2002: 28) "Between 791 and 796, Charlemagne was able to fill the capital of Aachen with tremendous wealth of all sorts from the conquests of the Avars. Wagon loads of treasure were brought in and helped to decorate the church and palace in a fashion beloved by the Carolingians with eleborate, colorful, and gem-encrusted surfaces. The Carolingians even covered books with colorful gems." It is clearly observeable from the remaining copula of his Cathedral of Aachen, Palatine Chapel and the remaining manuscripts even today.



Illustrations II & III : An Illumnated Caroingian manuscript & an encrusted manuscript cover from the same era. Accessed from <http://expositions.bnf.fr/carolingiens/> on (01.10.2013)

1.3.4 Scholars at the Palace School of Charlemagne

To promote his educational program he gathered the most learned men of Europe at his court, including Alcuin of York and Einhard, who later wrote Charlemagne's biography... Although Charlemagne himself was not very well educated (he may not have known how to write Latin) he was reputed to have enjoyed discussing scientific questions and carried on a lengthy

correspondence with Alcuin and other monastic scholars on astronomical problems. Charlemagne even had a silver table made for himself which depicted the celestial spheres, the constellations, and the movements of the planets (Whitney, 2004: 8). He was the first to realize the importance of establishing and developing a system of higher education. This evidently dawned on him in Italy, where he issued a whole series of deeds of foundation for universities in the imperial areas of Italy and Burgundy (without taking any interest in their further development). The university was intended to be more in its scope than any such previous institution. Its students were drawn not only from the empire, but from the whole of central Europe and Scandinavia (Fouracre & McKitterick, 2005: 563). But the circle which he found himself called upon to instruct at Charles' court craved for something more than to learn to chant, read Latin, and calculate the return of Easter (Mullinger, 1911: 70).

Charlemagne was also taught by Alcuin, the somewhat minister of education of his intellectual administrations within the court. Alcuin (735- 804 AD) obtained his early education at the Cathedral School of York. He remained at York as a student and a teacher until 782 when he became the master of the palace at Aachen. He was a student of Venerable Bede, a prominent British monk at the time. The palace school was already in operation for seven years before Alcuin joined it. Alcuin up-lifted the reputation of the school and soon it was known as an intellectual center. During his fourteenth years' of stay in the royal patronage, Alcuin made tremendous contributions to education. Some of them are listed here under.

- (i) He recognized that a competent elementary education was at first, and necessary, step towards educational reforms
- (ii) He devised an elementary syllabus and a pedagogy for teaching Latin and other practical subjects
- (iii) He prepared Latin grammar textbooks to enable students to learn an accurate, functional Latin
- (iv) He improved elementary teaching, popularized it and developed techniques for attaining greater teaching efficiency
- (v) He encouraged the cultivation of a closer relationship between liberal learning and spiritual knowledge. He also wrote a number of worthwhile books on education which affected the educational consciousness of his age (Sharma, 1997: 51).

His chief educational works are on Grammar, on Orthography, on Rhetoric, on Dialectics, all of which are in the catechetical form (question and answer), and of which on Grammar is the most important. This treatise is divided into two parts, the first dealing with methods of education and the duties of the student; the second dealing with grammar proper. Power suggests that Alcuin's importance in the history of education is due to: (1) the widespread reform of education initiated by Charlemagne and guided by Alcuin; (2) his texts on education that contributed to an educational consciousness; (3) the cultivation of a closer relationship between liberal learning and spiritual knowledge (Cordasco, 1976: 27). When he coupled that love with his desire for his subjects to have an education, he essentially lifted Europe out of the dismal culture of the preceding Merovingian¹⁷ epoch. The centre of Charlemagne's learning initiative was the palace school which served as a kind of incubator for future bishops and abbots. Since Charlemagne was essentially building a culture of enlightenment from scratch, he had to encourage foreign scholars to work in his school, because the local academic talent was lacking. The king's efforts paid off, however. Great talents such as Peter of Pisa, a grammarian, and Theodulf, a Visigoth from Spain, came to engage the intellectual life (Sheppard, 2005: 95).

Theodulf of Orleans¹⁸ was a theologian and poet. He had studied in the surviving Christian Kingdom of Spain and was an heir to the encyclopedic tradition of Isadore of Seville¹⁹ and his followers (Cunningham & Reich, 2009: 189). From Italy and England, Charles chose the scholars who were to work in his empire: from Italy Peter of Pisa²⁰, Paul the Deacon²¹, and cantors from the Roman school, to teach the cathedral the school of Metz and Soissons the Roman chant: from England his greatest scholar, Alcuin, some of his English students, and later, Clement the Scot²² (Deanesly, 1969: 60). About these "bright particular stars there gathered a galaxy of others of inferior importance, - Angilbert, Leidrade, Smaragde, Benedict of Aniane, Thedulph, Adalhard, Amalaric, Agobard, etc. (London Religious Track Society, 1799: 144). But only a few of them were actually priests. Even Alcuin was only a deacon. Theodulf, the bishop of Orleans, had a daughter Gisla who participated, at least indirectly, by the side of her father in the artistic and liturgical activities of the court circle. Angilbert and Einhard remained laymen even as abbots. Their whole tenor of life belonged to that plane on

¹⁷ A Frankish clan and dynasty before the Carolingians which ruled in Frank Empire for 300 years from the 500 AD on.

¹⁸ Writer, poet and bishop of Orleans.

¹⁹ An archbishop in Seville in the 6th century, he wrote the first genre that can be named as an encyclopedia.

²⁰ Italian poet, grammarian and deacon.

²¹ Paulus Diaconus, Italian Benedictine monk and historian.

²² Irish grammarian.

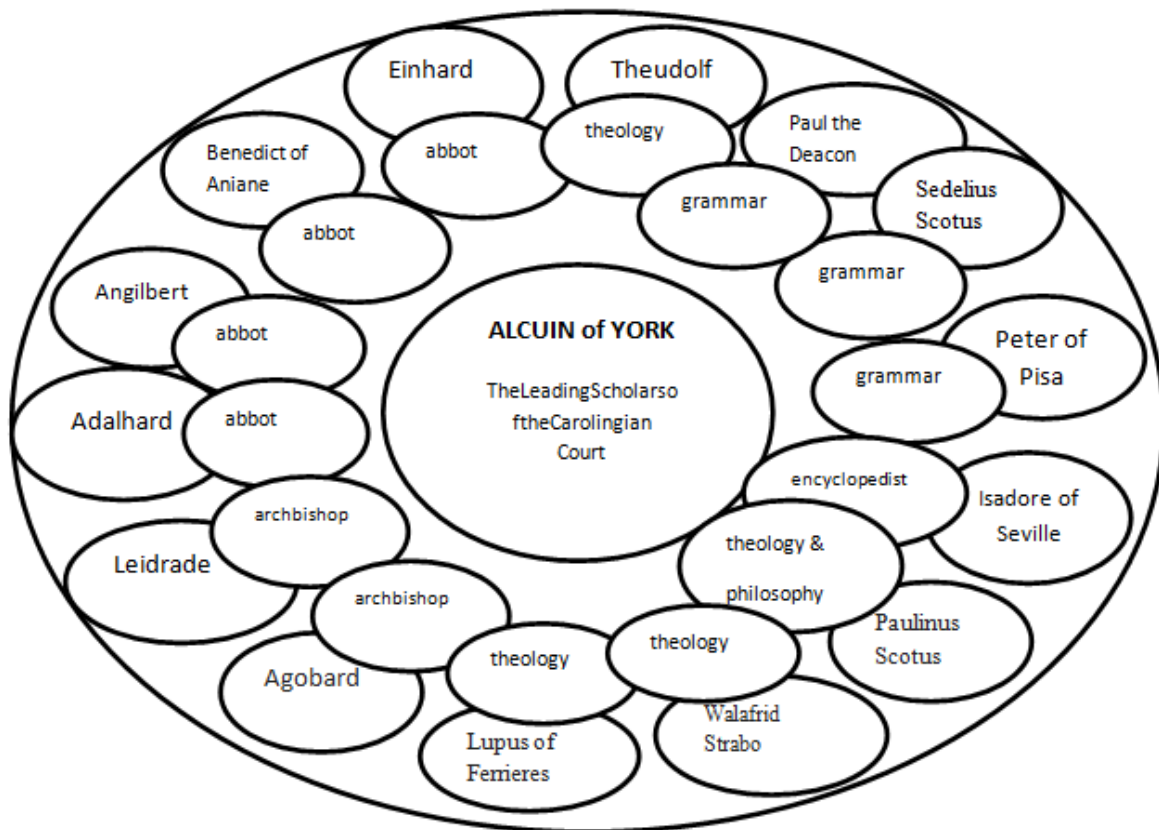
which the secular and the spiritual were united without much conflict. With some such as Alcuin and Einhard, this continued unchanged until they reached extreme old age. Only the later reforms of Benedict of Aniane effected that separation of spheres which made this fusion of divergent ideals impossible (Fichtenau, 1978: 93).

In short that educational council of Charlemagne directed by Alcuin tried to;

- bring regulation to the liturgy
- revive rhetoric
- enlarge the materials for theology
- they tried to add a logical argumentation into the education of nobility and the future king
- revise poetry.

Closely connected with the court, well versed in the classical authors, and wielding considerable power during their lifetimes, were two laymen, both Franks, Einhard and Angilbert. Einhard (ca. 770-840) received his early education at the great monastery at Fulda, whose library was already well-stocked with classical authors. He then studied at the Palace School under Alcuin. He was a favourite of Charlemagne's and became a member of the circle of learned men of the court (Dales, 1992: 89). Einhard was also a very important name in the council. He was also the educator of Charles's son, Louis the Pious within this new scheme. He also became the name who got into contact with the culture and learning of other countries to be able to acquire solid examples of a healthy educational system. At the time he communicated with important educational centers like *Visigothic Spain*, *Anglo Saxon England* and *Lombard Italy*. To add, he was the person who wrote the biography of Charlemagne and it is an important source of information on the time of Charlemagne still highly cited today.

Chart 5: The scholars of Charlemagne's Court



1.3.5 Details on the Education of the Prince

Apart from “lay” boys, the education of a Carolingian prince was dealt very carefully. They were raised based on cherished family legacy and were attended to be educated knightly and courtly until a certain age of life. “Charlemagne’s sons and daughters were all taught to read and write and were given a good education. Then the boys went on to learn horsemanship and knighthood, and the girls learned weaving and the other arts practised by upperclass women.” (Rasmussen, 2003; 150-151)

Other than the theoretical and practical phases of the education for the Carolingian prince, there also emerged a new literary genre which verbally mentors the young prince about how to be proper and successful prince. The deep concern of some lay men for their own salvation is indicated by the genre of instructional literature known as *‘mirror for princes’* (Costambeys & others, 2011: 300). “Mirrors for Princes” designates a literary genre in which political ideas are expressed in the form of advice to a ruler. This genre has its roots in Antiquity and especially in Late Antiquity. The first medieval flourishing of Works of this

kind dates back to the so-called Carolingian Renaissance, when the image of the ideal ruler is strongly influenced by the monastic background of most authors writing on this topic (Lagerlund, 2011: 791). As Riché states there were many leading figures in Carolingian Court who produced a version of “Mirrors for Princes” and among them were Alcuin, Sedulius Scotus, Smaragdus of Saint-Mihiel, Hrabanus Maurus, and Hichmar. He writes “All these “mirrors” proposed, each in its own way, a similar program of education, to fit princes for the governance of the realm and to give all laymen the means of governing themselves

- ✓ Aristocrats were to take up arms against vices, which were listed with descriptions of their ravages.
- ✓ They were to practice the virtues conforming to their rank: justice toward subordinates, generosity toward the church and the poor, protection of the poor, and good counsel to princes.
- ✓ They were to respect the sanctity of marriage and regulate their conjugal life according to the rules defined by the church.
- ✓ Finally they were to concentrate the strength of their arms to service of right and faith” (1978: 82).

Although some writings by Alcuin during the reign of Charles the Great already bear some essential features of the Mirrors for Princes, the first flourishing of the genre is usually dated to the ninth century, in the context of Carolingian courts. Scholars have rightly pointed out that some authors of this century draw on previous Works, such as the already mentioned *De duo decim abusi visseculi*. Nevertheless, Smaragdus of Saint Mihiel’s *Via regia* (813), Jonas of Orleans’ *De institutione regis* (831), Sedulius Scottus’ *De rectoribus christianis* (855-859), together with some Works by Hincmar of Reims’ (806-882) build up the first noteworthy body of texts explicitly devoted to the moral instruction of the ruler (Lagerlund, 2011: 792). Authors of ‘Mirrors for Princes,’ treatises of royal instruction, concentrated not on the gap between incumbent and office, between merely human ruler and God, but on the bridging of that gap through divine grace. Few scriptural tags were oftener quoted than Proverbs 21:1- ‘The heart of the king is in the hand of the Lord’... Other regal benedictions invoke a series of Old Testament judge send kings renowned for their success in war and wisdom in judgement. David and Solomon were favourite models in ‘Mirrors of princes’ (McKitterick, 1994: 59). There are four of five substantial mirrors for princes extant from the Carolingian period. Although Hans Hubert Anton starts his investigation of mirrors for princes with late antique

examples, the fully developed Carolingian genre actually appears later than lay mirrors: Smaragdus' is the first example, probably a decade or more after Paulinus' Liber exhortations. Jonas of Orleans' *De institutione e laicali*, with seven out of seventeen chapters reusing material. The last Carolingian lay mirror we have is Dhuoda's manual from 841, but several important mirrors for princes were written later in the ninth century, showing a continue disinterest in kinship (Stone, 2011: 42). Except from that literary type, we know that physical training and education in the court, Carolingian princes often visited monasteries or stayed in monasteries for periods of time:

Some of the children of some Carolingian monarchs were sent to monasteries, presumably for an education, but it is unclear whether they were intended for a religious vocation. According to Riche in "*Le renouveau culturel a la cour de Pepin III*," *Francia* 2 (1974), p.61, Charles Martel broke with the tradition in sending his son Pepin to St. Denis (c.721) for his upbringing rather than training him at court. Pepin's career at the abbey supports that of a non-Benedictine oblate in that he remained at St Denis until the age of 21, the age when he would have had the option to join the community or reenter the secular World, and was sent to the court of Liutprand. It appears that placing royal children in monasteries for an education was the exception rather than the rule, and some who were sent, such as Hugh, the bastard son of Charlemagne, ultimately pursued a religious vocation. Even this evidence is ambiguous because this identity of this Hugh has been confused with the identity of St. Hugh of Jumieges²³. As for other royal heirs, such as the twin sons of Charles the Bald who died in childhood at St. Amand, there is no way to tell whether they entered royal abbeys merely for an education in Latin literacy or with the intention of embarking upon a religious life. In any case, monasteries were not in any systematic way for educating royalty or the nobility (Hildebrandt, 1992: 76).

1.3.6 Who attended to the Palace School?

Palace school was what Charlemagne devised for the education of the young and the higher study of courtiers to be. It wasn't only a court school for the children of the emperor only. Its main motive was to enhance the intellectual background of the nobility so it is obvious that its members were the scholars led by Alcuin within the lay and royal members of the court.

Illustration IV on page 33 below: A Representational Scene in the Palace School : Charlemagne, scholars and the other students. (Guizot, 1869: 246).

²³ Joseph van der Straten, ed., "Vita Hugonis," *Analecta Bollandiana* 87 (1969), (pp.215-232)



Around him, as the years went by, he saw successively appear the three royal borned in rightful wedlock : Charles, the future ruler of Neustria and Austrasia; Pepin, the acknowledged lord of Italy; and Lewis, who almost from his cradle had worn the crown of Aquitaine -the graceful young athlete and mighty hunter, his mind already opening to that love for learning which, through all the good and evil of his chequered life, sister, cherished so fondly in later years. There, again, Charles' much loved sister, Gisela, abbess of Chelles, from her girlhood had renounced the world, but whom fame of the great teacher drew from her conventual retirement. Thither also came the last and best-loved of Charles' wives Liutgarda, of the

proud Alemannic race, hereafter prove among the firmest of Alcuin's friends; and the daughter, Gisela, whom parental affection held too dear for the proudest alliance. There too was Charles' son-in-Angilbert, chiefly distinguished as yet by his fondness the histrionic art, but afterwards the saintly abbot St. Riquier. There too were the royal cousins, the half brothers, Adelhard and Wala, whose after action shook the whole fabric of the Carolingian empire -the former brought back from Corbey to mingle again with the court life which he had shunned, and to forget Desiderata's wrongs- the latter, whose fair face bespoke his Saxon lineage, restored from a mysterious banishment to the royal favour (Mullinger, 1911:72).

It consisted of the emperor, his family, the chief officers of state, and those learned men whom he constituted his personal attendants. It is also stated that Alcuin was its president and, among the fellow scholars of Charlemagne are enumerated his children and grand-children, his sisters, several bishops, archbishops and the royal councillors (L.R.T.S., 1799: 145). Bote states that Charlemagne's Palace School was built for both monks and lay people (those who are not members of clergy). The other students of the Palace School were Charlemagne's family, including his fourth wife, Liutgard, and his daughter Gisela (2005: 77) .

The name Gisla is also mentioned in some other works as like Fichtenau's The Carolingian Empire. He writes "Theodulf, the bishop of Orleans, had a daughter Gisla who participated, at least in directly, by the side of her father in the artistic and liturgical activities of the court circle." So from this passage we can deduce that the children of the scholars were also enrolled into the education of the Royal Court. As we know that both his sister and his daughter were named Gisela.

To sum up we can count the students who attended to the Palace School of the Carolingian Court were:

- The Emperor
- The Emperor's family (his children and grandchildren, his wife, nephews and nieces)
- The Emperor's Personal Servants and Attendants (Clerks and Officials of The Palace)
- Scholars & Their Children

From this time, we are accordingly able to distinguish, with somewhat more precision, the different training of the monastic and the episcopal schools. Of the latter, indeed, throughout the ninth century, it is impossible to give much more than a conjectural account, as there existed no systematic organisation... Close to the cathedral precincts, and under the immediate supervision of the bishop, a school for boys, all destined to become priests, was confined to the care of one of the canons, known from his Office as the *scholasticus* (Mullinger, 1911; 130).

1.3.7 Alcuin's program, Teaching Technique, Literary Works Studied and The Curriculum

Alcuin was the head of all these innovative educational efforts and he was the one who made some applications on the seven liberal arts within the court school. He acted somewhat like

the Minister of Education of the Palace School of Charlemagne so most part of the educational data was gathered and arranged according to his point of view during this educational renovation process which Charlemagne started.

Alcuin's program was **both clerical and scholarly**. Its ultimate purpose was to train the clergy and the monks, but its method of instruction was a modified and simplified version of the Roman educational system and was based on the study of certain classical texts. Alcuin's program was modeled on the division of academic subjects devised during the first quarter of the 5th century by a scholar, *Martianus Capella*, who wrote an encyclopedia of education which was one of the most influential educational treaties of the Middle Ages (Claster, 1982: 130). The regular education of the youth of the Palace School was derived from the manuals of which we have given an account, and, as regarded extent and variety, was probably a simple reproduction of that which Alcuin had himself received at York (England) (Mullinger, 1911: 71). **Alcuin divided the seven arts of classical education into two groups, which would later become the arts and science faculties of western universities** (Dudley, 2008: 30). These two groups are *Trivium* and *Quadrivium* as we already mentioned. So we can deduce that trivium- grammar, rhetoric and dialectics (logic) consisted the main curriculum and it was enlarging itself with the quadrivium- astronomy, music, geometry and arithmetic.

Alcuin was the first scholar to mark the non-mathematical off from the mathematical arts by the use of the term *trivium* and *quadrivium*, but he himself made no contribution to the *quadrivium* as great as Bede's²⁴ *De temporum ratione*. His teachings must have been largely oral and informal, and his treaties on the arts were cast into form of dialogues (Deanesly, 1969: 520). So despite his efforts his covering of the mathematical programme was not that effective and only in oral.

By the time of Alcuin there were very few books, even in Anglo-Saxon England, on which to base the study of the Quadrivium and, although it was not totally neglected, the revival of the Quadrivium did not really come about until the eleventh century. Until then only a little *arithmetic* was taught, and that at a very elementary level, since its study was considerably hampered by the fact that Roman numerals, which are very clumsy to handle, were still being used. *Some astronomy* was taught, primarily because the church was concerned with the correct computation of dates for religious holidays, such as Easter. Some attention was paid to

²⁴ Anglo-Saxon monk, (c.672/673- 735), well known as an author and scholar, and his most famous work, *Historia ecclesiastica gentis Anglorum*, famous for his works in computus as well. Alcuin was his instructor.

music and its relationship to numbers and the movement of the planets but, all in all, none of this was much consequence (Claster, 1982: 130).

1.3.8 Literary Works Studied

Talking about the curriculum as Claster (1982) mentions, the heart of the academic program was trivium and it continued to be so for the next two hundred years. He adds “ However, *grammar* was not a narrowly confined discipline as we think of it today; it encompassed the study of language itself, modes of expression, and meaning. The study of grammar began with the reading of classical authors, such as *Vergil*, the Poets Juvenal, Horace, and Ovid, and the playwright Terence.” The writer goes on stating for rhetoric *Cicero*’s On the Orator and the works of *Quintilian* (an orator-teacher of earlier), encyclopedias of knowledge like *Isadore of Seville’s Etymologies* were studied.

Allowing for the poetic vein of Alcuin's description, and not unreasonably surmising (although he assures us the list might have been greatly extended) that an enumeration which includes the names of Phocas (the author of a sorry life of Virgil), of Euticius, and Commiuianus, can hardly have passed by much of note or value, it is still probable that the library was the best that England then possessed... Of these *Boethius* must certainly be regarded as the most important, from the fact that in his pages are preserved that slight mediocum of school learning which found its way into the education of the time (Mullinger, 1911: 61-62). From these two paragraphs we can deduce that Alcuin thought that the library at York was the supreme at its time because it had all the leading literary resources popular at the time. We can understand that from the expression “Boethius, and some Boethius' own logical treatises, must be considered to compose the sum of the Aristotelian logic known to be of Alcuin.” So he considered his works noteworthy.

Cunningham & Reich (2009) also write that some texts of Latin Grammarian *Priscian* used to be studied than be applied to passages from Latin prose writers, for dialectic some works of *Aristotale* in Latin which were translated by Boethius was also studied. Like Claster, Cunningham and Reich write too that some arithmetic was studied in sense of multiplication and division and they practised on abacus as Latin numerals were not easy to compute by writing. They add that *geometry of Euclid* was in the curriculum and *astronomy of Bede and*

*Pliny*²⁵ were also included. They finish talking about liberal arts at the time writing “*Music*” in this period was distinguished from *cantos*, which was the practical knowledge of chants and hymns for church use. In general, all study was based largely on “the rote mastery of the texts.”

So we can conclude that all curriculum was based on texts from Classical Greek Period because all these works belong to earlier times, of the names mentioned above like Quintilian, Cicero, Priscian, etc.

1.3.9 Inquiry Method of Charlemagne

Apart from the context, Alcuin had his own way of instructing. He used a technique which heavily consisted of inquiry. The basic form of teaching was based on oral study. On that Rowling in his book *Life in Medieval Times* writes “Alcuin’s method was mainly through dialogue. In one of these young Prince Pippin asks questions which Alcuin answers:

Pippin: What is life?

Alcuin: The joy of he blessed, the sorrow of sinners, the expectation of the dead.

Pippin: What is death?

Alcuin: An unavoidable occurrence, an uncertain journey, the tears of the living, the conformation of the testament, the thief of man (1973, 26).

Rowling also states that the guessing of the riddles was also used in education for sharpening the wits, and as a source of entertainment. He includes an example like:

Alcuin: Since thou art a youth of good abilities and natural gifts, I will put before thee some riddles.

I have seen the dead create the living and the dead consumed by the breath of the living.

Pippin: From the rubbing together of the sticks, fire is born which consumes them (1973, 26).

As for the dialogues between Charlemagne and Alcuin which he says were of a more profound nature he includes another examples such as:

Charles: Expound the nature of justice.

²⁵ Gaius Plinius Secundus, (c.23-79 AD), philosopher, naturalist and writer.

Alcuin: Justice is a state of mind which assigns to each thing its proper worth. In it the cult of the divine, the rights of mankind, and the equitable state of the whole life are preserved.

Charles: Unfolds its part also (1973, 27).

We can realize that the questions are simple and general; the answers are unlikely to be precise. Unlike the classical authors, Alcuin acted highly symbolic trying to understand the world, the cosmos and he was quite away from being scientific. He was concentrating on answering through philosophy. He wasn't verbally defining what the sun is; rather he was merely philosophizing about the sun. Like most scholars of his age, his interests were dominated by religious concerns. In short, we can deduce from this dialogue that reasoning or philosophy was the main technique for studying and teaching at the time.

1.3.10 Nicknames During The Educational Sessions

It is known that Alcuin preferred to call the scholars in the circle with some hypothetical names, in other words, nicknames during teaching sessions. We can think of that as an attribution of him to the literary and highly valued works in the history. So that every scholar could lose his identity and think as the character he was named after. This could be imagined as a way of freeing the mind from the self personality and interpreting the knowledge as if the literary character would do.

Among a number of very doubtful anecdotes concerning this institution, we find one fact mentioned of which we have incontestable proof in the letters of the monarch himself, and which may well go to swell the long catalogue of the puerilities of philosophers, and follies of the wise. This was the adoption of emblematical names by all the persons connected with the palace college; so that we find Alcuin himself writing to Charlemagne as David, and the monarch of the Franks addressing Angelbert, his chancellor, as Homer... Alcuin usually, in his correspondence, address the members of this circle under another name. Charles's second name would seem to have really been David; and this fact may account for the assumption of Scriptural names by some of his courtiers. Pepin was Julius; Gisela (the sister), Lucia; Gisela (the daughter), Delia; Liutgarda was Ava; Adelhard was Antony; Wala, Arsenius; Einhard, with reference, as M. Teulet conjectures, to his destined state avocation, was Beseleel; Riculfus, Falvius Damoetas; Rigbod, Machairas; Angilbert, Homer; Fredegis, Nathanel (Mullinger, 1911; 73).

With the assistance of Alcuin, and others like him, he founded an academy or royal school, which should have the direction of the studies of all the schools of the kingdom. Charlemagne was himself was a member of this academy on equal terms with the rest. He attended its meetings, and fulfilled all the duties of an academician. Each member took the name of some famous man of antiquity. Alcuin called himself Horace, another took the name of Augustin, a third of Pindar. Charlemagne, who knew the Psalms by heart, and who had an ambition to be, according to his conception, a king after God's own heart, received from his brother academicians the name of David (Bulfinch, 2004; 460). While Bulfinch writes that Alcuin's nickname was Horace, Deanesly mentions of another name for Alcuin which we'll see below but in another resource: *A History of Classical Scholarship From the End of the Sixth Century B.C. to the End of the Middle Ages*. So he probably used the name for a while and changed it or he used different nicknames in different concepts of learning.

Within the court each person had a name from the Bible, thought and speak as if they were these personalities. Deanesly, in his *A History of the Medieval Church 590-1500* (1972) writes "In this enthusiastic circle, where the king himself delighted to propound questions on dogma and ritual to reluctant bishops, Frankish names were replaced by classical and biblical nicknames: Charles himself was "David," Alcuin "Flaccus," (Horace), Theodulf of Orleans "Pindar," Angilbert "Homer" and "Charles' daughters "Lucia" and "Columba." About that, London Religious Track Society in its book *Life and Times of Charlemagne* writes "They assumed feigned names taken from sacred or classical antiquity. Charlemagne was styled David; Alcuin took the name of Albinus Flaccus; Angilbert that of Homer; Fredegis that of Nathaniel; Gisla, the daughter of Charlemagne, that of Lucia- and so on. It has been generally supposed that this adoption of fictitious names originated in the pedantry of age...The use of their proper names and titles would have kept constantly before them the inconsistencies and discrepancies of their relative positions, and thus have destroyed that perfect freedom of intercourse requisite for the successful management of the school" (1799: 145).

And finally here we have another quotation on the subject stating the false names they had from Guizot's *History of France V:I*(1869)

Other scholars of the school of the palace, Angilbert, Leidrade, Adalhard, Agobard, Theodulph, were abbots of St. Riquier or Corbie, archbishops of Lyons, and bishops of Orleans. They had all assumed, in the school itself, names illustrious in pagan antiquity; Alcuin called himself Flaeens; Angilbert, Homer; Theodulph, Pindar. Charlemagne himself had been pleased to take, in their society, a great name of old, but he had borrowed from the

history of the Hebrews—he called himself David; and Eginhard, animated, no doubt, by the same sentiments, was Bezaleel, that nephew of Moses to whom God had granted the gift of knowing how to work skilfully in wood and all the materials which served for the construction of the ark and the tabernacle.

The self-confidence of the Frankish élite became sufficiently great that it was by the 790s possible for writers to describe them as in effect the new chosen people in succession to the Jews; Old Testament imagery was standard in Carolingian political programmes, and Charlemagne was commonly called David by court intellectuals (Wickham, 2009). So this process of nicknaming the attendants of the court school was for getting them away from the impression that they are talking to the emperor in person which might have affected the psychological environment of the learning.

1.3.11 Location of The Palace School and the Carolingian Palaces

Information about the physical location and organisation of Carolingian schools is sparse, but monasteries and cathedrals certainly educated children in their schools and these included those who were not necessarily destined for the religious life or ecclesiastical careers (Story, 2005: 156). From the Carolingian era until the rise of the universities in the twelfth century, the instruction was given at two kinds of schools. One was the cathedral school for the education of the priesthood, directed by a bishop or a schoolmaster called *scholarius*. The second was a monastic school, usually directed by an abbot and devoted primarily to the education of monks. Some monasteries had two schools, an inner school exclusively for novices, and an outer one for the training of clerks. Although in theory it was possible for a layman to attend school, this was rare before the eleventh century, except in the royal household (Claster, 1982: 131). Of these two classes of schools by far the most important were the schools of the monasteries which now, for the first time, opened their doors to non-monastic students.

It was long thought that Charlemagne has established a school at his own court. To support this thesis, scholars turned to an anecdote reported by Notker the Stammerer: the king one day went into inspect the school and ended up reproving the lazy sons of nobles and praising the diligent commoners. It is likely that Charlemagne monitored the clerics at his court, but those who formed the schola- in reality a band of scribes, notaries, cantors- were simply young men who were learning their trade in the offices and the chapel of the court (Riche, 1993: 328).

First there was no one Carolingian court. The court was always evolving. For example, the Treaty of Verdun in 843 produced three royal courts within the empire because that treaty divided the empire up into three separate kingdoms (Jones & others, 2000: 1). Charlemagne preferred Meuse palaces Herstal, Duren, and Aix and, above all the Rhenish palaces of Frankfurt and Worms. After the burning of the latter in 793, he had Ingelheim built, about 9 kilometres from Mainz. In addition he had a more distant palace built at Nijmegen on the Waal and one at Paderborn in Saxony. In Aquitaine, Louis occupied four palaces in rotation: Angeac, Ebreuil, Doue-la-Fontaine, and Chasseneuil (Riche, 1978; 41). Geographical shifts and changes can be paralleled by chronological ones. The court of Charlemagne was very different in the years of the great military campaigns such as the 770s, when it sheltered in tents, from what it became in the 790s, when it resided in a great stone-built complex of buildings in Aachen. Secondly, terms such as ‘court’ or ‘court school’ can be misleading in their suggestion of a single fixed center. As Rosamond McKitterick has argued, in discussing the artistic achievement of the court of Charlemagne’s grandson Charles the Bald (843-77), royal patronage reached far beyond the court, making artists in non-court centres into ‘honorary court artists’: ‘the web of royal patronage extended far and wide in the kingdom’ (Jones & others, 2000: 1). So as we can deduce that Schola Palatina; Palace school was established for self-culture and it accompanied him as he travelled from place to place. During the first ten-fifteen years after its establishment, the college of the palace had probably followed the court during its frequent migrations, notwithstanding the number of member, and the difficulty of transporting the library, which soon became considerable. Many circumstances, however, seem to show, that after the construction of the great palace at Aix-la-Chapelle, it became fixed in that place. The library, we know, was there concentrated; and several of the books thus collected, such as the Codex Carolinus, have come down through a long line of emperors to the present day (James, 1832: 323).

But it apparently wasn’t physically fixed in a particular place at Palace of Aachen. That term Palace of Aachen was used as a generalized expression for Charles and his court. The supposition in much of the current literature on Charlemagne’s court at Aachen, ‘where Charlemagne and his court almost never were’, could not be a location of book production before 794 exposes the false expectation that the presence of the king and his ‘court’ was a necessary condition for the activity of scribes and artists writing for the king (op. cit. McKitterick, 2008; 350). That is, it has been assumed that scribes and artists were based at court, so that the fantasy must necessarily envisage workshops for scribes, artist, ivory-carvers

and metalworkers, and space for those who worked there to live as well... The court scriptorium has even been defined as a non-monastic scriptorium with a high turnover of personnel of both scribes and artists (McKitterick, 2008: 350).

The idea of “court school” is open to misunderstanding. The source of this misunderstanding is our conception of a school as an institution devoted exclusively to a kind of instruction where some people teach and lecture and others learn and read. To recover the earlier Notion it is useful to remove from the word “school” the suggestion of learned instruction. What remains is the sense of membership in a group with common characteristics, habits, and interests. In Merovingian times *schola* commonly refers to the court entourage. It is useful to take this definition of the word as our point of departure: a group with common characteristics, customs, and interests (Jaeger, 2011: 28).

1.3.12 Libraries and Manuscripts Production at Carolingian Monasteries

Around 780, a clearly defined policy was put into place to build up libraries across the empire. Cathedral and monastic libraries were to acquire manuscripts that were produced in the fairly closely regulated scriptoria and to reorganize and expand. The reorganization and expansion didn't happen consistently and evenly, but within a few decades it had spread across the entire empire, aided by the new Carolingian minuscule. The movement began as a Utilitarian effort to help provide learned administrators for the court and to educate monks and clergy to strengthen Christianity in the empire quickly broadened to preserve literary treasures of the past (Butt, 2002: 189). It is known that the numbers of books within the libraries of the Churches enlarged in number thanks to the efforts of these efforts. The love of books fostered by Charles also lingered on. In every monastery of any pretensions some provision remained for the copying of manuscripts. Under Charles, in the larger monasteries, so many scribes were employed that their scriptoria or writing rooms, were able to supply not only their own libraries, but, from their surplus, books for other monasteries as well. Library lists and manuscripts which have proved that Carolingian collections included a surprisingly large number of books, sacred and pagan (Rowling, 1973: 27). Before the Charlemagne, there were roughly 100 books within the libraries all around, but after him; he attempted to increase this number, after the renovations the number of book rose up to 1000. At the time, in the north of England there were *scriptoria* in monasteries which monks were continuously reading and copying the classical manuscripts. They interacted with these scriptoria and also thanks to the Christian itinerant missionaries at the time, a traffic of exchanges occurred

which enriched the Carolingian education. While scriptoria had flourished at Autun, Luxeuil, Corbie, St. Denis, Fleury-sur-Loire, St. Martin of Tours, Fulda, and St. Gall before the reign of Charlemagne, the number of scriptoria and their output expanded under the emperor and writing workshops could be found at all the great monasteries and at many bishoprics (Hildebrant, 1992: 74).

In addition to ordering improved education for monks and clergy and installing politically acceptable abbots, Charlemagne, with the help of his educational advisor, Alcuin, made the royal abbeys responsible for the standardization of Latin texts. Revisions of the Bible and various liturgical books accompanied the effort to preserve and copy all manner of surviving Works and to perfect a script more uniform and readable than Merovingian scripts. The result, the Caroline minuscule, can be seen as emblematic of the Carolingian efforts at standardization in religious life and culture (Hildebrant, 1992: 74).

According to Turner (2007), libraries at the time of Charlemagne included Aristotle's Works, Plato's Dialogues, Commentators of Aristotle, Translations and Compilations by Marius Victorinus, Cicero's Works, genuine Works of St. Augustine, etc. And the variations enlarged as the time and the capacity of the libraries and scholars evolved throughout the centuries. In addition to literary works, what was learned was extracted from compilations and encyclopedias of knowledge from the past. One of the most popular of these was the work *Etymologies* by a scholar-bishop of the seventh century, Isidore of Seville. *Etymologies* was an encyclopedia of everything, and it touched on all the arts, sciences, on history, and on theology. This compendium of information – an misinformation- spanned an enormous range of topics (Claster, 1982: 131). Isidor of Seville composed *The Etymologies*, a vast encyclopedia of twenty books. It was comprised of fantastic derivations of terms that were intended to provide the reader with some better understanding of the object. In the Carolingian era, what passed for natural philosophy were encyclopedias. These were actually collections of knowledge, hearsay, and tradition in the form of scholarship. Often the information in an encyclopedia was lifted directly from a previous work. Those most influential in the 8th and 9th centuries were Boethius, Cassiodorus, Isidore of Seville, and the Venerable Bede. Boethius produced one of the best of the encyclopedias with sections on all of the four sciences of the liberal arts. Cassiodorus (c. 490-c.585) wrote about all of the liberal arts, including the sciences, in his *Introduction to Divine and Human Readings* (Butt, 2002: 139).

Illustration V: Important Monasteries and Scriptoriums in the Carolingian Empire and their locations all over the country
 (Taken from *The External School in Carolingian Society* by M. M. Hildebrandt (1992; 75))



1.4 THE MONASTIC / CATHEDRICAL EDUCATION AT THE TIME OF CHARLEMAGNE

1.4.1 Monasticism & The Rule of St. Benedict

The concept of monasticism, the withdrawal from the corruption of everyday life in order to contemplate things spiritual, originated in 4th century Egypt, where Christian hermits led solitary lives in the desert wilderness. At about the same time, the idea developed that groups of monks might live together communally, and both the hermitic and communal forms of monasticism spread rapidly from Egypt to the edges of the Christian world (Moffett & others, 2003). The ideals of monasticism were summed up in the three ideals of chastity, poverty, and obedience. The primary characteristic of monasticism is denial. Monasticism in the East arose from the intimate relation of the new Christianity and the oriental religions; it was transferred to Rome by Athanasius (296-373) and Jerome (340-420)... (Cordasco, 1976: 24).

Monasticism occupies a central but anomalous place in the history of the Middle Ages. Monks and nuns were the *religiosi*, they practiced the purest Christianity, a life of prayer and work embracing poverty, chastity, and obedience. From monastic colonies such as Canterbury and Fulda much of Europe was evangelized, and in Ireland abbots supplemented or superseded bishops in providing a framework for ecclesiastical organization. The work of teaching letters and copying manuscripts in monasteries preserved the legacy of classical culture through the political and social dislocations of the early medieval period and inspired great artistic achievements in illumination and metalwork. Abbeys became the centers of huge and widely dispersed estates whose leaders were important figures in the world they renounced (Venarde, 1999: 1).

In the early ninth century, during the fourteen-year reign of Emperor Charlemagne, Benedict of Aniane (750-821), sometimes called "the second St. Benedict," adopted a strict observance of the Rule in his monastery in southern France. Benedict, having served earlier both in the military and in the court of Charlemagne, during which time he became a monk, was now called upon by Charlemagne to lead a monastic reform in his region of France according to his strict observance of the Rule (Robinson, 2010: 9). So from these lines we can deduce that Charlemagne once officially accepted that the Benedictine Rule shall be valid and accepted in his Carolingian monasteries. But later on there will be a time that Charlemagne will gather all

the monks in his court and check if they are still following Benedictine Rule despite his firm orders he sent them to leave the Rule and be Columban.

1.4.2 Major Monasteries of the Carolingian Period & and the Significant Abbeys like St. Gall, Saint France de Tour, Fulda etc.

Monasteries were existant before the reign of Charlemagne as well and in one way or another they had come to actively involved in teaching, preserving and spreading scinetific and educational data at their own time. Monasteries are complex and intricate compunds of religious staff and so were they before and under the reign of Charles the Great. Not only did the educational resources of monasteries attract the attention of important laymen, but the rules themselves became primary texts in the discourse between the sacred and the secular in the early medieval society... The adoption of particular rule became a matter of concern for both the members of an individual monastic community and the aristocratic men and women who founded, endowed, or donated money and land to it. Indeed, adoption of the **Rule of St. Benedict** (RB)²⁶ became an important goal of the Carolingian monarchs, especailly Charlemagne and his son, Louis the Pious. For these men and their advisor, most of whom were bishops and abbots, the Benedictine rule served as a universal document for articulating the relationship between church administration, the monastery, and society at large (Hildebrant, 1992: 22). At the council of Aachen, 817, the rule of Chrodegang was made the rule of the entire Church; while in the capitulary above referred to, as reflecting Benedict's influence, the whole discipline of the monastic life was defined with increased stringency (Mullinger, 1911: 129). Before that Benedictine rule was already left and didn't function in Frankland monasteries and Columban Rule- Columban believed that study allowed students of monasticism to overcome carnal desires (Riche, 1978: 325) -was being followed at the time. Charlemagne had carried out some investigations on if there exist any monks in his monasteries following the Benedictine Rule. To the time of his death Charlemagne remained concerned about religious training, but he ceased to stress monasteries as vehicles for education. Neither he, nor his educational advisor Alcuin, expressed official apprehension about the potential disruption of their program would create in Frankish monasteries or the need to segregate student *oblati* from the monastic students (Hildebrant, 1992: 63).

²⁶ The Rule of Saint Benedict consisted of a prologue and 73 chapters (some only a few sentences long), which set out the ideal of monastic life. Monks (brethren) were to live a family life in community under the direction of a freely elected father (the abbot) for the purpose of being schooled in religious perfection (Cunningham & Others, 2013: 250).

Even before the time of Charlemagne and his enthusiasm for education, large monasteries served as centers of culture and learning. **Fulda**, under Boniface²⁷ in the early 8th century, attracted scholars from England, Gaul, and Germany. **Reichenau**, founded at nearly the same time as Fulda, began with cultural mission, and **St. Gall**, though much older, had established a monastic school early in the eighth century as well. However, under Charlemagne and Louis the Pious, these monasteries and many others took on a more self-conscious cultural role (Hildebrant, 1992: 73). Apart from the others **St. France de Tour** was one of the most significant monasteries at the time of Charlemagne to which Alcuin was sent as an abbot in his senior ages where he founded a school as well. At Tours Alcuin immediately established a school, which soon became the most famous of all those that had lately arisen in France. From it as from a parent, sprang a multitude of others; and knowledge was progressively diffused over a large tract of country, which had previously been destitute of any sufficient means of instruction (James, 1832: 404). Among the schools established in the same way, those of Tours, Lyons, Orleans, Rheims, Fulda, Old and New Corvey, Reichenau, and St. Gall, became especially famous, and laid foundations of important universities in after years. The studies pursued in these places were divided into two classes, the Trivia and the Quadrivia, which together made up the seven liberal arts (The Religious Tract Society, 1799: 89). So it was something new for these cloisters to be engaged in these intellectual branches apart from the theological content. Because what came to be studied with the youngsters who are monks-to-be, “oblates”, curriculum turned out to include scholarly studies apart from the musical chants and grammar they were taught.

Actually, the monasteries were the sole schools for teaching; they alone offered professional training; they preserved books; they were the only libraries; they produced the only scholars; they were the sole educational institutions of the period. By the 10th century, they developed both inner monastic schools for those intending to take the vows (**obliti**), and outer monastic schools for those not so intending (**externi**). Although instruction in both schools was meager, it provided for reading, writing, music, arithmetic, religious observation, and rules of conduct (Cordasco, 1976: 24).

In ancient Rome Rhetoric was the first of the liberal arts in order of dignity; in Gaul the Schools of Rhetoric survived the fall of the Empire. But within the walls of mediaeval monasteries, where silence was prized more highly than speech, the art of the orator was felt to be unnecessary, if not positively dangerous. Isidore of Seville declared that the

²⁷ Anglo-Saxon missionary in the 8th century Frankish Empire.

word of God did not need the verbal display of the rhetorician. A few generalities based on the theoretic treatises of classical writers formed the stock-in-trade of the mediaeval teacher. It was generally considered sufficient to be acquainted with the terminology of Rhetoric, to be able to distinguish the three kinds of eloquence, to have some idea what was meant by *inventio, dispositio, and elocutio*²⁸, to know the six parts of an oration, and so on (Clark, 1926: 114).

1.4.3 On the Economy & The Budget Of The Abbeys And Monasteries at the Time

The civil government, represented chiefly by the monarchy, had a long history of fostering and pressuring monasteries; one of the key ingredients in the success of the great abbeys was royal patronage. Carolingian monarchs granted them privileges and immunities and often donated vast amounts of property to augment monastic estates. For Peppin III, this was a calculated move to deprive obstreperous bishops of their power base. For Charlemagne, it was both a religious commitment and a way to reward family members and loyal counselors (Hildebrant, 1992: 73).

Nevertheless, scattered evidence from the 9th century and good documentation from the 10th and early 11th centuries indicates that a similar type of monastic property division materialized slowly in the east Frankish realm and became firmly established during the German imperial period. The economic, political and religious conditions that instigated and, in some ways, presupposed the assignment of special conventual endowments and the eventual divisions of monastic property did not exist to the same extent east of Rhine. Thus, development was slower there. For instance, in comparison with the west Frankish monasteries, those in the east Frankish realm-with the possible exception of Lorsch and St. Gall and, perhaps, Fulda, Hersfeld and Corvey- did not at this early date possess property and assets in such abundance that the abbot had a huge excess to grant in benefice or to secularize, and thus endanger the needs of the monastery and the congregation (Bernhard, 2002: 110).

Abbey was increasing in material prosperity, its intellectual life was also progressing rapidly. Charlemagne had given a vast impetus to education, which continued to bear fruit long after his death. St Gall was fortunate enough to have a series of very energetic and cultured abbots, thanks to whose efforts it soon became one of the most famous centres of learning in Europe.

²⁸ Three canons of Rhetoric at the time out of Five. The others are “pronuntiatio & memoria.”

This development, which was to reach its culminating point at the close of the ninth and beginning of the tenth century, commenced with Abbot Gozbert (816-836) (Clark, 1926: 6). Incorporated in these monastic compounds were houses and workshops for the laity who operated the mill, ran the stables, assisted with gardening, and performed whatever services were necessary for the economic well-being of the religious community. Taverns, situated among the houses of the lay workers, generated a good source of revenue for the monks and furnish further evidence of the close fusion of the sacred and the profane, the secular and the ecclesiastical that existed in early medieval society (Hildebrant, 1992: 73). Monasteries were prominent in the overwhelmingly rural landscape, harboring hundreds of people; their economic, social and cultural impact has been compared to that of towns in a later age (McKitterick, 1995; 623).

Chroniclers who wished to praise some particular monastery tended to puff up the members with references to hundreds of monks. Thus Jumieges was said to hold 900 monks, although a list from the year 826 contains only 114 names. As we have seen, the dormitory of **Saint-Gall** made provision for 70 monks. Some 72 monks can be counted for **Ferrieres**; 70 at **Saint-Wandrille**, and 84 at **Charroux**. Adalhard of Crobie claimed 300 monks for this monastery with 150 auxiliaries. At **Saint-Bertin** there were 60 religious and 112 servants. In 832, under **Hilduin**, there were 150 monks at **Saint-Denis**. Some 120 religious are known to have been at **Saint-Germain-des-Pres** in 820. Therefore, except for Corbie and **Saint-Riquier**, where the number of monks reached 300, the numbers for the great monasteries range between 70 and 150, which is modest enough. To this number we must add servants, temporary domestic personnel, the poor, and the foreigners who resided briefly in the hostelry. Thus the population of a monastery was very unstable, but it rarely surpassed a thousand person (Riche, 1978: 40).

So we can deduce that monasteries at the Carolingian Period were almost like small town in population along with other staff at the auxiliary services apart from the monks themselves and St. Gall was not much larger than the other Carolingian contemporary abbey or monasteries.

Actually, the monasteries were the sole schools for teaching; they alone offered professional training; they preserved books; they were the only libraries; they produced the only scholars; they were the sole educational institutions of the period (Cordasco, 1976: 24). The third class, or monastic schools (*schola monastica s. abbatiales*) were, in compliance with Charlemagne's edicts, in most convents, if not in all. In them were taught the principles of Christianity, and

especial attention was given to the study of the Bible; the liberal arts were likewise taught, viz., the trivium, i.e. grammar, rhetoric, and logic; and the quadrivium, i.e. the principles of arithmetic, geometry, music, and astronomy. And these “Schola Monastica” again were divided into “interiores et exteriores sive in scholas claustris et canonicas.” In the former, only those boys received instruction who intended to embrace the monastic life, but into the latter were admitted all who were not destined to be monks (Wiltsch, 1859: 258-259). Although Charlemagne initiated educational reform and attempted to accelerate the institution of the Rule, it appears that he made no effort to reconcile these conflicting goals. We have no firm evidence that he conceived of the idea for an outer school building or that he even promoted it. Despite his devotion to the church, the emperor demonstrated no apprehension over mixing religious and secular functions and roles (Hildebrandt, 1992: 78).

1.4.4 787 "Charter of Modern Thought" by Charlemagne

The influence of a learned court extended to the schools of bishops, abbots, and, finally, the presbyters of rural parishes. In 787 Charles addressed *a capitulary* to the abbot of Fulda, ordering that in all monasteries and bishops' houses there should be study, and “let those who can, teach.” In 789 he enacted: “Let the ministers of God's altar...Collect and associate with themselves children not only of servile condition, but free born: and that there may be schools for reading –boys, let them learn psalms, notes, chants, the computus and grammar, in every monastery and bishop's house.” (Deanesly, 1969: 60) By Carolingian times the imperative to educate clerics became so great that the notion of establishing a segregated school building within the monastic precincts developed as a counterpart to the guest house (Hildebrandt, 1992: 30).

Also in a royal ordinance of Charlemagne in 787 commanded that there will be schools established within the bodies of Monastic environments. It exactly said: “We beg to inform your devotion to God, that, in concert with our councillors, we have deemed it beneficial that, in the bishoprics and monasteries confined to our care by God, we should see to it, not only that persons live piously and according to our holy religion, but that, moreover, they should give instruction in the knowledge of literature to all who, by God's help, are able and willing to learn.” (L.R.T.S., 1799: 88) And they opened many schools upon this chart. It was

something new for the cloisters because there wasn't a solid laic education beforehand that they served to oblates.²⁹

In any case the work of Charlemagne and his small group of scholars quickly began to take root, and by the start of the ninth century most monasteries had developed two distinct schools: an interior school for training monks and an exterior school for providing more secular education (Sheppard, 2005: 95). Those exterior schools were small schools within the complex of monasteries or cathedrals and they served for the children of the villagers or of the public of the county. As one can understand from the enactments of Charlemagne, he was the first emperor ever to enable the secular education take place around his kingdom in the middle ages. To make it more solid, he sent decrees and arranged capitularies throughout the kingdom. The charters demanded there would be no discrimination on who can make use of the education mentioned. "With all his puissance it was not in his power to make Jeromes and Augustins; but he laid the foundation, in the cathedral churches and the great monasteries, of episcopal and cloistral schools for the education of ecclesiastics, and carrying his solicitude still farther, he recommended to the bishops and abbots that, in those schools, "they should take care to make no difference between the sons of serfs and of free men, so that they might come and sit on the same benches to study grammar, music, and arithmetic." (*Capitularies* of 789, art. 70.) Thus, in the eighth century, he foreshadowed the extension which, in the nineteenth, was to be accorded to primary instruction, to the advantage and honor not only of the clergy, but also of the whole people" (Guizot, 1902: 197). So there was no criterion considered in sense of who will get what kind of education or to what extend.

Hildebrant in his book *The External School in Carolingian Society* writes that the term "school" may have been misinterpreted and it was intended as a separate school within the body of the Carolingian Abbeys at the time; and adds that "it doesn't necessarily mean an educational institution at all.... A strict interpretation of scola in the crucial phrase *scola laicorum puerorum* is that of a group rather than an educational institution: it is a school of lay boys, not a school for lay boys." He then goes on giving examples of Abbots at the various monasteries at the time who attempted to erect additional buildings to seclude the monks who followed the Rule (Benedictine) from the other dwellers at the monasteries and abbeys. He suggests that none of them erected additional buildings or sections for external schools within the compounds while trying to expand the location for this purpose related to the Rule. He also gives some solid examples from the Works of Angilbert-an abbot and

²⁹ Oblate is the student in monastic cloisters.

diplomat under the reign of Charlemagne- about liturgical processions in which no specific groups of lay boys attended as the members of a such “external school” adding: “However we cannot say with complete confidence that either the *centum pueros* or the “lay” school of boys in the monastic procession were members of a separate external school or that they were even externs studying with the oblates” (1992, 82).

He hints that if they were a separate unit, external school within the abbey, they would proceed as separately but within the body of the abbey. All these once again signals that there might be the possibility that “scola” might have been misinterpreted.

Under Charlemagne’s direction, Alcuin developed a system of school throughout the Frankish Empire- schools centered in both monasteries and towns. Attempts were also made to attach them to parish churches in the rural areas. The monastic school at Metz became a centre for singing and liturgical study; schools at Lyons, Orleans, Mainz, Tours, and Laon had centres for children rudimentary literary skills and offered some opportunity for further study in the liberal arts and the study of scripture (Cunningham & Reich, 2009: 190).

But the monasteries had similar patterns. “The boys begin with the alphabet; when they have grown in years and in wisdom, they proceed to the pitfalls of Dialectic, the questions of Grammar, and the attacks of Rhetoric. They know the position of different countries on the globe, the course of the planets and influences of the constellations, but they can also give information on obscure questions relating to the Law and the Prophets. Here we have an epitome of the *Trivium* and *Quadrivium*” (Clark, 1926: 97).

In many respects, the monastic policy of Charlmagne may be seen as a continuation and expansion of the policy of his father. Monsteries continued to be regarded as political pawns and instruments of imperial consolidation. While Charlemagne clearly supported both monasticism and education, he had no apparent intention of separating a secular educational function from a monastic one and certainly no qualms about sending members of the aristocracy to abbeys for training, regardless of their monastic vocation. He continued to award abbacies to loyal retainers and recruited advisors from the ranks of aristocratic monks (Hildebrant, 1992: 53).

1.4.5 The Monastic Architecture in Carolingian Era and the Example of St. Gall

Thanks to his successful military pursuit Charlemane was able to unify present day France, Germany and what we call Low Lands. “He summoned he greatest minds to his court,

established schools for the training of governmental administrators, and encouraged architecture by donating lands and money for the construction of churches and monasteries. The resulting buildings termed Carolingian (from Carolus, the Latin name for Charles), are in many cases based on the early Christian buildings Charlemagne visited during his travels in Italy... Much as Charlemagne as his architects admired Roman buildings, they lacked the construction skills necessary to duplicate them, so in comparison to their Roman prototypes Carolingian buildings may seem somewhat unrefined” (Moffett & others, 2003).

The lean centuries of the so-called Dark Ages came to an end about 800. The consolidation of Europe under the rule of Charlemagne and the rise of the monasteries as the backbone of European economy alongside the diminished cities provided the stability and means that are needed for large-scale architectural projects. Carolingian architecture, therefore, represents the first major leap since antiquity for the architectural profession, which had been significantly weakened in the intervening period of political uncertainty and social disorder (Kostof, 1977: 71).

We could speculate that St. Gall was one of the major and one of the most prominent monasteries at the time of Charlemagne. It was already there right before (it was established at the time of his father- Pepin the Short- Charlemagne was crowned but it probably got its high-time importance with him and at his time. It had the richest monastic library at its time and many of the abbots or clergy or liturgy at Charlemagne’s court and his renovations were educated at St. Gall. For example Einhard, who wrote the well-known biography of Charlemagne, *The Life of Charlemagne*, was a monk and Angilbert was an abbot at St. Gall. To reflect how the life was, or more specifically, how the education was in Monasteries at the time of Charles we can use **St. Gallen** or with its other name **St. Gall** as an example for architecturally investigating the educational monastic locations. We know that the plan we will be discussing below is not the exact plan of the monastery which was existent in Charlemagne’s reign but it was an abstract model on how monasteries according to Benedictine Rule should be.

The monastic life of prayer, contemplation, and mental and manual work, marked by poverty, chastity, and obedience, was intended to emulate the example of Christ. In 817 abbots from leading Carolingian monasteries held a conference to resolve differences in interpretation of the Benedictine Rule. Out of its discussions came a document detailing a model layout for a Benedictine abbey. We know of this drawing through a copy sent to the abbot of the monastery of St. Gall, where the plan remained in the abbey’s library until rediscovered in the 18th

century. Known now as the Plan of St. Gall, this manuscript is the oldest surviving architectural drawing from the medieval period, and from it modern scholars Walter Horn and Ernest Born have deduced much about monastic life and building practices in the Carolingian age (Moffett & others, 2003).

Hildebrand writes about a distinctive quality about St. Gall in his *The External School in Carolingian Society*:

“It consists of a single large sheet (112 x 77cm.) composed of several sections of parchment pieced together that dates from the early 9th century. On one side is inscribed the plan for a large monastery at St. Gall, including a building distinctly designated as a school with a common hall for study and residential rooms for students. The residential character of the building (monks and oblates slept in the dormitory) and the inscription on the wall surrounding the building, “These fences enclose the endeavor of the learning youth,” argue convincingly that this was, indeed, an external or outer school building” and then he adds that this Plan draws the attention of scholars in sense of containing an external school which no other contemporary monastery had or seems to have had... It is unlikely that the presence of a walled school at St. Gall prevented oblates and non-monastic students from having contact with each other.” So he suggests that they were isolated or kept away from each other by walls or other words their education was kept in separate buildings which would enable the oblates to perform their distance from earthly life (1992: 9).

In illustration VI, we see the famous The Plan of Saint Gall. As can be seen from the drawings, a monastery is a living area with almost every unit that can be available in a complex. As we can see above in number 21 External School is shown in number 20 between the Lodging for important visitors and Abbot’s house which can lead us to think that it wasn’t one of the central and basic component within the complex. Looking at the other components and their distribution among the other buildings one can deduce that they were being kept away from the oblate, in other words, internal school’s students. It is just a prediction, though. But considering the cloister and isolated life and conducts of monks and oblates it is not implausible at all. Its being the only example which contains an exterior school in its plan, causes us to think that St. Gall wasn’t built according to that plan at all. There are some thoughts about whether this plan was the exact plan of what stands to be the remaining of St. Gall today. Writers have their thoughts about whether the plan was a genuine copy of its original or whether it has never been build like that. “One of the most controversial sources for Carolingian monasticism the so-called Plan of St. Gall. This beautifully executed ground

plan of a large abbey was never used as a practical guide for building in St. Gall; this much is clear from archeological data. It therefore soon earned the qualification of a paradigmatic vision of how a large abbey should be planned...The architectural solution was the cloister (*claustrum*). In this inner sanctuary only monks were to be admitted their coming and going was subject to the abbot's approval, as was the highly exceptional admittance of outsiders. According to the Plan of St. Gall the *claustrum* encompassed all the buildings for exclusive monastic use, such as the dormitory, refectory, kitchen and lavatories Above all, the three places around which religious life revolved were secluded from intrusion by outsiders: the monastic choir, library and scriptorium" (McKitterick, 1995: 636).

Churches were prominent parts of architectural structures in the plans of abbeys or monasteries. They were sacred buildings and where all the liturgic processes and rituals were realized so they were like the core in these theological institutions. Carolingians brought back the T-shaped Christian Basilica architecture to their century and count that as one of the main accomplishments of the Carolingian Renaissance. "It found its most powerful expression in three churches built or conceived after Charlemagne's coronation in Rome: the abbey church of Fulda, the cathedral of Cologne, and the church of the famous Plan of St. Gall. The last of these was never built. It was delineated on a master plan for a monastic settlement, worked out during the reign of Louis the Pious and known to us through a contemporary copy now in the archives of the Stiftsbibliothek of St. Gall" (Benson & others, 1991, 712). Looking at these lines one can see that despite its effect on the idea about how the monastic zones should be designed, the Plan of St. Gall was nothing more than an unrealized plan. But it was a pattern determined by the successor of Charlemagne, his son Louis the Pious and had somehow influenced the construction pattern of the future monasteries. (As we mentioned above, it was prepared as an ideal plan and it had an exterior school which was really rare when compared to its counterparts). Looking at the Carolingian churches and monasteries it is not difficult to speculate that they imitated Italian ones. One reason of that might be the sojourn of Charlemagne we mentioned before. Benson & others go on writing about the Plan of St. Gall and T-Shape Plans as follows: "The early Christian prototype of these churches is the Constantinian church of Old St. Peter's in Rome. The Carolingian architects who designed and built them (some of whom may have knelt in Old St. Peter's when Charlemagne received his imperial crown) did not confine themselves simply to borrowing the scheme of their model-they reshaped it by introducing into the dimensional organization of its component spaces a geometricity that was not part of the original concept... As the T-shaped basilica was

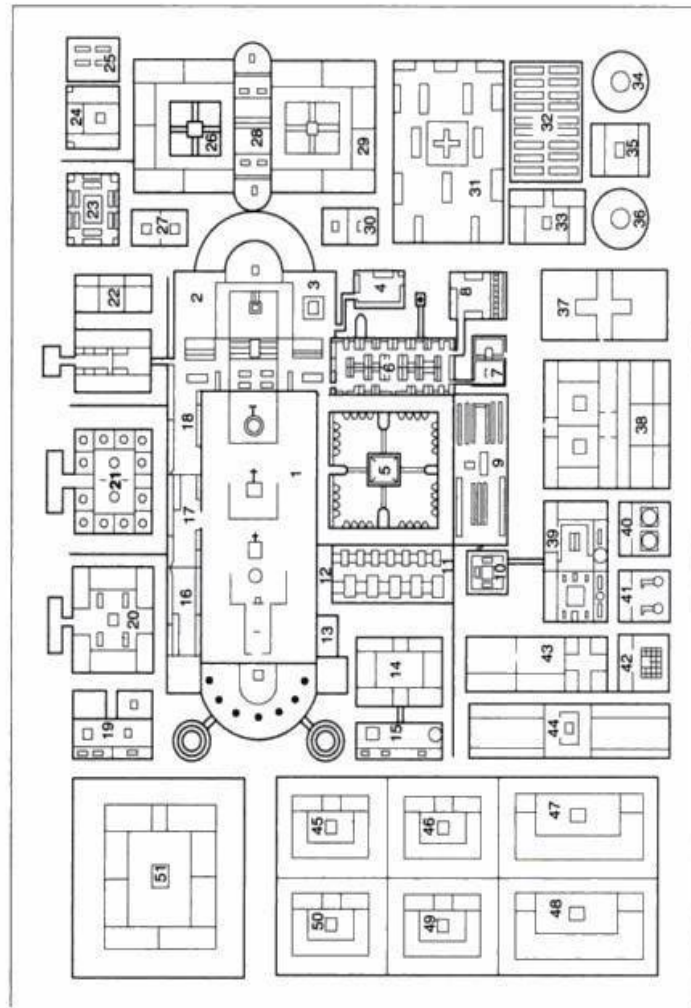
resurrected in Fulda, Cologne and, the Plan of St. Gall, the dimensions of the constituent spaces were gradually standardized” (1991, 712).

1.4.6 Medical Studies and Medical Practice in Carolingian Monasteries

It would be nonsense to expect monasteries, as complex forms, to be deprived of medical worries as they had (as we already mentioned above) almost town-like population figures. Carolingian era was an era of scientific hunger for medicine as well as other branches of science but it wasn't the high-time of medieval medicine, though. Charlemagne had his court physicians and he also expected them to be up-to-date and as proficient as possible just like the class of liturgy and clergy. There were also medical worries at monasteries to enhance medical wisdom and meet the health issues within the monastery as they were not only religious but also cathedrical centers of education. In monasteries there were even medical chambers to take care of the ill. As can be deduced, abbot was the supreme title to which they have to be accountable. So, mainly the Palace of Charlemagne and the monasteries were the places where medical practice and studies took place. But it wasn't more than largely translating and reproducing classical medical manuscripts. Some monasteries with certain religious orders got prominent in this application at Carolingian period.

“Medical practice in Carolingian times stressed the use of medical herbs and bleeding. Although the latter was practiced regularly, moderation was frequently recommended.”
“Physicians were also available when people faced serious illnesses. Many were clerics, and monasteries trained their own. Monastic libraries kept medical manuscripts copied from ancient works and grew herbs to provide stocks of medicinal plants. Carolingian medical manuscripts contained scientific descriptions of illnesses, recipes for medical potions, and even gynecological advice, although monks in particular expended little effort on female medical needs. Some manuals even included instructions for operations, especially for soldiers injured in battle” (Spielvogel, 2008: 222).

Illustration VI: The Plan of Saint Gall. The drawing is taken from the book *The External School in Carolingian Society* (1992, 10)



THE PLAN OF ST. GALL

1. Church
2. Ground-floor scriptorium with library above
3. Ground-floor sacristy with wardrobe above
4. Annex for preparing sacred bread and oil
5. Cloister
6. Monks' dormitory with warming room below
7. Monks' bath and laundry
8. Monks' latrine
9. Ground-floor monks' refectory with clothing stores above
10. Monks' kitchen
11. Monks' cellar with food stores above
12. Monks' parlor
13. Lodging for the master of the hospice for the poor
14. Hospice for pilgrims and the poor
15. Kitchen, bakery, and brewery for pilgrims and the poor
16. Porter's lodge
17. Lodging for the master of the external school
18. Lodging for visiting monks
19. Kitchen, cellar, bakery, and brewery for important visitors
20. Lodging for important visitors
21. **External School**
22. Abbot's house with kitchen, cellar, and bath
23. House for bleeding
24. Doctor's house
25. Medicinal garden
26. Infirmary with cloister
27. Infirmary kitchen and bath
28. Double chapel for the infirmary and novitiate
29. Novitiate with cloister
30. Novices' kitchen and bath
31. Cemetery and orchard
32. Monks' garden
33. Gardener's house
34. Hen house
35. House for keepers of chicken and geese
36. Goose yard
37. Granary
38. Workshops and house for artisans
39. Monks' bakery and brewery
40. Mill
41. Mortars
42. Court for drying fruit and grain
43. House for turners and coopers
44. Cow stalls and stable
45. Sheepfold
46. Goat stalls
47. Stable for dairy cows
48. Stable for mares and colts
49. Pigsty
50. House for farm workers and servants of important guests
51. Emperor's suite (identification uncertain)

The places where medicine, such as it thus became, could be applied, were at first mainly the larger ones of the Benedictine order: these were frequently developed into hospitals. Many monks devoted themselves to such medical studies as were permitted, and sundry churchmen and laymen did much to secure and preserve copies of ancient medieval treatise. So, too, in the cathedral schools established by Charlemagne and others, provision was generally made for medical teaching; but all this instruction, whether in convents or schools, was wretchedly poor. It consisted not in developing by individual thought and experiment the gifts of Hippocrates³⁰, Aristotle, and Galen³¹, but almost entirely in the parrot-like repetition of their writings (White, 2004: 33).

To speak medicine as a higher study we can quote from Frampton. He writes “The continued survival of Vivarium-style medical corpora within monastic libraries like Monte Cassino during the early Middle Ages (ca. 600-1100) and Carolingian period (ca.750-1000) played a crucial role in the maintaining some remnant of learned medicine after the disappearance of the last representatives of professional Greco-Roman medical pedagogy, Stephanus of Alexandria³² and Agnellus from Ravenna³³. Based upon a detailed comparison of four typical Carolingian medical manuscript collections found in early medieval monasteries with Cassiodorus’ proposed medical compilation...” “The Cassiodoran medical collection thus formed the nucleus of a cohesive summa of medicine that paralleled the thematic collections of texts in the *trivium* and *quadrivium*...” “In sum, the circumstantial evidence suggests that the Cassiodoran medical syllabus was seminal in the creation of a coherent collection of medical texts that was maintained in the centuries-long Carolingian tradition of medical manuscript compilation” (2008: 294). He also writes that this process covers ninth (Charlemagne’s period), tenth, and early eleventh centuries.

As mentioned above, The Plan of St. Gall includes every possible component that a unit can include to lead a regular monastic life. Examining the plan we encounter no concrete chamber or room or any specific location that medical education took place but we can suggest only one place related to medical scientific studies: the library and the scriptoria. Because reading the quotations above we can assume that the monasteries were “probably” training their own physicians but we have no concrete educational spot to speculate on the Plan itself.

³⁰ Hippocrates of Kos, (c. 460-370 BC). Famous Greek physician.

³¹ Claudius Galenus, (c. 129- 216 AD). Roman philosopher, physician and surgeon.

³² 7th Century Byzantine philosopher.

³³ (487-570 AD). Bishop.

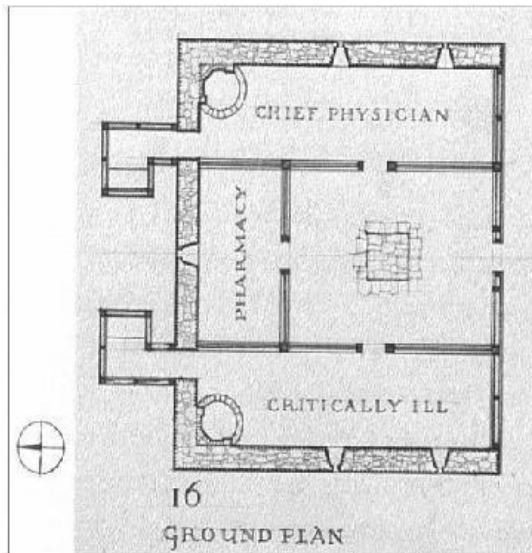


Illustration VII: Medical Section of a Monastery according to the Plan of St. Gall. (Wallis, 2010: 97).

But looking at the plan again we can see the locations of medical practice and medical locations are visible. About that we can look at number “24” and “25”. “24” was the physician’s house and “25” was Medical Garden. As can be seen from the picture, doctor’s room was facing the seriously ill ones’ and there was a pharmacy. The medical potions were prepared with the herbs that were grown in the garden that is signified with the letter “Z” in the Plan. So we can think that this unit was functioning as a regular hospital.

Although looking at the related literature makes us feel that all they did was to reproduce classical works of ancient medicals, some instances of medical practices makes us think that without the necessary knowledge about human body like cesarian operations or amputating the gangrened organs, or bloodletting etc would not be possible. Knowing that there were names like Notker or Hrabanus Maurus it is possible to speculate that medicine was taken seriously as a branch of science. Hrabanus as the student of Alcuin, lived between 776-876 and was the abbot of Fulda. Also served in Mainz; he wrote a book on anatomy and he was the physician of St. Gall.

1.5 CHIVALRIC (MILITARY) EDUCATION AT THE TIME OF CHARLEMAGNE

There are some contradictory ideas dwelling in the literature about the origin of chivalry and the chivalric education but one of them is what James in his *The History of Chivalry* claims:

that the institution doesn't originate in Charlemagne's reign and his time had nothing to do with neither the origin nor the education of a chivalry. Making claims depending on the fact that we haven't got solid and substantial accounts but just romances on which all these thoughts about Carolingian Knighthood emerged. He then mentions other romances which spurred in the Dark Ages like King Arthur's or Hercules's which attribute the same kind of chivalric qualities to the both. He writes:

“Towards the tenth, eleventh, and twelfth centuries, when Chivalry was in its imaginative youth, a thousand tales of wild adventure were produced, in which Charlemagne and his warriors were represented with all the qualities and attributes of those knights, whose virtues and courage had by that time wrought deeply on the heart and fancy of the people” (1830, 5). “After rejecting the evidences of such tales, we find nothing in the authentic records of Charlemagne which gives the slightest reason to suppose that Chivalry was known, even in its most infant state, during his reign. Though his great system of warfare must have –feats of daring courage, heroic valour, bursts of feeling and magnanimity, and as much of the sublime as mighty ambition, guided by mighty genius, and elevated by a noble object can achieve- yet the government of Charlemagne was in fact, anything but a chivalrous government.... Nor can we trace in the annals of the surrounding countries, a mark of Chivalry having been known at that period to any other nation more than to the Franks” (1830: 6).

Another opposing view can be found in Nicolle's *Carolingian Cavalryman AD 768-987*. Nicolle writes “A great many question remain unanswered concerning Carolingian armies. The traditional idea that there was a sudden rise in the importance of armored cavalry in Western Europe during the later 8th and early 9th centuries is probably wrong. In fact, many horsemen in early Frankish Carolingian armies were probably mounted infantry rather than cavalry. Of course, even the archetypal ‘knights’ of later centuries were trained and willing to fight on foot when the need arose. The question of adoption of stir-ups, and how significant this was in military terms, is similarly contentious” (2005: 8). So we can deduce that even though it could not be counted as chivalry there was cavalry and infantry. Nicolle mentions that Charlemagne cared a lot about gaining the support of the “elite” and there were “elite” members in his cavalry system.

The institution of chivalry seems to have emerged after the dark ages along with the feudal regimes. But in the early periods of chivalry the raising of the chivalric nominees included no intellectualism at all.

Up to the beginning of the twelfth century, the up-bringing and training of the future Knight included almost no academic study. William Marshall, one of the greatest of English noblemen, who died in 1219, was illiterate. The common definition and classification into *laicus il literatus* and *clericus literatus*³⁴ essentially reflected the true situation. However from the twelfth century onward, although there were still nobles who didn't learn how to read and write, the division into distinct categories was somewhat blurred. Many of the nobles who remained in the secular world no longer confined themselves to the oral cultural traditions of their class, which were transmitted in the vernacular, but began to study Latin (though generally only a smattering). Some became fluent in this language, and thus gained access to the high culture of the period (Shahar, 1990: 209).

Chivalry began during the latter part of the ninth century, reached its peak during the crusades in the twelfth century and disappeared in the sixteenth century. Essentially it was a system of education for the children of the nobility that included these stages:

page: to the age of 7 or 8 a child was trained at home by his mother; from age 7 to 14 (pagehood), he was educated at the court with his instruction supervised by a royal lady. Instruction included religion, music, courtesy, the etiquette of love and honour with some rudimentary work in reading and writing the vernacular language. By the man he was trained in gymnastics and military skills.

squire: At 14 or 15, the boy became a squire, in which state he was the personal servant and bodyguard of the lord whom he served.

knight: At 21, the boy was knighted in an impressive Church Ceremonial. He took an oath to "protect the Church, to fight against treachery, to reverence the priesthood, to defend the poor from injustice, to keep peace in his own province, to shed his blood for his brethren, and, if necessary, to lay down his life (Cordasco, 1976: 34). Boys generally completed their military training at the age of 15, at the beginning of the third stage of life (adolescentia), which was considered the onset of adulthood, and then became squires to knights. Most of them became knights at the age of 17-19, but some were already knights at 15, immediately upon completing their military apprenticeship and even took part in battle (Shahar, 1990; 211).

Training was conducted in groups, and children constituted a single group (of mixed ages) within the population of the castle. Like children in monasteries, they too were a separate

³⁴ The terms "literatus" and "illiterates" were synonymous with "clericus" and "laicus." Only clerics knew how to read and write.

group, but took part in the routine and the activities of the adults. However, whereas in the monastery, apart from those times when they participated in adult activities, they were deliberately kept apart from the monks, no attempt was made to separate future knights from adult society. They were raised in the male world of sweat, weapons, stables, horses, and hounds, with its ethos and courtly culture, as well as its lust and unrestrained urges. A central role in the child's education was played by approval, and by the sanctions of group pride and shame (Shahar, 1990: 211).

1.6 EDUCATION OF GIRLS DURING AND BEFORE THE TIME OF CHARLEMAGNE

“Education for girls varied according to class, as it did for boys. Lower class girls would be trained to do the same activities as their mothers, such as cooking, cleaning, gardening (for food, not for pleasure), and needlework...” “Charlemagne insisted that his daughters be trained in needlework, especially the finer types such as knitting, spinning, weaving, and embroidery, so that they would learn to do something productive and not become lazy” (Butt, 2002: 134). As we can see from that passage that the girls at the time were supposed to be responsible for carrying out domestic life and almost no time at all was devoted to academic study for the education of girls.

Upon the education of the children of Charlemagne, Dutton writes “Both his sons and his daughters were trained in the liberal arts as their father had been. He taught the boys to ride and hunt while the girls were educated in the domestic arts. Despite the fact that girls' academic emphasis was not that large at the time there happened to be a female literary figure (1994: 56). Cunninghams & Reich, in their *Culture and Values: A Survey of Humanities* write “Most of those who were educated were young men, although there is some evidence of learning among the aristocratic women of Charlemagne's court. The only book written in Charlemagne's time by a Frankish woman who was not a nun was a sort of manual for Christian living written by Dhouda³⁵ for the instruction of her own son. We do, however, know that there had to be a certain level of literacy for nuns, and some evidence also suggests that illuminated manuscripts that have come to us were done by women in such convents” (2009, 279).

³⁵ *Liber Manualis*, consists of 73 chapters, includes practical moral advices for his son to guide her sons through their lives.

Also there was education for girls in monasteries, in convents. They had nuns to teach them and they were only educated by the female, though there were some male staff for the chores in the convent. “Thus, young girls in monastic communities must have been taught by women. A number of resources, however, do shed indirect light on schooling for women. Gisela and Rotrud wrote to Alcuin after they had already tried to understand St John’s Gospel by tackling Augustine’s commentary. Paschasius Radbertus³⁶, who had been raised as an orphan by the nuns at Soissons and received his early education from them, wrote, in addition to the treatise on the Assumption, two other works at the request of the Soissons community. These kinds of requests testify to a high level of intellectual inquiry and to study programmes in female monasteries (McKitterick, 1995: 718). But there is little recorded data on medieval monasteries in Germany because the Carolingian councils held in Germany in the eighth century on held very strict policy over monasteries and applied serious privacy of monastic women and convents.

So, from the lines above we can deduce that royal and courtly girls used to get some level of education but it wasn’t as solid and as common as the boys. Even though they were the emperor’s daughters or the daughters of important people & scholars from the court, girls were generally supposed to accomplish basic female duties or responsibilities. Despite the traces of higher female study at the time, researches assume looking at the surviving resources that is wasn’t that substantial as the boys’.

1.7 RESULTS OF THESE EFFORTS IN SENSE OF INTELLECTUALISM AT THE TIME

The impetus Charles gave to learning affected the whole churches and abbeys in his empire. In Italy lay grammar masters had never ceased to teach for fees, but elsewhere in Europe the only schools were the household schools of boy lecturers. The tradition of classical learning, of the seven liberal arts was stronger in Italy than elsewhere. Apart from Italy, the best learning in Europe was to be found in the schools of Ireland, and still more, of England (Deanesly, 1969: 56).

Supported by the highest authority in the Church, the movement continued under the successors of Charlemagne, so that, during the ninth and tenth centuries, there sprang up

³⁶ (785-865 AD). Frankish saint.

besides the palace school, which seems to have accompanied the Frankish court from place to place, the no less celebrated cathedral and monastic schools of Fulda in Germany, and of Utrecht, Liege, Tournai, and St Laurent in the Low countries. It was France that the Scholastic movement found its first home, and it was in that country also that, after the temporary opposition of the reactionary alarmists, the most important school were founded, namely at Tours, Rheims, Laon, Auxerre, and Chartres. These homes of new learning were the scene of the first crude attempts of Scholastics speculation, as at a later time University of Paris was the scene of the last and most brilliant triumphs of Scholasticism (Turner, 2007: 208).

Charles IV, in other words; Charlemagne became the name who accomplished the greatest renovation of intellectual life during the Middle Ages before the Renaissance. We can see it is different from the Italians' in aspects as:

✓ Carolingians, as he and his clan used to be called, organized a Renaissance unlike the secular Italian Renaissance which came spontaneously. Carolingian one had a program and produced by a council, not by randomly selected intellectuals.

✓ What gave a start to Carolingian Renaissance was the State itself, the king wanted to renovate the intellectual life and attempted in person. He even took part in copying manuscripts in scriptoriums.

✓ Intellectuals were given tremendous privileges, power and wealth to do their best unlike the intellectuals of Italian Renaissance who tried to prosper the intellect despite the seigneurs who suppressed the social and intellectual life at the time.

✓ Again; unlike the Italian one, Carolingian intellectuals actively participated in governing, the king even consulted them, as he did to Alcuin.

In the sixth century C.E., what was left of the greatness of the Roman Empire, and even of classical Greece, gave way in the West to a period of intellectual decline. This used to be called the Dark Ages, but in a modern avoidance of derisive names, many textbooks now refer to this as a period of transition. However, the sixth and seventh centuries were "darker" in that literacy declined quite severely from the days of the first- and second century Roman Empire or even the fourth or fifth century (Butt, 2002: 158).

Alcuin was very sure of himself in sense of being one of the most knowledgeable men in his time. He had served at the famous library at York which was highly valued at the time and his great mentor was Venerable Bede, one of the highly respected scholars in Britain. About that Mullinger (1911; 60-61) writes: "Most students of English history are familiar with lines in

which Alcuin enthusiastically describes the library of which he was the appointed guardian at York, and from whence we shall gain our most accurate idea of the extent and character of the learning which he was now to convey to the monasteries and schools of Frankland.”

“Alcuin brought the great Anglo-Saxon tradition of Bede and Norhumbrian revival of learning to the Carolingian realm...” “Although his role is now recognized as less central in the creation of the script, he and his monastery at Tours did play some role in the development of Carolingian minuscule, which was to be admired and copied during the Italian Renaissance centuries later” (Frassetto, 2003: 100). It must be stressed, though, that the Franks were Rome's heirs. They made Roman and Christian ideas and techniques of art and scholarship their own. The Christian church provided both the spiritual and moral framework, and the specific educational and liturgical needs which the Carolingians strove to fulfill. Yet the Franks in the Carolingian period were also intensely creative; they built on what they had inherited and made vigorous use of it to create something new and distinctively Carolingian that provided the bedrock for the subsequent development of medieval European culture (Story, 2005: 153). Charlemagne expired like a meteor that, having broken suddenly upon the night of the ages, and blazed brilliantly over a whole world for a brief space, fell and left all in darkness, even deeper than before (James, 1830: 24). Which means what remained from his and Alcuin’s efforts could not last long, even right after him, under the reign of his son Louis the Pious.

CHAPTER II

2. THE ARABIC ORIGINS OF HIGHER EDUCATION AND THE FIRST CONNECTIONS WITH EUROPE IN SCIENTIFIC SENSE

Literature on the development of science before and during the middle ages, always focuses on how such an intellectual growth came out of Europe and how it took place. There are few who focusses on how Arabic scientific thought contributed to this progress and how the European renaissance would compose itself without Arabic touches on the whole. To understand this one needs to read on a medieval institution that has come to be called as madrasa, the higher learning centers of medieval people in the East. And this is the point at which we need to investigate over Islam and Islamic Philosophy and what we encounter will be Hellenistic culture in the Asian part.

Arabia was never hermetically sealed; and when the Arabs, united by Islam, left the confines of the Peninsula, the world which they conquered had long been subject to Hellenizing influence. Plato's respectful references to the ancient wisdom of Egypt and the Greek deference to Iraq in matters of astronomy were recalled by Arabic Writers centuries later to correct the impression that the commerce between Hellas and the Near East was necessarily a one way street. The widening of the Greek horizon by the eastern conquests of Alexander, indeed, had made possible a deep cultural interpenetration, which continued long beyond the so-called Hellenistic age (Beeston, 1983: 460). We have already mentioned how Greeks dominated the scientific thoughts and developments during the middle ages and even earlier. The Arabic seekings for science and its coming across with this Greek bits spreaded even outer than Europe; so Arabic and Greek origined European science were destined to come into contact.

There was, then, a higher culture in pre-Islamic Arabia itself; and, although its base might have been narrow, and its style somewhat mannered and repetitive (this after all is the sign of antiquity in an art form), its themes were by no means incompatible with what was to be received from the Hellenistic milieu. The materials of Arab culture did not leave their

possessor naked or unprepared for what he was to learn when he became master of the great cities of the Hellenistic world. And Greek notions were never entirely foreign to him (Beeston, 1983: 461).

Islamic civilization is however the civilization of all the peoples who became part of the new society. It had its roots in all the pre-Islamic civilizations of the same area. Besides Islam and Arabic, Syriac, Persian and Greek cultural elements, formed the ancestral traditions of most of the Muslim population. Thus the history of pre-Islam includes that of Arabia and of the lands extending from the western Mediterranean to the Oxus or wherever Islam was established (Al-Hassan, 2001: 57). Thus the centuries immediately before the outspread of Islam, show a wide and steady extension of Hellenistic influences in all the different forms of culture, in science, philosophy, art, architecture, and in the luxuries of life: and even before this, ever since the days of Alexander the Great, there had been a percolation of Greek influence, so that Western Asia was steeped in Hellenistic art, in many cases very crudely represented and combined with native elements. When the oppressive control of the Umayyads was lifted and the native population came again to its own, we can hardly wonder that this meant a revival of Hellenism (O' Leary, 1922: 44).

The Umayyad dynasty was found in Damascus in 661 and it was Arabic in descend. They didn't interfere with the lifestyle of Christian groups living around they just had to pay tax. The next dynasty we are going to talk about is the Abbasids which was founded in 750 in Baghdad and as we will see in the following chapters we are left with more texts and works in Philosophy, Literature, Art, Science, etc. Umayyads were before the Abbasids and it was possible to observe the traces of Hellenistic culture with them

Throughout the whole Umayyad period we see the conquering Arabs, so far the rulers of the Muslim world, in contact with those who, though treated with arrogant contempt as serfs, were really in possession of a much fuller culture than their rulers. In spite of the haughty attitude of the Arab there was a considerable exchange of thought, and the community of Islam began to absorb Hellenistic influences in several directions, and so the canon law and theology of the Muslims was beginning, at the end of the Umayyad period, to be leavened by Greek thought. It was, however, a period of indirect influence; there is no indication, save in a few instances in the study of natural science and medicine, of Muslim teachers or students availing themselves directly of Greek material, but only that they were in contact with those who were familiar with the work of Greek philosophers and jurisprudence (O'Leary, 1922: 86).

The Arab conquests and settlement, century-long processes of economic and social change and the formation of cosmopolitan urban societies and of a vast empire, not only governed political events but were the bases for the emergence of an Islamic civilization. New forms of Islamic religion and culture emerged as the expression of the communities and of the empire brought forth by the Arab conquests.

However, as Islam expanded to other regions and came into contact with other indigenous traditions and languages, it became necessary to create a cadre of Muslim experts who would develop sophisticated writings and textbooks on *Fiqa* (fiqh) – Islamic jurisprudence, *Sunna* – Prophet’s traditions, *Hadith* – Prophet’s sayings, and *Tafseer* – the interpretation of the Koran, to cater to the needs of non-Arab Muslim populations. Thus began the tradition of Madrassa, the center for higher learning the initial purpose of which was to preserve religious conformity through uniform teachings of Islam for all (Anzar, 2003). Towards the end of the Umayyad age the influence of Hellenistic thought begins to appear in the nature of criticism upon accepted views of Muslim theology. As in jurisprudence, we have no ground for supposing that Muslims at this stage were directly acquainted with Greek material, but general ideas were obtained by intercourse with those who had been long under Hellenistic influences, and especially by intercourse with Christians amongst whom the premises of psychology, metaphysics, and logic had encroached very largely upon the field of theology by the nature of the subjects debated in the Arian, Nestorian, and Monophysite controversies which turned mainly upon psychological and metaphysical problems (O’Leary, 1922, 81).

To sum up we can draw a line on how Arabic and European culture came together at a point in history and how they got entegrated, we can follow the steps Kazıcı (2010) did:

- According to him the first meeting point of Islamic & European thought was through Spain which was conquered by Abderrahman III in 711, especially the scientific centre at the time was Cordoba. It became an educational and artistic facility centre even for European scientists.
- Next one was in 10th century Sicily, where muslims established madrasas in which Christian scientists were also educated and Islamic and Christian way of thinking and conducts were kept on. In Sicily scientist mostly spoke Arabic so it was the language of science.
- The last turning point for Islam to meet European scientific culture was the Crusades, countless attacks of Christians to muslims made it possible for them to see the ruling and institutions they had established which caused them to take it as a model and

apply in their on unsystematically ruled European States. There are even writers who wrote about Islamic world.

- Another one was the Italian coastal cities like Venice, Pisa, Lucca, Geneva etc. which made cultural exchanges possible.

At the time of medieval Islam there was a holistic approach that considered science as a whole that composed of different fields of branches. About that in his *Knowledge Triumphant The Concept of Knowledge in Medieval Islam*, Rosenthal writes “The scholars and thinkers who left us their writings upon which we base our knowledge of that civilization were themselves not narrow specialists but polymaths, experts in various intellectual fields; to grasp the full range of their reach one has to command an equally vast body of knowledges” (2007: xii). So a scholar or ulema as we call them had to be an expert not only in his focus field but also in other branches of science which feeds that of his own.

To sum up, regardless of the geographies they emerged Arabic scholars and zealous seekers of science, a caliph or sometimes a sultan, were the ones who rejuvenated the by-gone wisdom of the Greek. About that Compier (2011) writes: "Traditional education about Western civilisation tells the story of how Europe, floundering in the ignorance and illiteracy of the Middle Ages, suddenly came across a number of texts in classical Greek which at once recovered the lost memory of Europe's glorious Greek and Roman past. Science and literature started flourishing, and with the help of the brilliant Greek philosophers the dormant Europeans were able to shed the ignorance of Medieval times and open the doors of science and civilisation. This process has been called the rebirth of classical civilisation in Europe, the Renaissance. The story however, is a myth quite lacking historical substance.

2.1 PHASES OF ARABIC EDUCATION SYSTEMS DURING THE AGES & THE ORIGINS OF HIGHER EDUCATION AT THE TIME

2.1.1 Emergence of Four Schools in Islam and Their Effect

Makdisi, starting his study called *The Rise of Colleges* (1981) makes a distinction between two terms: the school of law (makhdab) and the college of law (madrasa). According to him the latter one is designated to the buildings or institutions where instruction takes place while the former one is dealing with jurisprudence and they are personal schools; so they are a kind of sect or rite.

After the death of the Prophet, when Muslims faced situations for which no answer could be found in the revealed knowledge of the Koran and the Prophet was not there to guide them, the Muslim scholars sought answers in the sayings and practical life of the Prophet. This led to the development of traditions of following the *Sunna*, the knowledge of deeds of the Prophet and Hadith, the sayings of the Prophet. The mosque continued to be the center of learning even after Prophet's death. This mosque based understanding and acquisition of knowledge worked very well for the Muslims of the Arabian Peninsula because the tribal traditions combined with the teachings of the Koran were sufficient to govern the lives of people who spoke the same language and had the same cultural background (Anzar, 2003).

There were individual schools in Islam which was a like a relationship between a religious man and his followers and this custom was highly popular in certain areas in the Arabian Peninsula in the 7th and 8th centuries. But at the start of the 8th century, some names became prominent especially in cities like Kufa, Medina and Syria. One of the most famous schools was that of Abu Hanife in Kufa and Malik in Medina. In the early times in Islam there were also personal schools of law like **Sunnah, Shii'a and Kharidjism**. Among sunnah were Hanbeli, Maliki, Hanefi and Shafi'i. This schools were very effective on the basis of shaping the political poles at the time which even resulted in the polarization in the scientific thought and the emergence of madrasas in sense of a clash of propagandas between Shii'te and Sunni schools even eventually in the establishment of Nizamiyya Madrasas as opposed to its Shii'te counterparts. We are going to be dealing with those schools only in sense of their effect in the formation and instructions in madrasas and the political status quo at the time.

2.1.2 Elementary Education & Suffah During the Early Times of Islam

In Islam, everything that deals with ilm starts with reading and writing and the very first word that was intuited to Prophet Mohammed by Gabriel was "Read (Recite)!" as the Holy Qur'an writes. "Read! In the Name of your Lord Who has created (all that exists). He has created man from a clot (piece of thick coagulated blood). Read! And your Lord is the Most Generous. Who has taught (the writing) by the pen. He has taught man that which he knew not" (Qur'an, 30: 96).

Learning and education among Muslims dates back to the time when Prophet Muhammad received his revelation to a new religion was born. The importance of acquiring knowledge has been emphasized in the holy Qur'an, especially in verses 3:7,8, 16; 6:105, 108; 9: 14; 20:

114; 21: 22; 22: 54, 68, 71; 24: 6; 28: 14; 35: 28; 39: 9, and in many more thereby playing a tremendous role in engendering a zeal for learning among the believers (Muborakshoeva, 2012; 11). Seeking knowledge has been an integral part of the Islamic tradition. The early years of Koranic revelations to the Prophet were embedded in the oral tradition. Similar to the verses of good poetry, revelations of the Koran inspired the people of Arabia and they memorized the verses. However, as Islam expanded and it became necessary to preserve this vast knowledge, these verses were written down and compiled into various chapters. This compilation became to be the book of Islam, the Koran (Anzar, 2003). For the vast majority of Muslims, the Qur'an is the eternal uncreated speech of God, flawlessly recited to mankind by His Messenger, Mohamed. It should come as no surprise then that the Qur'an was the fundamental building block of education in the medieval Islamic world (Lindsay, 2005: 194).

Actually there is much to be told about basic and higher education during the time of Prophet and the Caliphs. Despite the fact that before the period of *hejira*³⁷ Muslim people were under pressure and there were many feuds on religious issues between the muslims and the other parts of the world, the Prophet Mohamed gave great importance and enabled the scientists to go on teaching no matter what. "It's a well known fact that the muslim people were exposed to torture and sufferings before the time of Hejira. Even in that period the Prophet kept education going, encouraged the muslims about that and talked highly of people who attended such facilities..." "Right after he arrived at Medina, following the construction of a masjid, a second section was reserved for educational facilities (SUFFAH)..." "Suffa which was in Masjid-un Nabi has turned out to be the first university of Islam. He (Prophet) taught there himself..."(Kazıci, 2012: 11-12). Suffah was the first solid place of Islamic studies where the prophet and other men with mature Islamic knowledge taught.

This place was set apart for lodging of new comers and those who were too poor to have a house of their own. This was a regular residential school where reading, writing, Muslim Law, memorizing of Qur'an and methods of reciting Qur'an correctly were taught under the direct supervision of the prophet. Suffah was not the only school at Medina. There were about nine mosques in Medina at the time of the prophet each of them served as a school for the teaching of Qur'an. The subjects of studies included beside the study of the Qur'an and Hadith, elementary mathematics, rudiments of medicine, astronomy, geneology and phonetics (Alavi, 1998: 2).

³⁷ The great movement of migration of muslims from Mecca to Medina in 622 AD under the guidance of Mohamed.

The suffah was a small cadre who lived in the mosque next to the Mohamed's house. They were recruited from among the most pious, enthusiastic, and fanatical followers, and were generally from impoverished backgrounds with no other way to make a living (Gabriel, 2007: xxv). The first thirty years after the death of Prophet (11-41/632-661) was a period of social and political tension within the body politic of the Muslim community. Problems among Muslims were not simply about political leadership but also about what and who represented religious authority. Some Muslims wanted to remain faithful to the letter and spirit of the religion and avoid debilitating disputes in the community by remaining politically neutral. Others took sides, which escalated into arguments over who was or was not a true Muslim. In fact, binaries of this nature were among the earliest questions posed in Muslim theological discourses in the first century of Islamic history, and many were to become key questions of Islamic theology (Saeed, 2006: 6).

Elementary education in Islam was carried out by kuttabs. "A traditional Islamic Qur'an school providing elementary levels of education, the kuttab is also sometimes known as a maktab, though occasionally the two had separate functions. The kuttab curriculum consisted primarily of memorizing the Qur'an and learning the fundamentals of Islamic belief and practice. But it could also include study of Arabic grammar, Arabic or Persian classical poetry, and basic arithmetic. Instruction was centered on memorization through dictation, writing, and recitation, with little or no teaching time devoted to the meaning of the texts (Campo, 2009: 437). Kuttabs were there before the emergence of Islam as well. They were buildings attached to the mosques where they were taught how to read and write.

In the early centuries of Islamic history, elementary education was very informal affair where young children studied with their fathers, uncles, or brothers (and occasionally mothers, aunts, or sisters) at home and, as they matured, with local scholars in the mosque. More advanced students then moved on to study hadiths (reports attributed to or about Muhammad), which along with the Qur'an formed the basis of Islamic jurisprudence and theology. The primary place to study hadith in the early centuries of Islam was mosque. Scholars also taught in their homes, which allowed them to offer hospitality to their students. It also made it easier for some scholars to charge for their services, despite the fact that it was considered bad form (Lindsay, 2005: 194).

There was a relation between travel and diffusion of Islamic science at the time. The Muslim seeker of knowledge was a great traveler, and in Islam, travel was untrammelled. In this he was better off than his counterpart in the Latin West; for unlike the latter, he could go from

city to city and country to country without losing his 'citizenship'; he 'belonged' by virtue of his religion. There were no city-states in Islam (Makdisi, 1981: 5).

The relationship between travel and education is illustrated eloquently by a hadith in which Muhammed is reported to have told his followers that they should seek religious knowledge (ilm) even unto China; that is, to the ends of the earth. This desire to travel in order to study with the masters was often coupled with the obligation to undertake the pilgrimage to Mecca at least once if one is able. In addition to being the means for many to fulfill one of the five pillars of Islam pilgrimage caravans from such distant places as Spain, West Africa, Central Asia, India, and elsewhere functioned as informal traveling universities that continually added new scholars as they made their way to Mecca and back each year. As such, these pilgrim caravans played a very important role in spreading new ideas and reinforcing old ones throughout the Islamic World (Lindsay, 2005: 196). Islam, of course, goes back in the Prophet Muhammad, the revelation of the Quran, and the first Muslim community in Medina and Mecca, but the Islamic religion, as we now know it, was the amplification of these teachings, carried out in later centuries not only in the original home of Islam in Arabia, but throughout the whole of the vast region from Spain to Asia conquered by the Arab Muslims. The Islamic religion in this sense encompassed not only the Quran and the example of Muhammad, but a vastly expanded range of religious study and practices including law, theology, and mysticism, developed in numerous schools and sub-communities. Islam in this sense refers to the whole canopy of religious concepts and communities through which the original inspiration was later expressed. Furthermore, Islamic ideas permeated the poetry and belles-lettres, arts and sciences that were also the cultural expressions of the new Muslim empire and societies in this larger body of literature, arts, and sciences, religious and non-religious influences intermingled (Lapidus, 2002: 67).

2.1.3 Education Under The Umayyads & Abbassid Period

After the assassination of Mohammed's son-in-law and cousin, Ali, a group called the Umayyads came to power and chose Mu'awiya as the fifth caliph. Mu'awiya ruled in a time when Muslim factions fought about the nature of their government, and how religious or secular it should be. Mu'awiya emphasized the latter, moved his capital to Damascus in 661 and began to reform the new empire's administration. Mu'awiya modeled his government's organization on that of the Byzantine Empire, which had recently ruled the region, even going so far as to hire Christian administrators. Mu'awiya further changed traditional Muslim

governance by identifying his son, Yazid, as his successor, instead of leaving that decision up to the respected elders of the community. The Umayyads were therefore the first dynasty to rule an Islamic empire (URL 1). Umayyad Caliphate was the fourth biggest Islamic caliphate which was established after the death of Mohamed; they were the descendents of the same family. Right after the establishment of the Abbasids in 750, the Abbasids killed all the members in Umayyad Clan and only one of them, Abd er-Rahman was able to escape to the south of Spain where we call Andalucia and establish the Andalucian Umayyad Caliphate in Cordoba in 756.

With the rise of the Umayyad caliphate the Arab-Islamic conquests entered their second phase. Within twenty years between 73/692 and 94/712 the Umayyads added North Africa, Spain, Sind and Transoxania to the Arab-Islamic Empire. They, in effect, doubled the size of the Empire, and before the end of their period a major portion of the world, as known then, became part of the Arab-Islamic caliphate. So we can say that the rise of the Umayyads was the beginning of the era in which Arabic or mostly Islamic thought proved itself to be present even so strong that European scientists were academically measured in Cordoba which was a learning center during 900s. Community upheaval continued in the Umayyad period (41-132/661-750). Several groups with diverse theological or religio-political orientations emerged. Among these were the Kharijis (khawarji), the Shi'a, the Qadaris (Qadariyya), the Mu'tazilis (mu'tazila), the Jabris (jabiriyya) and the Murji'is (murji'a) (Saeed, 2006: 7).

There have always been different views, various sects and their movements within Islam. These were highly political, but there happened times they were a way of thinking, in other words, intellectual:

Besides the followers of **Orthodox Islam (Sunna)**, the **Shi'a** was the next Islamic party in importance and in numbers. The Khawarij were among the oldest religious groups and from this movement there remained the **Ibādīs**, who are followers of Abdallāh b. Ibad who lived in Basra around 610/680. Among the religious and philosophical movements of intellectual origin was the **Qadariyya**, which adopted the concept of freedom of will. This movement appeared in Damascus. The Qadariyya was opposed to the **Jabriyya** or **al-murji'a**, the **Determinist movement**. An important intellectual movement, the **Mu'tazila**, appeared in Basra. It is said sometimes that it was influenced by the Qadariyya, and some maintain that the Mu'tazila was a continuation of it. One of its founders was Wasil ibn 'Ata'. The Mu'tazila played a prominent role in Islamic thought, and the movement reached its zenith during the reign of al-Ma'mun, in Baghdad... Among the religious-political movements was **al-Murji'a**. It is generally maintained that

this movement accepted the rule of the Umayyads, contrary to the Shi'a and **al-Khawarij**. The attitude of Al-Murji'a was that of tolerance: and in this atmosphere of tolerance lived Abu Hanifa, and this had some influence on his teachings (Al-Hassan, 2001: 76).

To consolidate their regimes, the Umayyad and 'Abbasid dynasties attempted to give cultural legitimacy to the Arab-Muslim imperium and to weld the disparate elements of the governing class the Caliph, his family and boon companions, Arab tribal Chiefs and generals, Inner Asian soldiers, Iranian administrators, Christian ecclesiastics, and Muslim religious scholars - into a cohesive imperial elite (Lapidus, 2002: 68). It can be judged as something expected to gain the trust of the elite which would bring reputation among the people. The Umayyad century was a time of change as the leaders of the new state absorbed the culture of the eastern Mediterranean. By the early Abbasid period, the Islamic world had developed a classical culture of its own, though it remained willing to accept what was useful from the older empires (Brend, 1991: 20). While accepting an Islamic identity the court and imperial versions of Islamic culture stressed the aspects of poetry, philosophy, science, art, and architecture that could help define the authority of the regime and the of the ruling classes. A literary and philosophic culture was needed to present a vision of the universe as a whole, of the role of the state and the ruler in the divine plan and in the functioning of human society, and a concept of nature of human beings and their destiny in this world and the next.

Chart 6: Education During Abbasid and Umayyad Periods. In Umayyad and Abbasid societies this vision was expressed partly in Muslim terms and partly in literary and artistic terms inherited from the ancient cultures of the Middle East (Lapidus, 2002 : 68).

<i>Education Under Umayyad Period</i>	<i>Education Under Abbasid Period</i>
Al-Murji'a dominated the intellectual and political society.	The view mutazila dominated within the society. Mutazila was way stricter in religion but more rationalized.
Stressed military conquest rather than aquisition of knowledge.	Largely focused on solid knowledge and science.
Poetry and history dominated the courtly education.	Bait al-Hik'ma emerged in this period. More concentration on <i>ilm</i> and <i>ulema</i> .
Qur'an, Hadith and Arabic were studied.	Qur'an was the basis. Qur'an, Hadith and

	Arabic were highly studied by them, too.
Only influenced by the Classical Greek teaching but translation wasn't a dominating figure in science.	Translation of Greek works characterized this period's educational philosophy.

During the days of the prophet and the pious education was conducted strictly in line with the philosophy of education and life as enunciated in the The Umayyads paid only lip service to the Islamic ideals. The early Abbasids popularized Greek sciences and philosophy at the cost of Islamic ideals. The later Abbasids reversed the policies of their predecessors and persecuted those who subscribed to Greek ideas. But by this time the Abbasid power was weakened and the empire was dismembered and small principalities rose which extended support to their own sectarian ideologies (Alavi, 1988: 1).

In the Umayyad and early Abbasid periods there were two foci of Islamic religious and cultural development. On the one hand, Islam expressed the political identity of the court, the Caliphate and the political elites; on the other. It expressed the religious, moral, and social values of the Muslim urban populations. Out of the two milieus came two different forms of early Islamic Civilization. The court milieus contributed especially to Islamic art, architecture, philosophy, science, und Iranian and Hellenistic forms literature in Arabic. The city milieus contributed the literatures of Quran interpretation, law, mysticism, and theology in conjunction with an Arabic belles-lettres. Some subjects, such as poetry, theology, and history, were cultivated in both milieus (Lapidus, 2002: 67). Without contributions of Umayyad culture, The Abbasid intellect could never organize the data that were accumulated in advance by the Umayyads themselves. Abbasid scholars preserved Greek works of medicine, algebra, geometry, astronomy, anatomy and ethics. They were advanced in religious, legal and philosophical discourses.

In the Umayyad period, this imperial culture included Arabic poetry, derived from pre-Islamic conventions und oral traditions concerning the history of the Arabs, the life of the Prophet, the origins of Islam. And the deeds of the early Caliphs. It also incorporated and Sasanian artistic und literary materials. Thus, Umayyad mosques and palaces fused Christian and Byzantine decorative and iconographic motifs with Muslim uses and concepts to create new modes of Islamic architecture. The Umayyads also sponsored formal debates among Muslims` and Christians which led to the absorption of Hellenistic concepts into Muslim theology (Lapidus,

2002: 67). Umayyad dominance in the east was challenged by a sudden appearance by the Abbasids, who had already joined others opposing the empire's laic aspect. The Abbasids brought down the Umayyads in the year 750 and tried to get rid of as many Umayyad clan members as possible to avoid its later resurgence and possible loss of strength. That was how the Umayyad clan emerged in the Hispanic Lands (thanks to the flight of Abd er-Rahman and establishing his own emirate in Cordoba), in Andalusia and how Andalusian science got a chance to flourish and turn out to be an intellectual center in the following years.

2.1.4 Education in Muslim Spain (Andalusia)

We can say that the scientific era in newly conquered areas in Spain by the Umayyads, originated in Cordoba and through the Caliph Abd al-Rahman. Things gained momentum especially after the time he had made the Great Mosque of Cordoba right following his declaration of independence as a separate caliphate apart from the Abbasids.

By the time Abd al-Rahman reached North Africa, many parts of Southern Spain, or al-Andalus as they called it, were being ruled by Muslims. But there was considerable discontent, not so much, ironically, among the Christians as among some of the Muslims who had helped achieve victory but were now being sidelined by rulers as they carved out their own domains and city states. This was the situation that the young Umayyad prince would encounter and take advantage of as he sailed across the Straits of Gibraltar to Andalusia (Masood, 2009). By most accounts, Abd al-Rahman was the lone survivor of the Umayyad dynasty after the Abbasids murdered his extended family. He made his way to Spain within five years, mustered support of the Umayyad governors and generals still in the region, and established a capital in the city of Cordoba in 755. During his reign, Abd al-Rahman gave most power to Arab Umayyads, enforced Islam as the official religion, and around 785 began construction on the Great Mosque of Cordoba (URL 1). When he arrived Cordoba as important but possibly run-down Abd al-Rahman created a city that turned out to be a focus of culture, learning and science to rival Abbasid Baghdad. Umayyad Cordoba was to have its own Golden Age of Learning (Masood, 2009). That city was going to turn out to be a great learning and scientific center in Spain. So all these were preparing the path for Islamic science to set roots in Muslim Iberia.

What is important about Abd al-Rahman III and Hasdai ibn Shaprut-Jewish physician, diplomat and scientist worked for the caliph- is that they created an environment where

intellectual and cultural talent could be nurtured. Not only did they benefit from the advanced knowledge coming from the Muslim East, they worked proactively to put an educational and communications structure in place to continue the adaptation of new techniques and to conduct further analysis of the scientific information collected. They put the people in place whose contributions would benefit generations to come (Penn Allen, 2008).

Two chronological facts reveal much regarding the inception of scientific activity in medieval Spain. First is the late appearance of organized scientific activity in al-Andalus (mid-tenth century), and second is the rapidity of the transmission of Islamic science to Christian Spain. The late start of Andalusian science had nothing to do with orthodox rigidity but simply reflects the changing demographic situation. Scientific activity began only when the phase of explosive conversion was well underway, implying the emergence of the necessary demographic weight to foment the division of labor requisite to the support of highly specialized individuals within the learned class, whose educational system could not have been institutionalized with any great depth prior to the tenth century (Glick, 2005: 297). During the expansion of knowledge within Spain, in scientific centers there was a different flow of communication and exchange between scholars and students. There were some networks between academicians and the students. Glick mentions such an example of that was that of Maslama of Madrid among his disciples who were mathematicians and astronomers draw the line for such networks as in Chart I below. As we analyze the charts in detail, we can see that what made the Arabic thought spread that rapidly was the interconnected nature of the academical relationships at the time. Ulema at different cities made it easier for the data to diffuse better and faster. And here is another figure from the study of Glick that depicts the communication within the network of ulemas in Southern Spain, in other words: Andalucia

Diagram 1: The Network Of Lodgings Of The Ulema In Maslama's System (2005: 303)

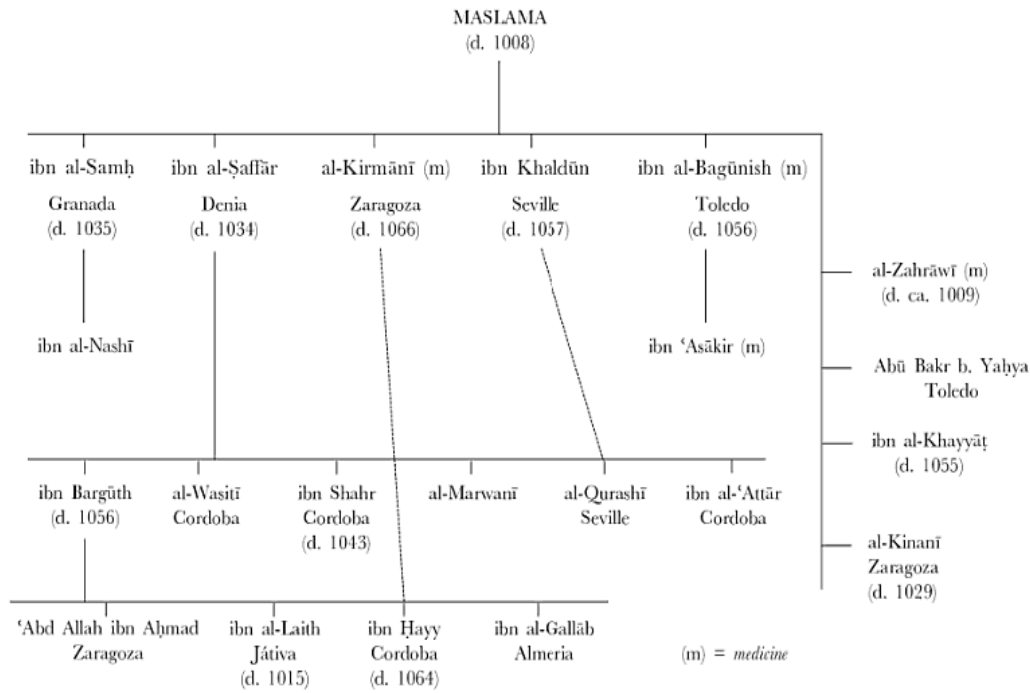


Figure 6. Maslama and his School

Translation was also a form of scientific conduct, it was what all the able ulema did so it was quite a measure for an academician to be able to translate. Translation preserved its importance in the continuity of the Umayyads in the Iberian Peninsula what has come to be called Andalusia. Scientist created and translated and interpreted scientific works and this went on especially during the 12th and 13th centuries. Even though a majority of the Madrassas during the subsequent centuries would remain the centers of Islamic learning, a large number of them produced renowned scholars and philosophers who contributed to earthly or secular knowledge too. *Ijtihad* – independent reasoning was a special feature of these Madrassas. This is especially true for Madrassas in Spain where the Muslims ruled for almost 800 years and which is usually referred to as the Golden Age of both Islamic and Jewish advancement in science, technology and philosophy. It was in Andalusia Spain that Islam is said to have given birth to a number of scholars who combined spiritual knowledge with the earthly knowledge and contributed to the preservation of Greek and European knowledge, which was at the verge of becoming extinct.

Diagram II: The Network Between the Components of an Agronomical School (Glick, 2005: 305).

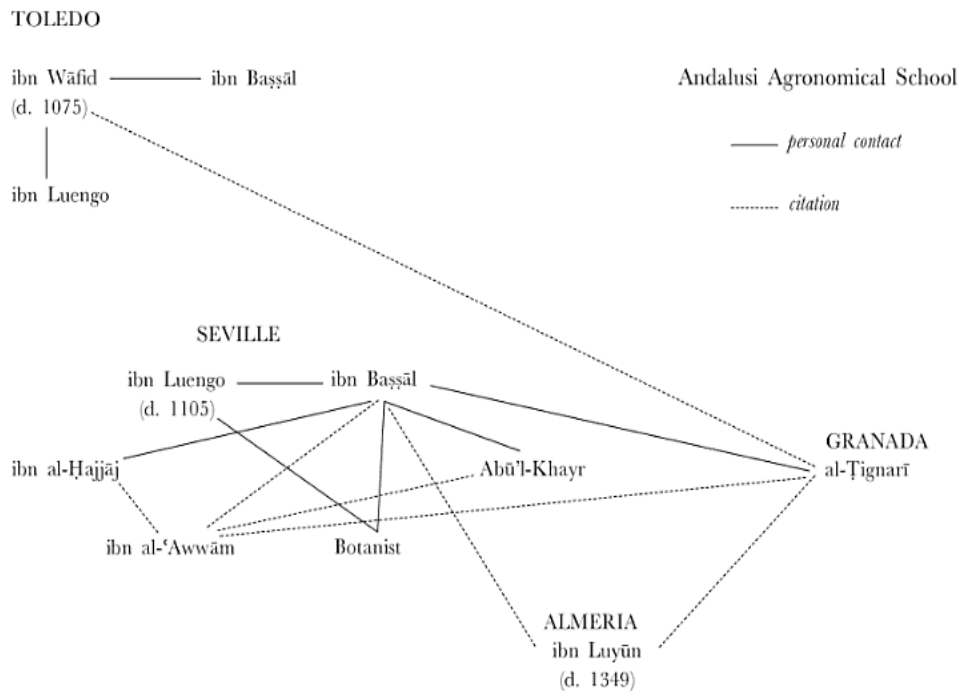


Figure 7. The Andalusí Agronomical School

2.2 COMPONENTS OF MADRASAS

What is Madrasa? What are other forms of educational institutions or places used for higher education in Arabic Thought?

In the Encyclopedia of Islam madrasa is defined as “the name of a place, descended from the word “lection” (*dirase*) which means reading, understanding, and reciting” (Vol. 28: 323) (URL 2). Ellwood (2012) writes, “the word madrasa is Arabic and is related to the verb *darasa*, which simply means “to study.” In its most basic meaning, a madrasa is thus a place where one studies. The application of the term therefore has as many meanings as that of the English word ‘school’.

Islamic education began in the Prophet Muhammad’s time, but centers of learning did not begin until after the first and second centuries of Islam (Campo; 2009: 446). We could make a

comment like “Mosques or masjids were the earliest types or prototypes of madrasas.” Because they were the places where people gathered for rites and conversate about religious topics; a place where they learned about Islamic law. Here we need to mention a term, “majlis” which meant to be the circles in which muslims gather and rationale about topic. They used to form majlises for discussion (majlis al-munazara), for scientific reasoning (meclis al-ilm), etc. So, the very origin of madrasa, the essence of madrasa is that majlis within the heart of masjids or mosques that came to be madrasas. Madrasa evolved from some other type of religious institution called “*masjid*” where any kinds of Islamic science was studied depending on the owner or director of it. Masjid emerged with the rise of Islam while Madrasa emerged much later. Before the rise of madrasas foreign sciences or as we can name them “Liberal Arts” were studied in masjids, halqahs, maristans or bimaristans, medical centers or hospitals, libraries etc. And as paralleled to madrasas some educational locations like *ribats, zawiyas and khanqahs* can be counted at the time. With the rise of madrasas the study of foreign sciences began to disappear and new institutions like “Dars” began to emerge. These were the institutions where Islamic law and Qur’an studied began to diffuse and Dar’ul Qur’an, Dar’ul Hadith appeared.

In the tenth and eleventh centuries another distinctive form of educational institution developed and became to be known as *madrasa*, What it meant in Arabic language was “the place for study.” The madrasa emerged from the *mosque-khan* combination, as both a teaching and accomodational institution. Besides giving supporting the systematization of the existing knowledge and wisdom on religious and legal sciences, emergence of this type has also contributed to the support of Sunni Muslim identity in educational milieus while Shi’i clans was in the control in many parts of the Islamic sphere in the tenth and eleventh centuries

2.2.1 Shii’te Muslims and Madrasas Established According to that School

Within the Christian Church itself there was a debate about fate and free will, about hell and the eternity of punishment. Similar debate on the very same subjects took place in Islamic theological circles, which led to the appearance of the intellectual movements just mentioned.

All these currents made the people who think and believe the same way come together and gather regularly for teaching and learning some issues which led to madrasa systems emerge (Al-Hassan, 2001: 76). These kinds of debates took place in the fore-mentioned social occurances called “majlis.”

Among the Shiites religious and legal instruction was at first conducted exclusively in the mosque, as had been the practice among Sunni Muslims. The oldest and one of the most prestigious universities (jamia) is the mosque of *al-Azhar* in Cairo, Egypt, which was founded as a center of Shiite learning in 972 by Jawhar al-Katib al-Saqilibi (“the Sicilian”), the commander of the Fatimid army that conquered Egypt in 969. The name chosen for the university, al-Azhar, means “the most radiant” and alludes to the prophet Muhammad’s daughter Fatima, nicknamed “al-Zahra.” The Shiite learnings of the university are reflected not only in the university name but also in its curriculum, the staple of which was Shii’te law. Al-Azhar University was also a bastion of secular learning, offering courses in the natural sciences, medicine, mathematics, astronomy, as well as geography and history. (Cosman & Jones, 2009: 148). Private institutions known as *Dar al-Ilm* (House of Knowledge) or *Dar al-Hikma* (House of Wisdom) began to emerge in the Shiite world in the late ninth to 10th centuries. These were essentially large libraries equipped with reading rooms and classrooms where courses were offered on all branches of the Shiite Islamic sciences and secular sciences (medicine, astronomy, mathematics, etc.). Dar al-Hikma was open to scholars from all over, but its curriculum and administration reflected its Shiite learnings; it was administered by the head Shiite propagandist (dia al-dua), who also gave weekly seminars (Cosman & Jones, 2009: 148).

About the status quo of the Shiite scholarly studies at the time Ellwood (2012) also states, “In some regions two cognate institutions existed side by side, a madrasa for teaching purely religious subjects and a *dar al-ilm* for teaching the rational sciences, particularly those of the Greek tradition.” So there was another form of a platform for higher educational studies. Therefore from that sentence of Ellwood we can deduce that madrasas had no facility for teaching rational sciences formerly, they had just established to serve religious education to Islamic students.

2.2.2 Nizamiyya Madrasas

Encyclopedia of Islam writes: “Madrasas established in various cities under the reing of the Great Seljuks, firstly in Baghdad. Nizam al-Mulk³⁸ decided to establish madrasas all over the empire to strengthen the Sunna and to educate the clergy the state needs when Shiite Fatimids

³⁸A famous vizier and scholar at Seljuk Empire, (1018-1092).

involved in a scientifically hectic period to prostrate the Sunni Abbasids and the Seljuks in addition to political and military actions.” (Vol. 33: 188) (URL 3)

Both in Baghdad, Nizamiyya Madrasas and other oriental ones had philosophy in their curriculum. Many of the madrasas were founded for the followers of a particular rite; sometimes for a particular scholar. Nizam al-Mulk, who was himself a Shafi'i, laid down that the mudarris, vizier, and librarian of the Nizamiyya in Baghdad should be Shafi'i. The teaching programme of the Baghdad Nizamiyya comprised the Qur'an, *hadith* (traditions), *usul al-fiqh* (jurisprudence) according to the Shafi'i rite, *kalam* (scholastic theology) according to Ash'ari doctrine, *arabiyya* (Arabic language and literature), *adab* (belles lettres), *riyadiyya* (mathematics), and *fara'id* (laws of inheritance) (Boyle, 1968: 216). These madrasas were many in number throughout Iran and Central Asia in cities like Amul, Nishapur, Merv and Bukhara. These centers were making Shiite propaganda and their whole system and curriculum was based on Shiite thinking which gave rise to the Sunnah school to emerge educationally in a very effective way.

He founded many madrasas: the first at Nishapur about the middle of the 11th century, followed by others at Baghdad, Tiis, Basra, Isfahin, Herat and Balkh; and, his successors following his example, the institution spread over the whole Seljuq Empire. What the Nizam did for Persia and Lower Mesopotamia, the great Seljuq feudatories, the Atabeks of Mosul and Damascus, Nur ad-Din and Saladin, did for Upper Mesopotamia, Syria and Egypt. These Princes, who were of Kurdish or Mongol origin, were ardent Sunnites, and, under them, we see the madrasa advancing towards the west and appearing at Mosul, Arbela, Sinjar, Nisibin and Edessa (Creswell, 1920: 2). So, like Nizam al-Mulk, there were some strong political figures in the Mesopotamia like Nur ad-Din and Saladin that contributed to the Medieval Syrian and Egypt's education. These three names could be seen as counterparts.

The 10th century witnessed the emergence of a new academic institution called the madrasa (“the place where one studies”). The first madrasa was reputedly founded by a Seljuk Turkish vizier of Abbasid Baghdad, Nizam al-Mulk (d. 1092) and was called the Nizamiyya Madrasa. Nizam al-Mulk wanted to create a bastion of Sunni Islamic learning that would counter the increasing advances of Fatimid Shiite missionary propaganda, called *dawa*. Students at the Nizamiyya studied all four schools of Sunni Islamic law, as well as the Qur'an, the Hadith, and Arabic philology. The institution spread to numerous other countries from India to Granada under the Nasrid dynasty (Cosman & Jones, 2009; 69). Many of the madrasas were founded for the followers of a particular rite; sometimes for a particular

scholar. Nizam al-Mulk, who was himself a Shafi'i, laid down that the mudarris, va'iz, and librarian of the Nizamiyya in Baghdad should be Shafi'is. The teaching programme of the Baghdad Nizamiyya comprised the Qur'an, hadith (traditions), usul al-fiqh (jurisprudence) according to the Shafi'i rite, kalam (scholastic theology) according to Ash'ari doctrine, arabiyya (Arabic language and literature), adab (belles lettres), riyadiyya (mathematics), and fara'id (laws of inheritance) (Boyle, 1968: 216).

Hakim writes "Muslim historians are in some doubt as to who should receive most of the credit for the madrasa. Nizam al-Mulk seems to receive most of the credit even though others developed the above four Madaris in Nishapur. It seems that his contribution lies in:

(a) the enthusiasm and energy which he created for the development of the Madrasa;

(b) the scholarship he endowed for the students; and

(c) the development of the Madrasa for boarded students, which became the prevalent type after his time" (1979: 75). Looking at these lines and analyzing the hint beneath the info given in 'c' we can speculate that having boarded students became a common quality for the madrasas at the time.

The courses at Nizamiyya Madrasas were called Dars-e-Nizami. As Singh & others stated in their book (2002, 19) most of the courses taught at madrasa was of religious nature. Dars-e-Nizami consisted of grammar and syntax, logic, mathematics, rhetoric, jurisprudence, principles of jurisprudence, scholastics and dialectics, tafsir and ahadith/hadiths.

2.2.3 Harun Al-Rashid & Al Ma'mun's Bait al-Hikma and Libraries at the Time & Some Pre- madrasa Institutions

Few of the caliphs are said to invest his nation's cultural cumulation and among them one of the most prominent names we encounter is Harun al-Rashid³⁹. He was a great Caliph in addition to having interest in cultural studies. What he couldn't finish in his life-time in the level of cultural contribution was all completed by his son, the next Caliph to throne, Al-Ma'mun.

While in Marv, he had revived the Barmaki practice of inviting representatives of various schools of thought to present their points of view. He continued this custom in Baghdad, where scholars were offered elaborate hospitality:

³⁹ Abbasid Caliph, ruled from 786 to 809 AD.

Every Tuesday, al-Ma'mun would invite the *fuqaha'* and the representatives of other schools of thought to debate with him. The guests would be shown into a carpeted room and invited to remove their shoes and their heavy headgear. They would then be given food and drink. After eating and performing their ablutions, they were fumigated with incense and aromatics. Then they went to see the caliph, who gathered them close to him and debated with them fairly and without coercion (Mas'udi, 2726) (opt. Cit. Cooperson, 2005: 81).

The name of the caliph has been so synonymous with the concept of a golden age of medieval Islamic civilization that his biographies have generally provided occasions for describing the origin of Islam, the spread of the Arab conquests under the Umayyads, and the sophistication of cultural life in Damascus and Baghdad, as well as in Cordoba (Hibri, 1999: 29). Following him his son Al-Ma'mun became the Caliph and he had the similar zeal for science as his father did. He is always mentioned to be the most prominent Caliph who concentrated on science, culture and scholarly studies.

In Abbasids, education was a highly considered issue and there were "*kuttabs*" and "*maktaps*" which we could refer as the basis of the primary and elementary education. There were also mosques that could be used as educational centers as well as houses of the ulema.

Nor was the education of the Abbasids was confined to that of children and primary schools, for al-Ma'mun founded *Bait al-Hikmah* ("the house of wisdom"), where the higher branches of learning were pursued (Totah, 2002: 16).



Illustration VIII: (Yahyá al-Wasiti, 1237). Polymaths in an Abbasid Library.

Considering the quotation from Totah, it would be possible for us to state that though Bait al-Hikmah was a center for scientific facility, it would not be completely possible to claim that it was an educational institution or an educational center, either. But he can be named as the Caliph who effectively and zealously started an intellectual movement and enabled a serious amount of translational effort all along his Caliphate. To enlarge his accumulations he never hesitated to deal with any possible remaining bits of ancient/actual wisdom which ranged from digging in ancient tombs of Egyptian Pharaohs or requiring any fallen-rival of his to hand him the most precious manuscripts of their palace library.

Al-Ma'mun's name never escapes mention at the start of any study of medieval Islamic science and philosophy. For it was he who first commissioned the translation of the ancient classics, the works of *Euclid, Ptolemy, Aristotle, Plato, and Hippocrates*, and who founded the academy known as Bayt al-Hikma (house of wisdom), where scholars pored over inquiries ranging from medical study to measuring the circumference of the earth (Hibri, 1999: 95). Glick & Others (2005) states that in 830 he established "**the house of wisdom**," Bait al-Hikmah and that it was a combination of library, academy, and translation bureau which in many respects proved the most important educational institution since the foundation of Alexandrian Museum in the first half of the 3rd century." In this academy, many Arab-Christian scholars under their Muslim Abbasid patrons translated significant classical *Greek works first into their native Syriac and then into Arabic*. Works of **Euclid, Galen, and Plato**, among others, were thus made accessible to the succeeding generations of primarily Arabic speaking scholars, influencing the development of a humanistic tradition (Afsaruddin, 2005). Bennison in her "Great Caliphs" writes "astrologer called Kanaka, who spent some time at the court of Harun al-Rashid. The latter's son and second successor al-Ma'mun founded observatories in Baghdad and Damascus where Muslim astronomers prepared new tables which amended those of Ptolemy, using the information they had gained from India and their own observations. Like astrology, astronomical manuals soon percolated west far beyond the formal boundaries of 'Abbasid territory to al-Andalus, either in the baggage of the Iraqi musician and courtier Ziryab or a Cordoban scholar called 'Abbas b. Nasih, who went to Baghdad to collect scientific works for the Umayyad *amir*" which also clarify the fact that ma'mun was not only involved in libraries but also other scientific institutions as well.

The House of Wisdom was directed by three wealthy brothers who were skilled mathematicians and who were known as the Banu Musa ("sons of Musa"). Al-Ma'mun also imported rare manuscripts from Byzantine Empire and built observatories where Muslim

scientists could study the heavens (Janin, 2005: 52) And Naseem depicts Bait al-Hikmah as an institute where a section of the institution translates and copies while other serves as a library (2001: 14). This sentence hints that it was not only a source of scholarly studies but also served as a legitimate library at the time. Afsaruddin in his article (2005) writes: "Sometimes wealthy private individuals, such as 'Ali b.Yahya (d. 888), endowed libraries in their residences. Ibn Yahya's library, known as khizanat al-hikma (lit. "Treasury of Wisdom"), was particularly renowned for astronomy, and allowed students to study all branches of learning without having to pay a fee."

Alongside a lust for power, al-Mamun's rule was also characterised as a time when science and scholarship were at their peak. Al-Mamun is regarded by historians as the great champion of rationalism, and as the caliph who promoted science more than any other. It is said that once, when al-Mamun achieved a victory over Byzantines, he asked from them as reparation not gold nor any other such mundane treasures, but a copy of Ptolemy's great book on astronomy, the *Almagest* (Masood, 2009). The attitude of this enlightened Caliph towards learning had contributed handsomely to the advancement of all branches of science including geography. Al-Mamun ordered the collection of important scientific Works in his days from all the corners of the known world irrespective of cost, and translators were paid the weight of books in gold. However, 'Bait al-Hikmah' was more than a 'Translation Bureau,' as some of the eminent scholars employed in this bureau were able to add their own original contributions. Outstanding scholars of all nationalities and religious creeds including Arabs, Persians, Indians and Romans were employed by Al-Mamun at 'Bait al-Hikmah.' (Buttimer & Wallin, 1999)

The seventh Abbasid caliph, al-Ma'mun tried hard, for political reason, to end the Sunni-Shiite split and force upon his subjects a more rationalistic approach to Islam. Unfortunately, he failed in both endeavors. His support of learning, however, was more fruitful (Janin, 2005: 52). About him, Totah writes "When Charlemagne was learning to read his letters with the sons of his nobles in the palace school, al-Ma'mun was studying and discussing philosophy in Bagdad and at the time when most European children had no school to attend, their Arab contemporaries were enjoying the full benefits of education" (2002: 15). This sentence clearly depicts the distinction between the two cultures and their position in scientific realm of the time. In fact little is known about the House of Wisdom, and many historians now think its status as a university or research center has been overplayed. It was almost certainly a library of books and also a place for some translation as well as some astronomy, especially in al-

Mamun's last years. But beyond that, the evidence from manuscripts is not solid enough to know more (Masood, 2009).

It all started when Ma'mun dreamt about Aristotle and they had a philosophical conversation. After the dream he considered that he was destined to get scientific bits of ancient wisdom on his land with his own efforts.

There is a famous story telling how al-Mamun once saw Aristotle in a dream. Several versions of the story exist. Here is one transcript of the Exchange:

Al-Mamun to Aristotle: What is good?

Aristotle: That which is in the mind.

Al-Mamun: What more is good?

Aristotle: That which is in the law.

Al-Mamun: What more?

Aristotle: The will of the people

Al-Mamun: And what more?

Aristotle: There is no more (Masood, 2009).

The foundation of Bait al-Hikma is always attributed to the Caliph but many resources state that it was already there before Ma'mun gave a start to his intellectual revolution. For example about that Bennison quotes from al-Tabari:

An institution often considered integral to the translation movement was the famous but shadowy *bait al-hikma*, the 'house of wisdom', founded by the Abbasid caliphs in Baghdad. Although very little is known about its practical functioning, *the bait al-hikma* has been variously described as a royal archive, a library and the nerve centre of the translation movement. Traditionally its foundation has been attributed to al-Ma'mun, the golden boy of the translation movement, but some chance references suggest that it was established at least 50 years earlier by al-Mansur or his Persian ministers who were actually following the Sasanian practice of maintaining royal archives of dynastic chronicles and translated materials (2009: 79).

Stam clearly writes that Bait al-Hikma was first established in 600s by Caliph Mua'wiya. Later, by in the late eighth century, the regular position of sahib al-masahif (curator of books) had been established. He then goes on with the name al-Ma'mun to state that it was him who expanded the institutions under that name and it started to include all known branches at the time until the tenth century (2001: 112). Again, Glick & Others write "It had been supposed

that Abbasid caliphs, particularly Harun al-Rashid (786-809) and al-Ma'mun (813-833), established a kind of translation bureau with this name. But *bait al-hikma* is most likely just an Arabic translation of the Sasanid Persian term for library, in particular a palace library established by the rulers to preserve books on Persian history. The Abbasid *bait al-hikma* then appears to be a continuation of a Sasanid palace bureau, mainly a library but with scribal services and some translation activity, particularly from Persian into Arabic. No translation from Greek to Arabic has been explicitly located there, and the great translators are not mentioned in the context of the *Bait*" (2005: 80). But Bennison writes about the translation of Greek works to Arabic underlining the fact that it was the one with the largest significance. "Astrological works written in Pahlavi Persian were the first to be translated, along with a few Sanskrit texts, but the Greek heritage was the most significant in proportion and included almost all the works of Aristotle as understood by Greek commentators such as Alexander of Aphrodisias and Themistius, and the sixth-century Christian philosopher John Philoponus; digests of Plato's works, for the most part via the great Neoplatonists, Plotinus, his disciple, Porphyry, and Proclus and maybe a few Platonic political works in close to their original form; the complete works of the physician and philosopher Galen, which included much from Hippocrates; mathematical works by Euclid; in addition to Ptolemaic astronomy and an array of other materials (2009: 175).

This quotation from Glick & others above shows two main points; one: it wasn't established under the reign of Ma'mun and two: it wasn't the sole and the leading centre for translational activities at the time which means the activity of translation was taking place both at al-Ma'mun's libraries, at his palace and the bayt as well.

Bait-ul Hikmah is one of the most prominent research centers at the time but this doesn't mean that it was the only. Stam (2001: 112) writes that it was, by time, replaced by Dar'ul Ilms (house of knowledge, sometimes called dar al-kutub, or house of books) which served as public academies. They had large collections of translated and Arab-Islamic sciences and included chairs for the teaching of both doctrine and the natural sciences. Abbasids made use of them to control scholarship and founded many of them in Mesopotamia, Syria and Egypt.

Makdisi mentions some other libraries, personal/institutional, that were formed then underlining the fact that the term libraries or the places where books are located had some other synonyms like *bait* (room), *khizana* (closet), *dar* (door). We can deduce that only small numbers of books, in an organized or unorganized way, collected with personal efforts could be counted as libraries. And apart from al-Ma'mun's, he counts the libraries during the time

and some are: "al-Fath b. Khaqan's library collected by Ali b. Yahya al-Munajjim (888), again, Munajjim's library in his palatial residence which he called Khizanat al-Hikma (namesake of al-Ma'mun's Bait-al Hikma), Nizamiyya Madrasas, Dar'ul Ilms etc. These were probably wealth elites in the Arabian peninsula who were in the pursuit of knowledge. Madrasa education went under a second phase in the Ottoman Period. But before the Ottomans; or in other words in the medieval Arabic era there were mainly three types of madrasa in the Islamic lands and as Kazıcı (2012) included as well, those madrasas were:

a.Daru'l Hadith: where the very sentences and sayings of the Prophet was studied.

b.Daru'l Tib: where medicine was studied.

c.Daru'l Kurra: where students were mainly taught how to read Qur'an in seven different ways (Creswell, 1920: 35).

2.2.3.1 The Scholars at Bayt al-Hikma

An official named al-Sanawbar is described as "director of the Bayt al-Hikma among a number of royal libraries of al-Ma'mun" (*sahib bait al-Hikma min buyut hikam al-Ma'mun*). Persons explicitly associated with the Bait al-Hikma were administrators, copyists, and binders. Ibn al-Nadim reports that the astrologer al-Fadl ibn Nawbaht "was at the hizanat al-hikm for Harun al-Rashid; he translated from Persian into Arabic and relied in his scholarship on the books of Iran." Ibn al-Qifti adds that Ibn Nawbaht was the head of this library (*sahib bait al-hikma*). Ibn al-Nadim also mentions a Persian scholar, 'Allan al-Shu'ubi, a copyist who "transcribed in the Bayt al-Hikmah for al-Rashid and al-Ma'mun," and ibn Abi'l-Harish, who was a bookbinder there. We know, too, that the mathematician and astronomer al-Khwarizmi frequented the Bayt al-Hikma in the times of al-Ma'mun, one of the few solid indications that activities other than translation from Persian into Arabic took place there (Glick & others, 2005: 80).

In addition to surrounding himself with *kalam*-debaters, he sponsored the activities of translators, astronomers, mathematicians, engineers, physicians, and other practitioners of what today would be called the sciences. He was not the first caliph, or the last, to support scientific activity. But he did so with more personal enthusiasm than any other caliph before or since. Today, the political crises that marked his reign are only dimly remembered. But the scientific breakthroughs that took place at the same time have become part of the global heritage. Although al-Ma'mun was not personally involved in all the intellectual activities that he supported, no account of his reign would be complete without them (Cooperson, 2005: 82).

The list of those indebted to al-Ma'mun's patronage is long and varied. It includes such luminaries as the Bakthishu family, trusted physicians of the caliph; the Banu Musa b.Shakir, expert mathematicians and engineers; Ishaqb.Yusuf al-Kindi, the renowned philosopher of the day; Hunayn b.Ishaq, the leading figure in the translation movement; al-Abbas b.Sa'id al-Jawari who managed the astronomical observatory in Baghdad; and even astrologers, such as Umar b.al-Farkhan Abu Hafs al-Tabari and Abdallah b.Sahl b.Nawbakht, who advised the caliph of fortuitous moments for sensitive decisions (Hibri, 1999: 95). So to draw an overall chart for the scholars which frequented and worked half/full time under the reigns of al-Ma'mun and his father we can count many names. To add, most of these aforementioned names were polymaths and made a great contribution to what Europe and the rest of the world's scientific spheres had in their hands in sense of solid science.

2.2.3.2 The Essence of Translation at the Time

Especially starting from the rule of the Umayyads, translation has become another form of art in sense of translating classical Greek studies of early middle ages. Thanks to these translations and indirectly thanks to the Arabic translators at the time that contributed to the renovation of the remaining of the largely Greek and Roman teachings, Renaissance has emerged and all these almost forgotten classics turned back to Europe and emerged a kind of enlightenment.

These two Arabic cultures have also gained momentum in sense of translating Greek works that have contributed to the renovation of classical knowledge in Europe. Translation was quite an important academical conduct and thought of very seriously in sense of reaching to Classical Greek Scientific Thought. "Translation was vital for both spreading of Islam, and strengthening the young Muslim state. At that time, Arabs needed to expand their knowledge in every subject, apart from what they already had: poetry, religion and language. Moreover, medieval Arabic translation was not merely considered as means of transferring knowledge but also as a significant technique in helping Arab scholars to benefit from the translated texts in enhancing their own capabilities, and producing their own work accordingly" (Faiq, 2000: 93).

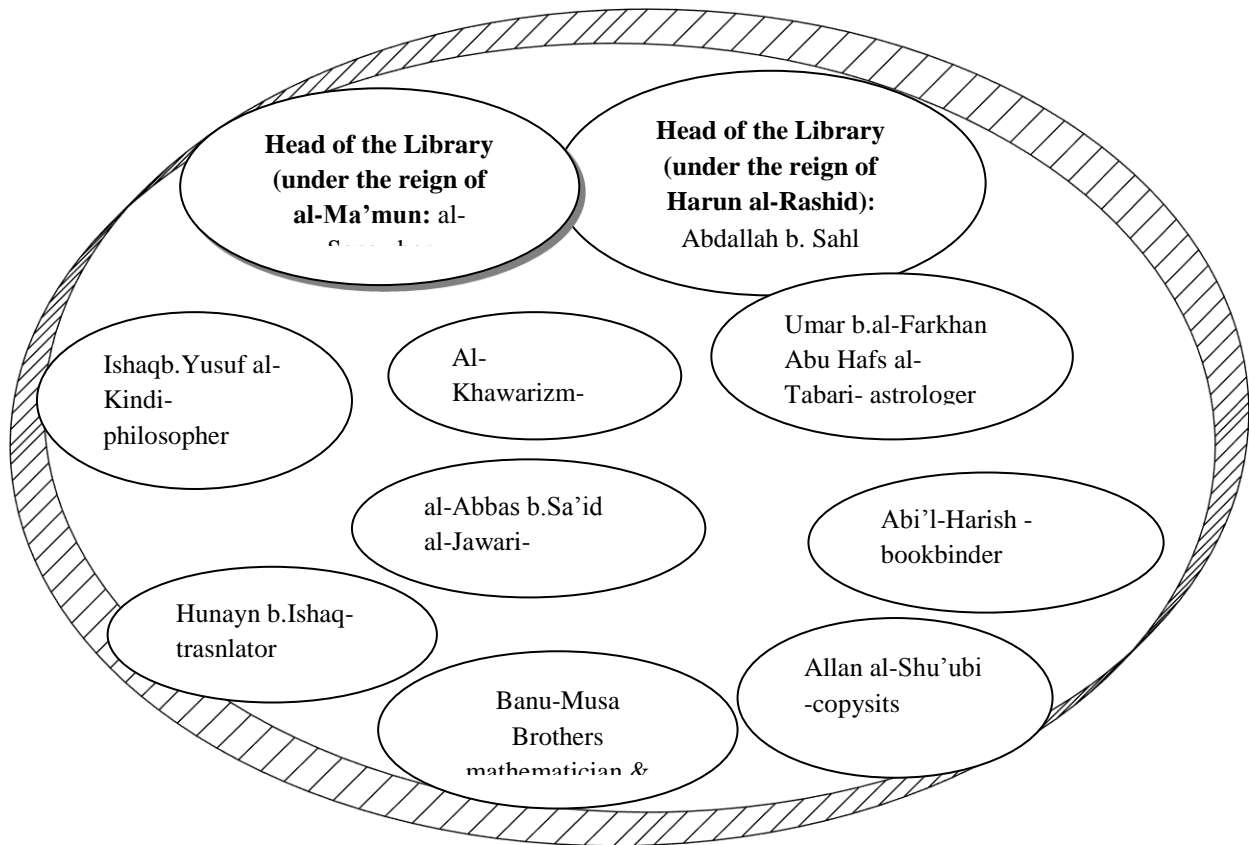


Illustration IX above: Some Prominent Names from the Times of Bayt Al-Hikma under the Reign of Rashid and His Son Al-Ma'mun.

The Muslims were merely interested in the translation of what they believed to be useful: philosophy –logic in particular- medicine, mathematics, astronomy and even plants were various areas of interest. They were not interested in the translation of poetry, history or drama.... Although the Arabs translated the work of the most famous Greek authors such as: *Aristotle, Hippocrates, Galen, Euclid, Ptolemy and Dioscorides*, they totally ignored the work of *Herodotus, Thucydides, Euripides and Sappho* ... It is believed that such omission was due to the fact that the latter names had their specialisations in different areas such as history, a subject which was not an area of interest for the Arabs. They were not interested in translating something they believed they had already mastered (Faiqh, 2004: 253).

The most prominent of the earliest madrasas is Egypt's *Al- Azhar* which was opened under the Fatimids in 970 C.E. The opening in Baghdad of *Nizamiyya* College in 1066 marked the beginning of the madrasa system. Many Nizamiyyas were opened afterward; the point of these madrasas and systems of madrasas in other regions was to create uniform opinion regarding Islamic law and THEOLOGY (Campo; 2009). In the tenth century, a Shi'i dynasty

called the Buwayhids—or Buyids—established its control over ‘Abbasid Iraq and Iran, with the Sunni ‘Abbasid caliph remaining as the nominal ruler. The Buwayhids retained their control until the eleventh century when they were beaten back by the Sunni Saljuqs, a Turkic-speaking people from Central Asia. In 969 C.E., another Shi’i dynasty from North Africa—later called the Fatimids—gained power in Cairo, Egypt and ruled the Sunni population until 1171 C.E. when they were defeated by the Ayyubids. One of the Fatimids’ enduring intellectual legacies was the establishment, in 972 C.E. of what has been called the first university in the world—the al-Azhar mosque-madrasacomplex in Cairo—to propagate Fatimid-Shi’i doctrine and learning. With the fall of the Fatimids, there was subsequently a concerted Sunni effort to roll back the Shi’i influence of the preceding two centuries. The madrasa became in many ways the *locus classicus* for waging this campaign of religious and intellectual reclamation. This is dramatically reflected in the transformation of al-Azhar into the foremost Sunni center of higher learning in the twelfth century, a position it enjoys still today (Afsaruddin, 2005). So the famous al-Azhar university was a functioning as a higher study center and also making Shi’ite propaganda which later would turn out to have Sunni point of view later when the Fatimids fell.

2.2.3.3 Famous Higher Educational Centers (Mekka, Cordoba, Medina, Kufa, Basra, Damascus, Cairo, Bagdad, etc.)

Cities for scientific research and experimentation very mainly muslim in essence like Baghdad, Cairo, Damascus, Samarkand, Shiraz, Bukhara, Isfahan, Toledo, Córdoba, Granada etc. Also there were many impetus to the emergence of science especially in these cities depending on their way of life, their position in world’s trade or in the world market at the time, social background and even in their diet as in the examples of exportation of spices and silk. These two have always been a central focus in world’s markets and a source of wealth. Or if we need to give another painstaking example which summerizes the importance of daily issuesin contributing to the expansion of trade in line with scientific development. In many of these cities soap was one of the market brands and perfume was produced thanks to the method of distillation which was a technique invented by Arabic scientists at the time. So this effected how science got into the daily life of the citizens of these cities and how they made use of science within their daily errands or professions which all contributed to the development of science especially in these cities rather faster than others.

The reason why important educational centers were established in oriental locations such as Belh, Junishaphur, Bukhara has always been interpreted differently. “The development of the Muslims’ imperial civilization turned cities such as Damascus, Baghdad, Cairo and Cordoba into great cultural and commercial capitals, kept in regular contact through expanding networks of land and sea routes. ... By the twelfth century the civilization of Islam was sophisticated far beyond that of Christian Europe” (Turner, 1997: 27). Perhaps the most prominent name associated with the spread of madrasas, particularly in Iraq, was Nizam al-Mulk (d. 1092), the redoubtable Saljuq vizier (Ar. wazir, a “minister”). His name is associated with the famous Nizamiyya Academy in *Baghdad*, which boasted the presence of famous scholars like Abu Hamid al-Ghazali (d. 1111). In the twelfth century, the Zengid ulema Nur al-Din ibn Zangi and the famous Ayyubid ruler Salah al-Din ibn Ayyub (known as Saladin in the West) were prominent patrons of madrasas in *Syria and Egypt*. Henceforth, the madrasa, a higher institution of learning comparable to a modern university, became the principal venue and vehicle for the transmission of religious education in the major urban centers of the Islamic world, such as *Baghdad, Cairo, Damascus, and Jerusalem*. In fact, as discussed below, the madrasa is very likely the precursor of modern colleges in the West, both in terms of structure and curricula.

Daily life in the medieval Islamic world revolved around its markets and its mosques- two institutions essential to the hussle and bustle of daily life in every city any town. For it was in the local markets that goods were manufactured and food was bought and sold. In the major cities such as Damascus, Baghdad, Cairo and others everything imaginable from all over the Abode of Islam and beyond could be found as well. The main congregational mosques- the center of official religious and political life- wa always located within or next to a market. In those instances where congregational mosques were constructed in new garrison towns such as Basra and Kufa in new palace cities such as Baghdad and Cairo...” (Lidsey, 2005). Basra and Kufe became the most dynamic, hustling and lively scientific and intellectual centers of Islamic world at the time.

Arab Scientists such as Averroës, played a key part in the development of world science during the middle ages, not only through their own contributions, but also as preservers and transmitters of knowledge. In centers as far-flung as Baghdad and Damascus in the Middle East, Cairo in Egypt, and Cordoba in Spain, Arab thinkers had enthusiastically adopted the Greek scientific tradition and preserved the writings of Aristotle, his colleagues, and disciples, and many other Greek thinkers. In the 12th and 13th centuries, many works of Greek science

came into the hands of Western European thinkers during contacts between Muslim and Christians in Spain and Sicily and were then translated from Arabic to Latin (Spangenburg & Moser, 2009: 35). In Umayyad Spain, the great capital of Cordoba was, like Cairo in Baghdad, a center of higher learning that drew students and visiting scholars from all regions of Islam. Cairo's al-Azhar, founded late in the tenth century as a training school for preachers, later contained mosque schools (madrasa) and still flourishes today (Turner, 1997: 30).

2.2.3.4 Scientific-Social Background Of Arabian Society At The Time

Despite the fact that there were many nations which affected the Arabic culture deeply during different contexts at different periods such as *Greek, Indian, Barbary, Turkish or Persian*, etc., there was a solid fact that the Arab have always accepted the other nations as "mevali" which meant they never truly accepted other nations though they were Muslims, too.

The social web in an Arabian society before Islam was basically patriarchal and tribal. This strict structure couldn't be changed and instead, an Islamic style which softened the socio-cultural body which was mainly clannish was presented. The people of Umayyad can roughly be divided into two as The Arab and Non-Arabs. Thus When the Arab faced with other nations during the times of war and met with other nations who accepted Islam, they called them "mevali" which meant "the other." While Arabs were seen qualified to be in the prior and important political, managerial or legislative offices, "mevali" was overlooked and rarely got those kind of positions. As for Andalusian scientific background at the time, we could mention a paragraph from Ziya Pasha. Ziya Pasha, who is an Ottoman writer and translator lived in 1800s, states in his book *The History of Andalusia* that at the time of Abder-Rahman III, each branch of science had its own academy and the seekers of that science used to attend the academy to share it and expand his knowledge. Apart from scientific qualities no other quality such as family roots, blood or officialdom would be enough to attend to these academies.

As for the specific centers in Spain the ruler al-Hakem established The University of Cordova in the Abder-Rahman III mosque which has evolved to be one of the best and leading educational centers at the medieval era. Granada and Murcia were also famous for scientific activity and the system of madrasas they had. Following that in al-Azhar university emerged and the Nizamiyye Madrasas came into the existence making Baghdad one of the most popular scientific centers of the time.

Within the Arabic society there was a group of scholars that were called *ulema*. About that Al-Azmeh writes “This body of specialists is generically known as the ‘*ulama*,’ the possessors of ‘ilm, science, a term variously translated as scholars, doctors, savants, divines. They were indeed the carriers of the literate memory of Arabic culture, but the fact that a generic name is applied to them has obscured the fact of their differentiation, which is far more important and historically relevant than their common nomenclature” (1986: 251). “Court patronage and emergence of a group of *ulema*, religiously educated scholars who completed their education by travelling from one center of learning to the next study under renowned *shaykhs*(religious teachers) contributed to the development of a distinct body of Islamic learning” (Adas, 1993; 45). Information about the scholarly and bureaucratic positions held by the ‘ulama’ for whom we have clear association with the madrasa provides an insight into the variety of career options open to the group under review. The data are arranged in four professional categories, each subdivided into several types of positions: a.academic professions in the endowed madrasa (category I); b.legal professions (category II); c.religious functionaries (category III); d. bureaucratic professions (category IV) (Ephrat, 2000: 104).

Scientists and politicians must be distinguished, though they might have involved in both. For example; that for Umayyad period it is not possible at all to talk about such a circle of ulemas who were clearly defined, formally named an identity and constituted a specific social group. What we mean by the expression “ulemas at the period” isn’t men of science who dealt with politics but with the very science itself. Names such as Zeyd b. Ali is not considered as scientist but a political character or a politician of the time.

Shi’ites also constituted a part of Arabic culture and Arabic education at the time and they were highly located in Egypt. Apart from the Al-Azhar which was founded in 972 as originally a mosque “The first known Madrassa is said to have been established in 1005 AD by the Fatimid caliphs in Egypt. This Madrassa taught the minority Shi’ite version of Islam. It had all the ingredients of an educational institution. It had a library, teachers for different subjects were appointed and students who were admitted were provided with ink, pens and papers free of charge (Anzar, 2003).” Muslim education was geared to the new Orthodoxy by the founding of madrasas, where the religious sciences alone received intensive study (Saunders, 1965).

2.3 Lecturers

In Arabic, *madrasa* means the place where students study or the building in which students live and study. The academicians within these academical institutions are called *muderris*. (Kazıcı, 2010: 302). According to Anameriç & Rukancı (2008), in the *madrasa* system, there was a hierarchy between both the students and the lecturers of a *madrasa*. Students' education was differentiated according to their levels and they were educated within a graded system. Depending on the level of education they got students were named as '*talebe-i ulum* (sufta or softa),' '*danishmend*,' '*mulazım*.' First one was highly used among public while the second one was used to refer to the graduates of *madrasas* and literally meant "the man who has the 'ilm,' science. The last one was also used to refer to *madrasa* graduates with diplomas. As for the lecturers within the body of *madrasas* there were also various titles which corresponded to different educational responsibilities. Again, Anameriç and Rukancı state that lecturers were called as '*muid*,' '*müfid*,' '*müderris/dersiam*.' There were also some names which were used for unexperienced lecturers such as '*molla*,' '*allame*,' '*kari*,' '*muhaddis*' and '*fakih*' each of which again corresponding to different activities within the educational structure of *madrasas*.

About the educational staff of *madrasas* Kazıcı (2012) also makes a grouping depending on the responsibilities within these educational institution. He retells the ranks as *muderris*, *muid* (*assistant*), *mufid* (*assosiate prof.*).

The primordial function of the license to teach, the doctorate, was a religious one, indispensable for the monopoly on the authority for the exclusive orthodox teaching of the guilds of higher learning. This license, at its origins in classical Islam, had a double function: first, that of teaching Islamic traditionalist theology; secondly, that of issuing authoritative theological opinions to the Muslim faithful soliciting them. The two-fold function was secured by a double license: one based on the doctor's competence to teach in the guild colleges; and a second, based on his jurisdictional authority for the determination of orthodoxy in the opinions he issued to the faithful. The Arabic title of this license made this double function explicit. These Professional teachers in Islam had a triple designation, as their later counterparts did in the Christian West: doctor (*mudarris*), master (*faqih*) and professor (*mufti*) (Madelung & others, 2003: 60). The *madrasas* had other functions besides teaching, and not all scholars were associated with them. Most importantly, Islamic education, or the transference of knowledge, was a personal matter between the teacher and his student, and not an institutional process performed through the *madrasa*. The diploma that the graduate received was issued not by the in which he studied but by his teachers, who granted him an

ijaza, a license to teach the book or books that he had read under his teacher's guidance. The huge numbers of biographies of 'ulama' do not mention the madrasas where the scholars studied but list the names of their teachers (Hatina, 2009: 26).

As for the money professors gained by teaching it was determined at the beginning of the course, in advance and students agreed on the money to be paid to the professor. Even after the rise of madrasas lecturers were still admitting fees from students which was very highly disputed at the time. Students wouldn't be accepted to the classes before they paid the fee. But the income of the madrasa professor would generally be dependent on the students' parents' wealth. So if a professor was teaching to the students whose parents are from a high class, he would gain well.

2.4 Students

In madrasas students were generally treated in different groups on different criteria like:

- Their educational levels – this criteria signified their learning levels
- The stipends they get from the madrasa- this one signified the amount of their stipends
- The criteria of being foundationer- was related to being graduate or undergraduate
- Their participation in the education-signified being a working student.

To sum up the data about these topics provided by Makdisi (1981) we should take the levels of learning into consideration and they are:

- Beginner (*mubtadi'*)
- Intermediate (*mutawassit*)
- Terminal (*muntahin*).

Among these terminals were the ones who had right to speak more when compared to other students and they would take the leads in classroom discussions. They can be thought of as "senior" students in universities today. The students in this category were "working students" or "auditing students."

Madrasas offer a free education, room, and board to their students, and thus they appeal to impoverished families and individuals. On the whole, these religious schools are supported by

private donations from Muslim believers through a process of alms-giving known in Arabic as *zakat*. The practice of *zakat* — one of the five pillars of the Islamic faith — prescribes that a fixed proportion of one's income be given to specified charitable causes, and traditionally a portion of *zakat* has endowed religious education. Almost all madrasas are intended for educating boys, although there are a small number of madrasas for girls (Blanchard, 2008). This is what financially support madrasas in muslim world. It wasn't very different in medieval era, either.

There was a different kind of relationship and different form of social distance between the alim and the students or in other words “disciples.” About that Berkey quotes from Makdisi (1981) in his *The Formation of Islam*: “Teaching took place in “circles” (halaq, sing, halqa) centered on a particular shaykh, circles which might be held in institutions established for the purpose, but which also might transpire almost anywhere else. What mattered was not the venue but the close personal bond between teacher and student, a relationship which carried reciprocal obligations and which was known as *suhba*. As it is used in texts describing the transmission of knowledge in medieval Islam, *suhba* can indicate both the concepts of “companionship” and “discipleship,” and thus presumed both an almost familial intimacy (teachers were often likened to a father) and also hierarchy, the hierarchy of age and status as well as expertise (2003: 225).

Students must be honest and careful attendants to the classes otherwise they won't deserve the stipends madrasa gives them. Apart from being wrong in his manners, talking with another student or ignoring Qur'an recitations during class time or not listening to what is being told commits slander. He not only neglects his duty but also prevent his friend from doing his. Makdisi (1981) writes that during class times, proffessor would assign two kinds of students one of whom is a keeper of attendance for law students while the other is attendance- keeper. The former one used to be assigned with detecting which students are missing or if they are present and ready for the class and determining why they didn't come that day and taking a note of the reason. So we can see that attandance was highly considered during the course of the teaching by the madrasa system.

There were some common beliefs about how a student should handle his learnings ethically. About that Rosenthal writes: “Teachers must not be too severe, and students must not be bashful. According to Luqmân, a dignified quiet on the part of scholars makes people willing to learn. Loquaciousness repels them. On the value of asking questions in order to gain

knowledge: “Put questions like a fool, and store up information like a genius.” Six verses ascribed to Ibn alAlrâbî. Another verse, elsewhere ascribed to Bashshâr b. Burd, which runs:

The cure of blindness (ignorance) is prolonged questioning.

Blindness materializes through prolonged silence in the state of ignorance” (2007: 258).

The fact that the madrasa is scarcely mentioned in the literature of the period, as opposed to the many testimonies of study circles either outside the madrasa or overlapping it, and the centrality of the teacher-disciple relationship in the transmission process both testify to the marginality of the madrasa, indeed of any form of organization, in the culture and society of the learned. Teachers came to the madrasa in order to obtain an official post and its accompanying salary, students in order to receive stipends and living quarters. This is not to imply that madrasas were not educational frameworks, but that the world of learning took place both inside and outside the new “law colleges,” according to its customary forms. Created as a means of safeguarding “ture” religion and guaranteeing financial support to the religiously learned, the madrasa was, in other words, merely a new and more institutionalized form of organization into which the essential cultural and social practices were poured (Ephrat, 2000: 85). So from these sentences we can think that students studying in madrasas were getting financial support from these institutions.

Students weren’t supposed to stay in a specific madrasa and complete their education fully within the framework of that madrasa. They could go to some other madrasas and study with some other ulamas on some other books. About that Hefner writes “... it was once common for advanced students to wander from one teacher to another, staying long enough in one place to master a kitab under the guidance of a scholar renowned for his expertise in that text. When a teacher deemed a student proficient in the text, he made a ritualized statement or, less commonly provided a certificate known as the ijaza” (2009: 60-61). As we have mentioned above *ijaza* could be thought as the ticket of qualification for an advanced student to be able to start to work with another ulama on another topic that could deepen his knowledge of science. Here we can get the hint that an ulama’s sentence that was uttered or produced only verbally were valid enough for other ulamas and they were highly respected within the “*jamia*” because the writer underlines the fact that it was only “less commonly” to issue a certificate of ijazat at the time.

There wasn't a certain age for students to be admitted to madrasas but they were expected to accomplish basic Islamic law with their professors to be able to go on with their education. Considering the examples Makdisi gives in his book *The Rise of Colleges* (1981) we can deduce that it was generally between 14-16. To talk about the accommodation of both students and the lecturers we can include that pensions were available almost in every madrasa at the time so accommodation was not a problem for neither students or the lecturers at all. Makdisi, again, in his same work mentions some records which tells that the sons of some wealthy families could rent houses in which they could hire slave girls for serving them or that these wealthy ones even could borrow from their teacher until their new cheques arrived from their families. So apparently the ones accommodating in the madrasa during their education were the ones who had ill economies or the ones with no family at all.

2.5 Curriculum (Also: Liberal Arts in The Madrasas and Other Topics in Islam as Higher Study) and Techniques & Class Procedures & Holidays.

Learning in medieval Islam was divided into two categories: "Sciences of the ancients" '*ulum al-awa'il*' and Musliman Sciences. The former comprised sciences, of foreign and pre-Islamic origin, inherited from antiquity such as mathematics, astronomy, geodesy, physics, medicine, grammar, philosophy, etc. and the places where these sciences were taught was called Dar al-Ilm. The latter comprised the various branches of theology, such as the study and exegesis of the Qur'an, ritual and canon law, and the Traditions. These sciences formed a vast body of completed doctrines, a huge collection of religious, moral, judicial and social precepts, depending on the suna, or orthodox custom in religious matters (Creswell, 1922: 1).

Religious education was based upon what is termed in Arabic as al-'ulum al-naqliyya (lit. the "transmitted sciences"), which consists primarily of the Qur'anic sciences, the Hadith sciences, and jurisprudence (Ar. fiqh). In addition to the "transmitted" or religious sciences were al-'ulum al-'aqliyya (lit. "the rational sciences"), which included logic, philosophy, mathematics, and the natural sciences. The rational sciences were also termed the "foreign sciences," or "sciences of the ancients," pointing to their largely classical Greek provenance (Afsaruddin, 2005).

About these complex classifications Ferngren writes "...terms like 'ulum al-'arab (the sciences of the Arabs), al-'ulum al-naqliyya (transmitted science), and 'ulum al-din (religious sciences) were used for linguistic and religious disciplines, such as grammar, lexicography,

religious law, Qur'anic commentary, and philosophical theology” (2013: 76). This was in contrast with idioms such as “‘ulum al-aw’ail or ‘ulum al-qudama’ (*the sciences of the ancients*), al-‘ulum al-qadima (*ancient sciences*), al-‘ulum al-nazariyya (*rational sciences*), al-‘ulum al-‘aqliyya (*intellectual sciences*), and al-‘ulum al-falsafiyya (*philosophical sciences*). *These terms emphasized the pre-Islamic origins of science and philosophy, their rational character, and their universality...*”

Along with Islamic sciences students also studied Liberal Arts in madrasas. From the literature we can quote about like following quotations:

The madrasa as an institution dedicated to the teaching of one or more of the four mahdabs, or schools, of Sunni Islamic jurisprudence, often in conjunction with the ancillary Islamic sciences, including Arabic grammar, the study of quranic exegesis (tafsir) and Prophetic Traditions (hadith) alongside more secular disciplines such as history, literature, rhetoric, mathematics and astronomy, began to proliferate in the eastern Islamic lands from the fifth century/eleventh century, although its origins are traceable as far back as the early fourth/tenth century in eastern Iran (Mortel, 1997: 236). It is unclear when the ‘ancient sciences’ began to move into the madrasas, mosques, and hanqahs. At least in the twelfth century some of them can be found in these institutions in Seljuk Anatolia, ‘Abbasid Baḡdad, Artuqid and Zangid Northern Iraq, and ayyubid Damascus and Cairo. Other areas such as Iran saw a similar development, if not during Seljuk rule, then under their successors, the Ilhanids. This move took three forms-copying manuscripts for the library, teaching and studying either within the physical confinement of such an institute or with a madrasa teacher elsewhere, and the donation of special chairs for particular disciplines (Halm 1997: 71). A science academy was established during the tenth century at Cordoba, and another in Toledo. Generally however, advanced education in science was carried out on a personal rather than an institutional scale, within the confines of royal courts and royally sponsored establishments such as observatories and hospitals. A young man seeking high-level education in the sciences had to wait until he had progressed beyond elementary school and the madrasa, where he could receive instruction in basic mathematics. University curricula might include advanced mathematics, some astronomy, medicine, and natural sciences such as biology, but these subjects were treated largely within a framework of Qur’anic fundamentals and interpretation as well as principles of religious law (Turner, 1997: 32).

So if we need to draw a chart for curricula in first few centuries on islamic science to be categorized as grouped by Ibn-i Khaldun, Farabi and Ibn-i Sina can be depicted as:

Chart 7: Diversion of Sciences in Madrasas

<i>Traditional Religious Sciences dealing with</i>	<i>Phylosophical (Liberal) Sciences dealing with</i>
Examination of Qur'an	• Aristotelian Logic
Reading of Qur'an	• Physics
Tradition	- Agriculture
Jurisprudence	- Magic
Dialectics	- Alchemy
Theology	• Metaphysics
Mysticism	• Mathematics
Philology	- Arithmetic, Calculation, Algebra, Commercial Transactions, Appotioning Of Inheritances, Geometrical Sciences, Surveying, Optics, Astronomy (subdivided into tabulation and astrology)
Interpretation of dreams	• Music (was considered mathematical science at the time)

The madrasas, which authors have sometimes depicted as being the equivalent of European colleges, became 'institutions' at that point, since their activity was closely regulated and structured, with a fixed curriculum, fixed location, regular hours, instructional methodology and graduation. This explains the closer attention which State authorities paid to higher education as a powerful social and political tool, in contrast with the practice of earlier centuries. The growing State involvement in staffing, curriculum and financing of the madrasas gave rise to the theory that they became a State agency, serving as vocational schools to train people for the 'orthodox bureaucracy' (Boyle, 1968: 216).

The static curricula and dated pedagogical techniques, such as rote memorization, used in many quietist schools may also produce individuals who are neither skilled nor prepared for the modern workforce. Defenders of the madrasa system view its traditional pedagogical approach as a way to preserve an authentic Islamic heritage. Because most madrasa graduates have access only to a limited type of education, they commonly are employed in the religious sector as prayer leaders and Islamic scholars. Authorities in various countries are considering proposals for introducing improved science and math content into madrasas' curricula, while preserving the religious character of madrasa education (Blanchard, 2008).

From the writings of Maksidi (1981) we learn that sequences of courses or the programme of the curriculum was highly dependent on the founder of institution. It is a data that enables us to speculate that every individual madrasa was free in organizing its teaching programme. He then gives a moderate *sequence of the programme* like:

Qor'an > Hadith > The Qor'anic sciences like exegesis and variant readings

sciences of hadith > the two usuls: usul ad-din & usul al-fiqh >

mahdab > khilaf (divergences of the law) >

and jadal: dialectic.

Maybe, using the word curriculum would not be the exact expression for attending to the teaching material of medieval Arabic Scientific Thought. Because madrasas were mainly under the control of certain ulemas and despite the fact that they taught the same topic, logically one could not guarantee that they used a standard curriculum and table of topics in every madrasa at the time. Curriculum of madrasas were essentially based on Islamic sciences and Islamic teachings of the ulama at the time. But they also included philosophy in their curriculums.

Typically, a lecturer would dictate long quotations to his students and then he would comment on meaning, content, and style (Campo, 2009: 446).

In his study named *Ihsâ'u'l-Ulûm*, Farabi counts the main fields of study which was mainly focused within madrasa systems:

1. The Science of Linguistics: Especially grammar and some significant linguistic measures
2. The Science of Logic: Mainly included the eight chapters of Aristotle's *Organon*

3. Applied Sciences: Topic such as calculation, music, weights and measures, etc.
4. Nature and Theology: The principles of natural philosophy, simple objects, emerging & disappearing of these, plants, animals, etc.
5. Civic Sciences and its sub-brances: Only included *fiqh and kelam*.

Kazıcı (2012), writes that from the very beginning Qur'an, Hadis and Fiqh was studied in madrasas. And also it is known that especially nahiv, a subject similar to syntax was dealt within the body of madrasas. He also states that Ibn-Khaldun mentions in his Mukaddime all kinds of Islamic sciences and divides these into two groups as *ulum-i nakliyye* and *ulum-i tabiiyye* the former of which largely based on the very words of Allah.

There were many madrasas already by the time of Abbasid Empire and the techniques varied in teaching. But there were some basic ones. According to Anameriç & Rukancı (2008), in madrasas there was a *deductive approach* which was mainly developed by authoritative scientists and philosophers at the time. The problems were tried to be solved based on these authorities. This approach involved

- **Recitation&Repetition:** was studied to improve and enhance memory and the people with profound recited knowledge were called *bahr'ul ilm* which meant *the sea of knowledge*.
- **Comprehension:** was exercised to support the former techniques
- **Deliberation:** was realized by question-answer method.
- **and Noting Down:** it was important to note down what you have recited. With the spread of books that were studied within madrasas this method started to fade away.

Makdisi (1981) follows almost the same pattern while introducing the methodology of learning. His presentation follows like this:

- **Memorization**
- **Repetition**
- **Understanding**
- **Mudhakara-** a kind of reasoning on the cases between the members of the majlis
- **and the Notebook-** note-taking process

“The syllabi of the institutions of higher learning included Arabic language and literature, Persian, Qur'an, Hadith, Fiqh, al-Kalam, Logic, Astronomy and Mathematics. In this period

natural sciences and various schools of philosophy were not included in the syllabi but later on the Mughals these subjects and many more secular subjects were added” (Alavi, 1988: 9). Many more secular sciences here might be interpreted as Liberal Arts: “Compared to Jewish Yeshiva Schools and Christian scriptural schools, madrasas concentrated on rote memorization of the Qor’an, knowledge of correct ritual practice, and the deduction of legal points from the scriptures (fiqh), and, in fact, they eventually produced bodies of law. Philosophy, astronomy, mathematics were also taught in medieval Iranian madrasas, but opposition grew in Arab lands during this time against the study of philosophy, and, after the fourteenth century, Arab madrasas instead emphasized grammar and rhetoric as well as religious law” (Campo, 2009: 446).

Once a student had finished reading a book with a particular teacher, he requested a certificate, an *ijaza*. This document attested to the fact that a particular student had studied a particular book with a particular teacher. A more specialized form of certificate was the *ijaza*, entitling the student to act as a mufti and therefore exercise *ijtihad* or teach a particular book or subject. An *ijaza* sometimes took the form of an elaborate listing of the whole chain of transmission from teacher to student over many generations of intellectual ancestors. It is important to note that in the Islamic culture of learning, the transmission of knowledge required not only reading and learning from books but especially personal guided training, commentary, and interpretation by a reputable scholar (Cosman & Jones, 2009: 148). No medieval madrasa had anything approaching a set of curriculum, and no system of degrees was ever established. Indeed, medieval Muslims themselves seem to have been remarkably uninterested in where an individual studied. The only thing that mattered was with whom one had studied, a qualification certified not by an institutional degree but by a *personal license (ijaza)* issued by a teacher to his pupil. Whether lessons took place in a new madrasa, or in an older mosque, or for that matter in someone’s livingroom, was a matter of supreme indifference. No institutional structure, no curriculum, no regular examinations, nothing approaching a formal hierarchy of degrees: the system of transmitting knowledge, such as it was, remained throughout the medieval period fundamentally personal and informal, and consequently, in many ways, flexible and inclusive (Berkey, 1992) (opt. cit.. Hefner & Zaman, 2007: 43).

Makdisi (1981), in his book *The Rise of Colleges* writes about the classroom procedure in madrasas. There were many courses of action some of which symbolized academical attributions. From the hadith samples he quotes we can deduce that

- ✓ The more a scholar advance in the science he studies, the closer he sits to the professor in the learning circle.
- ✓ There were ranks between students. Some of them were seen senior, seen privileged to sit closer to the professor and they had some kind of authority over the others.
- ✓ All the classes would be initiated and terminated by prayers.
- ✓ There were some routine procedures professor had to apply like monitoring the students memorizing the Qur'an and the content of this procedures was determined by the waqf deeds.
- ✓ Advanced students were to help the professor to carry out classroom tasks. For example, some students called "müntezil" would repeat what the professor said loudly so that students sitting at the back could hear what he said.
- ✓ Most of the classes would start very early even with the rise of the sun (also a time for the first praying of the day) and went on with different types of classes.
- ✓ Some classes used to be carried out with mixed level classes in which students with higher level could help the novices or the students with lower level of proficiency at the subject-matter in question.

As for the teaching days in madrasas we could state that the teaching days generally depended on the waqf deeds again. Paid professors would come to teach on the days the madrasa required and we know that 3 days of the week weren't the days for teaching. Makdisi (1981) says that these days were *Tuesday, Friday and Saturdays*. He writes "Besides Tuesdays and Fridays, it appears that a whole month was designated as a holiday, most likely Ramadan, the month of fasting." Mahamid (2012) in his article named "Study Days and Vacations in Madrasas of Medieval Syria" writes

Sources related to this period show that procedure was quite common in Ayyubid and Mamluk Egypt and Syria. The students in most of the madrasas studied on Sundays and Wednesdays, but because of the waqf conditions, it is noticeable that the study days and holidays were not uniform or consistent, but varied from institution to another, both according to the waqf conditions and the size and importance of the educational institution. On the other side, information collected from a review of the sources shows that the students were not scheduled for classes on Tuesdays and Fridays. Additionally, there had been longer vacations related to religious events and days, and the yearly big vacation known as "*al-Batala al-Kubra*."

2.6 Financing the Madrasas

Main objective of an endower was to become closer to God, prove his generosity for Islam and make a good religious deed it was called “*qurba*.” Because this is what God, Islam wanted people to do: share with the poor or in needs. So wealthy people or the ones who wanted to spend their money or property would endow it to the institutions called *waqf* or bestow them to the ones in need. These were the institutions which were established by wealthy elites or caliphs mostly who were highly interested in the present science. So students didn’t need to be wealthy or have their own financial power to involve in scientific environments all they needed to do was to prove themselves about being well-qualified.

When the madrasas were introduced in the 11th century and when the State started to gain more control over madrasas using them ideologically as centers of propaganda things started to change. Shatzmiller (1993) writes that the introduction of the madrasa in the 11th century altered the occupational structure of the educational system as a whole. The change affected two particular aspects of this group, supervision and financing.

Financing for the madrasas originated through private initiative and remained so during the medieval period. The higher education given in the madrasa or the mosque, was financed from a variety of sources but most frequently from *awqaf* revenue. It has also been suggested that, because the higher educational institutions, such as madrasas, fell within the sphere of charity, their various regulations interfered with free thinking in Islam. In other words, the teachers in madrasas and mosques were heavily dependent on private donors for their livelihood, donors who effectively dictate both the level of remuneration and the administration, and who could also dictate curriculum and preventing teachers from pursuing their own choice of curriculum, and books, or selecting their own students (Shatzmiller, 1993: 312). Once made *waqf*, the property became inalienable. It could no longer be the subject of any sale, disposition, mortgage, gift, inheritance, attachment, or any alienation whatsoever, with one exception: it could be exchanged for equivalent property, or sold, subject to mandatory reinvestment of the price in another property (*istibdal*), if the founder had so stipulated in the deed of foundation, or if the original property fell into ruin or ceased to be productive so that the objects of the *waqf* could no longer be fulfilled (akt. Makdisi, 1981)

When madrasas had financial problems or when they were not able to survive, they could easily change forms. For example a madrasa could be a mosque and the lecturer then could turn out to be the preacher of that madrasa. About the Chamberlain (2002, 79) quotes from Jazari’s example which depicts a similar incident in which in 697/1297-8 the lecturer,

Mu'azzamiyya becomes the preacher of the “formerly madrasa and newly mosque.” And depending on the income coming from the endowment, the mutavalli-director- of the madrasa could decide on enlarging the student population or enlarging it. Because he had to calculate on the stipends and other expenditures of the institution.

2.7 Architectural Structures Of Madrasas

In Islam, knowledge meant quite the same thing with worship. Information and wisdom on fiqh, hadith, jurisprudence enabled a muslim to carry out his islamic conducts rightfully. So it was also about worship. Looking at the madrasas, learning and praying were always carried out at mosques which eventually caused to have certain characteristics related to educational and religious life. After a while they became distinct in sense of place and quality. William (2007: 9) writes “The early madrasa building offered special open and closed teaching halls. The form and function of the early madrasas were similar to those of the mosques.” So it is not difficult to observe the process madrasas and mosques influenced each other during their evolutions for a while.

The confluence between the official status of the madrasa and its role as a pious and educational institution is confirmed by its architectural form, which seems to draw equally on palatial and religious architecture, with some modifications necessiated by specific functional requirements (Tabbaa, 1997: 129).

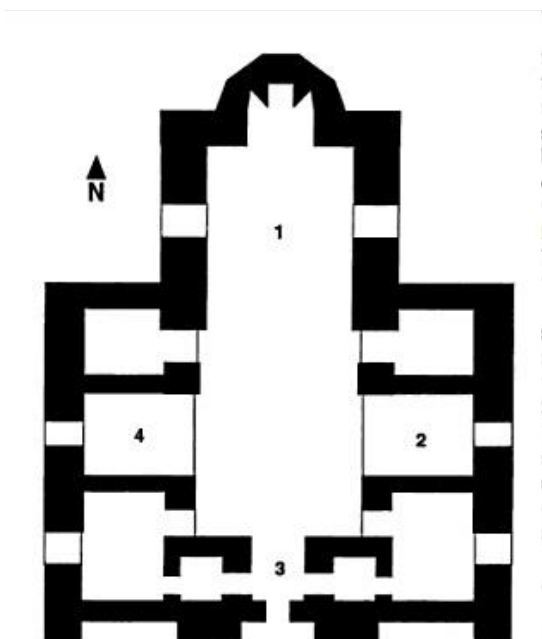
The most common formal prototype of the early madrasas is the four-iwan plan... Although it is traditionally thought that madrasas provided sleeping and working accomodation for students, the extant examples show that this was not a rule and it is only later on the progress line of madrasa buildings that student facilities became accepted parts of a madrasa design (Williams; 2007: 9). Madrasa included a small mosque within its surrounding; it was a building built for both teaching and learning. Apparently it was highly used at the time was *four-iwan plan* or in other words *crucified plan* and it had a fairly long history because it seems to have been transmitted from civil to religious architectural buildings. About that evolution from civic architecture to the religious one we can take an excerpt from Kuban's (1985) book *Muslim Religious Architecture* in which he writes “Four-Iwan residential madrasa is both early and widespread. In excavations at Lashgari Bazar, near Ghazna, a palace of the Ghaznawid sultans with four-iwan courtyard had been excavated. This cruciform plan seems to have been well established also in Egypt for residential buildings. At Fustat,

excavations have uncovered a group of eleventh-century houses which with minor variations have each four iwans around open courtyards.” So from these instances we can deduce that four-iwan plan was highly used even before the emergence of madrasas and it evolved to be used in madrasas by time.

The classic madrasa consists of two-storeys. It has classrooms, service rooms, and a small *masjid* on the first floor and students accommodate upstairs. In the cruciform plan there is a square-shaped courtyard and also there are four halls, they have large, arched openings named iwans. In a mosque, the greatest iwan faces opposite the qibla wall and it is directed towards the holy city, Mecca; this iwan serves as a *masjid*. “Again, as in a mosque, the wall facing Mecca also has a prayer niche, or *mihrab* A madrasa building used to have a courtyard, a prayer hall and small rooms where students lived” (Singh, 2002: 17).

Illustration X below: A Representational Plan of a Medieval Madrasa.

This picture is taken from the book *Traditions in Architecture: Afrika, America, Asia and Ocenia (2001) Figure 10.3, s.237. Plan of a typical four-iwan madrasa- a cruciform plan with a central courtyard. Iwans are stiated in the transverse and longitudinal axes of the cross plan. A madrasa is the college of jurisprudence of the traditional Islamic university. Traditionally, the madrasa, like a moque, is oriented toward Mecca and has a *mihrab* (prayer niche) to indicate the direction of prayer. Iwan (1) is the largest and functions as a chapel. Iwan (3) is a vestibule, while iwans (2) and (4) serve as classrooms.*



Creswell (1920) in his famous study *The Origin Of The Cruciform Plan Of Cairene Madrasas* quotes from Van Berchem about the structures of the madrasas at the time as “Having sketched the evolution of the madrasa as an institution, Van Berchem, then sums up the architectural type of the Cairene madrasa as follows “Amidst a crowd of secondary modifications, it offers a uniform plan, a square central court, flanked by four halls or liwans, forming the branches of a cross. This figure is inscribed in a square, the angles of which are occupied by the dependencies: halls, libraries, cells for the professors, students and servants, etc.”

That four-iwan concept was a result of four orthodox schools and in each of these iwans, a different school of Sunni islam used to be studied. About that Creswell writes:

Completed at the commencement of the year 662 the new college was inaugurated 5 Safar of the same year (9th December 1268). Four distinct classes were held in its four iwans; Sheykh Taqy ad-Din Muhammad ilm al-Hasan al-Hamawy, and the students of the **Shafeyite** rite occupied the **south** iwan; as-Sadr Magd ad-Din Abd ar-Rahman al-Halaby, Sheykh of the **Hanafites**, taught in the **north** iwan; the Sheykh Sharaf ad-Din 'Abd al-Mumin ibn al-Khalaf ad-Dimiatiy, commented on the Traditions (Hadith) in the **east** iwan, and the Kaqih Kamal ad- Din al-Mahally taught the seven ways of reading the Quran in the **west** iwan. There were therefore four iwans arranged in the form of a cross around the sahn; one could not wish for a more explicit description (1920: 39).

2.8 MEDICAL EDUCATION AS EARLY MEDIEVAL ISLAMIC STUDY

O'Mailey writes (1970) writes about medical studies in the medieval era as follows: “Soon after the triumph of Islam, caliphs and rulers gave further support and impetus for promoting the health professions. It was in the ninth century (3rd A. H.), however, that medical education and practiced in Islam developed into a well-defined and established profession, with solid foundations and a scholarly and secular outlook.” He then starts to count possible reasons in his own point of view the

- First of which is the transmission of intellectual legacies of earlier great civilizations. He mentions about the competent scholars in Iraq and neighbouring countries who translated the classcial writings from Syriac, Persian, Sanskrit, Nabataean, Coptic and

Greek into Arabic at Abbasid time. This turned out to be influential on medicine, pharmacy and the allied sciences.

- The second one, according to him, is the acceleration and abundance in locally manufactured good quality paper which facilitated writing and copying in Islamic studies. He adds that Arabs founded the first paper factory in 794 and everything related to paper production all turned to create the writing industry. This all spreaded from Iraq to Syria thence to Egypt, North Africa and Spain. This process of copying, cataloging, binding, selling and collecting of books contributed to various fields including the healing arts.
- According to O'Mailey the last factor is rise of medical and educational institutions- public or private- like libraries, hospitals and medical schools. The first hospital in the modern sense was established in Baghdad under the reign of al-Rashid (786-809). In the hospitals established in Abbasid and other cities worked some great physicians like Yuhanna b. (for ibn) Masawayh (d.855), al-Razi (d.925) and Sinan b. Thabit (d.941) practiced and also educated students. The hospitals spreaded in the Islamic world and medical scholars both healed patients and learned by way of bedside experiences.

The core of the scientific studies of medieval Islam was medicine. Socially, the medical profession had always stood high in the East: whereas in the Greco-Roman world doctors were often freed slaves, in Persia and Babylonia they could rise to be the prime ministers of kings. At the time of the Arab conquests the classical medicine of Hippocrates and Galen was being studied by Egyptian Greeks in Alexandria and Nestorian Christians at Jundi-Shapur, in south-west Persia (Saunders, 1965: 193). Arab interest in the curative science found expression in the Prophetic tradition that made science twofold: theology and medicine. The physician was at the same time metaphysician, philosopher and sage. In the curative use of drugs some remarkable advances were made at this time by the Arabs. It was they who established the first apothecary shops, founded the earliest school of pharmacy and produced the first pharmacopoeia. As early as the days of the Caliph al-Mamun pharmacists had to pass an examination. Like druggists, physicians also were required to submit to a test (Hitti, 1996: 141).



Illustration XI : Eye Drawing for Medical Research at the Time.

The picture is taken from the book *Avicenna (Ibn Sina): Muslim Physician and Philosopher of the Eleventh Century* (2006) by Aisha Khan on page 29. She writes “This diagram of the eye is from *Kitab al-Ashr Maqalat fi'l Ayn* (Book of Ten Treatises on the Eye), a work that presented the first anatomical drawings of the human eye.” The book was written by Hunayn ibn Ishaq al-Ibadi a Nestorian Christian who also studied in Bayt al-Hikma in al-Ma'mun's time.

The picture above shows how deep were the medical studies in Islamic science at the time. Compared to its counterparts it can be said to be way ahead of the European level.

A community of practising physicians, many of Nestorian Christian origin, emerged in Baghdad under the aegis of the caliph al-Mansur, and hospitals using Hellenic and Persian medicine became part of the infrastructure of the city during the caliphate of Harun al-Rashid. There were at least five by the late ninth century, as wealthy benefactors, including women, put up funds for their establishment and upkeep. Although Muslims often attributed the origin of the hospital to Hippocrates, hospitals were not a common feature of the Graeco-Roman cityscape, and the inspiration was more likely to have been the hospital in Sasanian Gundeshapur from which the first Abbasid court physicians came (Bennison, 2009: 90). The Abbasids promoted medical learning, and hospitals were established with permanent endowments. The first was built in the 800s in Baghdad under Harun al-Rashid. Within 100 years, there were five other hospitals, or *bimaristans*, in Baghdad alone. In addition to the general physicians, hospitals had ophthalmologists, surgeons, and bonesetters on staff. The government even sent doctors with travelling pharmacies to care for prisoners on daily basis (Khan, 2006: 28).

As in the case of other educational institutions at the time, it wasn't unusual for people to endow their houses or workplaces for medical purposes. For example, Pioreschi writes "[In 1225 Abd al-Rahim ibn Ali (al-Dakhwar)] endowed his house in Damascus, which was in the goldsmiths' market east of the date sellers' market, and made it a madrasa in which the art of medicine would be taught, first of all by himself. He endowed it with estates and several [other] places the income from which would suffice to maintain it and provide a salary for teachers and those who worked in it [i.e., the students]. He willed that Ali ibn al-Rahbi succeed him as the teacher" (2001: 388). He also writes curriculum for medical students was left to discretion of the teacher or to student himself if he is to study by himself. There were some recommended texts like the writings of Galen... Besides the books of Galen, dozens of others were recommended. Rhazes' *al-Hawi fit-tıbb* (the Continents) and Avicenna's *Kitab al-Qanun* ("the Canon") were considered particularly important; Al-Dinawari's (d. 9th century) *Kitab al-Nabat* ("The Book of Plants") was a favourite textbook and reference work in pharmacology. He adds that due to the high costs of these materials they preferred summaries of these books most of which was in question-answer form.

The Caliphs employed graduates of these schools as their personal physicians: members of one Nestorian family, the Bakhtyashu (a name meaning 'happiness of Jesus') served in this capacity at the court of Baghdad for several generations. Nestorian medical professors translated most of Galen and other authorities into Arabic, and by 900 the science of medicine was being assiduously cultivated by Muslims all over Islam. Razi was the first of their faith to acquire world fame through his vast medical encyclopedia, the *Hawi* (best known under its Latin title *Continens*), which was filled with long extracts from Greek and Hindu writers and displayed a knowledge of chemistry most unusual in that age. A similar work by Ibn Sina, the *Canon*, attained even greater celebrity and was treated for centuries as a kind of medical Bible. The branch of medicine most successively investigated was ophthalmology, eye-diseases being sadly common in the East, and the *Optics* of Ibn al-Haitham, court physician to the Fatimids in Cairo where he died in 1039, remained the standard authority on its subject till early modern times, being studied with profit by the astronomer Kepler in the seventeenth century (Saunders, 1965: 193).

Moreover, affected by historical contexts in countries where it was assimilated, Islamic medicine has acquired different socio-political characteristics. For example, it does not mean the same thing in India where it is called *Unânitebb* (lit. Greek medicine) and in Iran where it is termed *tebb-e sonnati* (traditional medicine). Perhaps the relationship between Greek

medicine and Islam is best illustrated in the term *tebb-e sonnati* that is used in Iran to designate Galenico-Islamic medicine, insofar as *sunna* (or *sonnat*) refers to the customs and manners or the sayings of the Prophet that are the foundation of Islamic law and jurisprudence. The term *tebb-e sonnati* therefore has a religious overtone and in this sense it is legitimate to include what are called *tebb al-nabi* (medicine of the prophet) or *tebb-al-a'emma* (medicine of the Imams), in “traditional [i.e. Galenic] medicine” (Ebrajimejad, 2004).

Medical ethics also looked to Greek antecedents. According to al-Shayrazi, one of the *muhtasib*'s responsibilities was to make physicians take the Hippocratic oath and swear not to administer harmful medicine to everyone, not to prepare poison for them, not to describe amulets to anyone from the general public, not to mention to women the medicine used for abortions and not to mention to men the medicine preventing the begetting of children (Benninson, 2009: 8).

2.9 EDUCATION OF GIRLS IN THE ISLAMIC THOUGHT

Looking at the literature on the education of girls/women in early and later Islamic periods some different views are existent. But it generally depends on the geography and educational school of the community we are talking about. The dominant view is that women's educational status or at least higher educational status was not taken seriously in the early times of Islam.

Qur'anic verses concerning the pursuit of knowledge are gender-neutral. A number of Qur'anic verses clearly express preference for those who pursue and possess knowledge. These include often cited ones such as ‘My Lord, increase me in knowledge’ (20:114); ‘God has raised those who believe and those who have been given knowledge by degrees’ (58:11); and ‘Say, are those who possess knowledge equal to those who do not?’ (39:9). Another verse (9:22) mandates that when armies go out for battle, the Muslim community should take precautions to ensure that a group of scholars remains to maintain and preserve knowledge for the community (Sayeed, 2011).

About that Groth summarizes what Beck (2003) and Obermeyer (1992) wrote “that the number of educated and elite Muslim women may well have been under-represented in history because, whereas males needed records of their education to establish social and

occupational status, females, whose social status was mainly dependent on male kin, had no reason to chronicle their educational experiences. It might also be argued that the low access to education among Muslim women can be partly attributed to the patriarchal system (subordination of young to old and of women to men) in societies that strongly circumscribe women's roles as domestic, not social, economic, or political."

Nashat & Beck (2004) write "Male children and young men, particularly in the pre-madrasa period prior to the twelfth century, could be expected to maintain, or have their male relatives maintain for them, some record of their education since this played a role in establishing their social status and might become professionally relevant if they became teachers or hadith reciters later in life. There is substantial evidence that compilers of biographical dictionaries used such personal educational memoranda in carrying out their projects." They go on questioning if the same was applied for girls and women. Their rhetoric answer is "Probably not. As individuals whose social status was dependent on male kin, whose public roles were highly circumscribed, and whose prospects for teaching outside the family were scant, what reason would they have had for chronicling their educational experiences?" As we can see, their educational records weren't even kept due to an insignificance of their future education. And we know that they weren't used to be enrolled in madrasas for religious education. But we know that they could get basic or primary education. "Although girls could attain an elementary education, they were not allowed into the religious colleges. They could obtain a higher education only in a limited way at the mosque, or, if they were from the family of a great male scholar, at home. Indeed, some of the most noted hadith scholars in medieval Cairo and Damascus were the daughters of famous male scholars" (Campo, 2009: 208).

Another reason for male dominance in the educational milieu in medieval Islamic world scholars, could be counted as girls' subordination to boys in sense of being domestic and not going out on their own, or without someone male from the household. Girls were seen as moral symbols and they were kept in houses and they weren't allowed to be as out as freely as the boys in medieval Islamic world. Outside world was not suitable for a young girl then, so attending to madrasa would mean her being socialized for that reason wasn't preferred by families who were strict in their religious conducts and way of life.

In light of this lacuna, it is worth summarizing the methodology of Sunni jurists with respect to the issue of women's education. In ascertaining whether women can pursue an education, what types of subjects should be studied, and the proper etiquette for students and teachers, Muslim scholars, such as al-Azimabadi have been guided by a number of factors. These

include Qur'anic verses and hadith, the precedents of early generations of men and women who interacted with each other in the pursuit of religious knowledge, and various local traditions and practices (Sayeed, 2011).

CHAPTER III

COMPARING THE GREEK AND THE ISLAMIC ORIGINS OF MEDIEVAL SCIENCE AND THE EARLY LEARNINGS

If one needs to learn where our present day knowledge of science, art, sport etc. comes or originates from the deep waters of world's intellectual history, s/he shouldn't be surprised seeing everything we call knowledge today almost ascends from Ancient Greeks. Although Greeks weren't always the one and only holders of science, knowledge, culture etc. what has turned out to be the core of present day wisdom dates back to Ancient Greece.

For centuries before and after the Christ, learners have always seeked for the knowledge in one way or another and things came to a point at which only basic and everyday wisdom were not enough. People wanted to know more and more so the sense of higher learning started to emerge. As the centuries passed by the sense of scholarly studies divided into more and more specific brances as in the example of Liberal Arts.

There were, certainly, times when the knowledge got deeper but to talk about the very beginning of Greek Higher Education we should concetrate on the point when it literally started as a system or a State policy. Ancient Greece was highly humane, sophisticated and structured in administrative, social, civic, military and educational systems even in the centuries before the Christ. In archaic Greece there were city-states which were separate and domestically free in administration which means that every one of them could organize their own system of teaching. In Ancient Greece's archaic cultures, as we have seen in Chapter 1, we come across with the city-states' names who lefted the others behind as being the prominent and solid centers of higher education at the time. Among which were Athens and Sparta. In Ancient archaic Greece, this only consitituted of the physical and musical educational aspects of the physically suitable young citizens and in the latter, education was more significant in sense of being imposed by the State. In both, young people had to follow

an almost present day strand of educational phases like primary, secondary and tertiary; the last, tertiary is what concerns us here most as dealing with higher learning at the time. It was composed of phases like *Old Greek* and *New Greek Educational* eras. Old Greek education can be summarized as having *almost no* intellectual study at all and it had nothing but *paeidas* which can be counted as higher educational centers. In paeidas, young Athenians and Spartans only studied physical and musical classes and taught by only male educators. We can say that Sparta being highly concentrated on educating “potential soldiers” for the regular army, Athens was more centered on “just educational” aspect. In Sparta it was compulsory for the parents to send their sons to the educational center and afford their expenses because it was important for the state to grow qualified and agile soldier-citizens. To compare Spartan scholarly studies with its counterpart, Athenian higher education, we can say

* That it was more rigorous and demanding in physical sense.

* The education of girls was highly concentrated on domestic responsibilities of the female individuals in the family in Athens while in Sparta, women were thought of the potential mothers of healthy individuals of the substantial citizens who are supposed to be strong and all-the-time available soldiers of the State.

Taking Spartan and Athenian educational policies into consideration as early examples of Greek science, Islamic educational centers in the high-time of the Islamic Science all had their own characteristics of educational policy. For example, depending on the cultural notes and lifestyles of the Muslims living in Syria or in Damascus, they all had their own policies in education- though had the same ideal. Despite they sometimes concentrated on the same fields of Islam or Liberal arts, there wasn't any serious attempt to make all the cities come into the same vein in sense of educational policy. But of course, they could copy one another's policy or conducts if seen reasonable. And it should be noted that it included no physical study- let alone higher study- at all.

From the very early eras of Greeks, they had institutionalized structures to supply education on periodical basis like paeidas in Athens or agoges in Sparta. But it took Islam to take a very long while to supply institutionalized educational centers like madrasa. These institutions like paeidas or agoges emerged somewhere from 800 to 450 B.C. This corresponds to the second period of the Old Greek Education. But madrasas came out of majlises which didn't have an institutionalized character but turned out to be occurrences which were going to be a part of mosques and then turn out to be separate forms. To speculate, we can say the emergence of institutionalized forms of Islamic centers like mosques doesn't correspond to the early times

of Islam. It doesn't even date back to the time of Muhammed or of the four caliphs. But, there were Dar al-Ilms, Dar al- Hikmah etc. emerged in the late 10th century which is quite far from the rise of Islam. Comparing the concepts of the two, the former was state schools where youngsters got educated while the latter was the serious scientific institutions where scientific researches dominated the process rather than supplying regular basis education for young people.

Along with these there was period in which no intellectual (or if it is proper to use the verb "scientific") improvement were made. There was a dark period as historians name it and this might be resulting from the fact that church or the Fathers of church were not in line with the pagan literature or the teachings of pagan philosophers. Mullinger writes in his *The Schools of Charles the Great* (1911) "It is a fact familiar to all students of ecclesiastical history, that the efforts of the teachers of early Christendom were directed to the abolition and destruction of that very literature which modern Christendom has done its best to restore and has cultivated with such untiring assiduity. Those efforts were attended with almost complete success, in the Western Church the teaching of the Fathers proved fatal to the reign of the philosophers..." "The ancient polytheism, in their view, was a bowing down the very powers of darkness, and the Christian was accordingly bound to carry on unceasing warfare against its adherents" (1904: 5). Looking at these lines we could assume that before the innovations Charlemagne did there was not many things left in sense of intellectual heritage from The Ancient Greek and The Roman. This is why the renovations of him one might tend to name as somewhat Renaissance before the actual Renaissance itself.

Before going on with what happened in the same period in the Arabic Peninsula, it would make it easier for us to comprehend the scholars' background and their ethnic heritage. I prefer to attend to the word "Arabic Islam" as it has come to named which is, according to my point of view, is not completely right. The ethnic origin of these scholars whom we will talk about was varying from Persians, Christians, Jews; even non-moslem, non-Christian and no-Jewish attendants. The only word appropriate to address the scholars at the time would be "Islamic," but not for the sake of their own religion but the aim of their studies.

Also, many practitioners were Christians, Jews, or pagans, especially in the early period. "Arab science" is also wrong, since most of the scholars involved were Iranians or Arameans. For our period, "Islamic science," meaning scientific work described in the Islamic language, is the most accurate, although it does not apply to later times, when scientific books were also written in Persian (Cooperson, 2005: 84). The same can be seen in what

Charlemagne did. He, too, gathered scholars with any ethnic or religious origin and provided them with patronage for gathering, processing and producing knowledge.

As for the origins of Islamic scholarly studies it would not be wrong to say that Islamic learning is not as old and ancient as the Greek one. Considering the start of systematic Islamic learning came up with the Muhammed the Prophet in the mosques, it just dates back to the 6th century at most. And when it wouldn't be completely wrong to claim that the existent knowledge at time paralled to the rise of Islamic knowledge was not pure and completely free of the Greek influence because the effect and traces of Hellenistic learning that came to an end in the 6th century could still be witnessed in the area's scientific thoughts. So, the Islamic-Islamic science fed on the Persian one which itself contained Hellenistic and, needless to say, even older touches of Ancient Greek figures. It would be really effective to include a quotation here which fully summarizes the matter in only two sentences. About that Beeston & others (1983:463) write: "It wasn't necessary for an Arab to travel as far as Jundishapur or Alexandria to come into the contact with Greek ideas. The Jews of Arabia, Palestine and Iraq, the Christians of the same lands and of Syria and Abyssinia, the pagan star-worshippers of Harran, brought Hellenistic thinking well within the cultural horizons of the knowledgeable Arabian.

Islamic science drew on several traditions, of which the most important was the Hellenistic one. The Greek-speaking philosophers of Alexandria and other eastern Mediterranean cities had cultivated rational inquiry as a way of approaching the divine. Knowledge, they believed, could make a man into something like a god. Building on the work of their ancient Greek predecessors, they produced treatises on logic, mathematics, geometry, astronomy, medicine, and other subjects. In certain important ways, their efforts were not scientific in the modern sens (Cooperson, 2005: 83).

So it would not be so wise to be so strict on the evolution of Islamic studies comparing its developmental phases with Greece on one-on-one basis. Hence, we can say that what gave the Islamic peninsula an impetus for seeking the knowledge was the religion itself, we can deduce that remembering the well-known saying of Muhammed "Go, seek for the science no matter where it is, even in China. Here are a few points in which we can compare the two:

Chart 8: The Origin and Evolution of Knowledge in Western and Islamic Science

<u><i>Origin and Evolution of Greek Knowledge</i></u>	<u><i>Origin and Evolution of Islamic-Islamic Science</i></u>
The very ancient Greek knowledge didn't emerge as based on any kind of religion, the belief was highly pagan.	Fed on the pieces of Egyptian, Syriac, Persian and Greek knowledge. Empowered by the rise of Islam.
Solely started with the Homeric Works.	Mainly started with the religious teachings of Muhammad. But affected from <ul style="list-style-type: none"> • Indian, Syriac, Persian, Egyptian and Iraqi traditions.
Its span of permanance is highly long-lasting, Greek science was even there when the islamic cultures gave a renaissance to the classical Greek works.	Has been fairly young in respect to Greek learning, have been existant from the 6 th century onwards.
Has gone through stages along with the ages like <i>Homeric, Historical, Transition and Helelnisitic</i> . They were long and indiviually characteristic eras and each lasted considerably long. Although underwent some alterations in application and thought at Roman period it remained basically same.	Has gone through shifts within itself along with political and ethnical effects within resrectively close eras. Like <i>Shii'te Movement or Shafi, Sunni, Hanbeli and Maliki schools</i> .
Earliest literary works were highly oral depending on the civilization's socio-cultural characteristic.	Written records are available from the early stages of Islamic science which depends on having emerged at a period available to keep written records neatly.
Went through with Greco-Roman phase and almost died off in the Dark Ages until the early Renaissance of Charlemagne.	Kept its basic character and got into its high-time first with Umayyad and then golden age with Abbasid Dynasties.

To be more specific, we can add that we know Islamic Science was under the influence of some other elements apart from Greeks. “The so-called Islamic numerals, as well as the system of decimal placement, also came from India. But no scholar active in al-Ma’mun’s time could read Sanskrit, as far as we know. Many could read Middle Persian, but there was little science for them to translate from that language other than a few works on astrology. On the other hand, Iranian traditions were influential in the area of patronage. The Barmaki viziers sponsored translations from Greek and Syriac; and the House of Wisdom, as the caliphal library in Baghdad was called, may have been modeled on a Sasanian predecessor.” (Cooperson, 2005: 84) And it is not hard to guess that all these data in the present knowledge of different civilizations would diffuse because in the medieval era it was the intermittent Christian monks, Moslem and Christian scholars who were striving to analyze and synthesize the wisdom in every nook and cranny.

About that Bennison (2009: 183) writes “The latter’s son and second successor al-Ma’mun founded observatories in Baghdad and Damascus where Muslim astronomers prepared new tables which amended those of Ptolemy, using the information they had gained from India and their own observations.” Thus it is not so rare to accept that Islamic science evolved by what had been left from the Ancient Greek and Rome.

As seen on the chart as the first item for comparison, what Islamic science mostly dwelled on was the remainings of Egyptian, Syrian, Persian and Greek science but it was largely the Greeks they got influenced and it was highly inspirational in the way following eras of Islamic studies evolved. About that McNeill in his *The Rise of the West: A History of the Human Community* (2009: 437) writes “Arab science and philosophy derived directly from the Greek, with some immixture of Indian ideas. Until near the end of the ninth century, the main task of Arab scholarship was the appropriation of the Hellenistic heritage.”

Looking at the very early nature of Greek education, one can comment that it mostly consisted of physical and musical elements while Islamic scholarly studies mostly contained religious fields of Islam and almost no physical or musical elements at all. Or at least these two elements are not the prominent ones that we encounter whenever we examine or try to quote from a book related to the Medieval Islamic Scholarly studies. The main reason for that might be that when Islamic science began to emerge from what was originally the remainings of Greek classicals, it fed on what there already was on earth in sense of systematized

knowledge of all sciences. During the so-called Dark ages-we can exactly tell in which year it ended or started- there were some parts of ancient wisdom every nooks and creenny of the world. In short comparing the centuries they correspond, it was The Greeks who made intellectual bits of wisdom that would later turn out to be the systematized codexes of remaining knowledge of humankind. In other words: Islamic science had pieces to make a whole, to create a new field or enrich the already existing ones while the Greek originated them, and it was very natural for Islamic science not to include musical cores as basis because there were no religious systematic and strict music teachings as they did in monastic educational centers.

It is always mentioned in the related literature that Umayyad and Abbasid Caliphs got a great interest in science and scientific study and they endowed lots of prestige and financial funds to support it. Looking at the time of the Carolingians, especially the time of Charlemagne, we can observe that the same enthusiasm was there, too. But Carolingian Reforms aimed to nourish intellectual aspect with the aim of regulating and renovating the religious and lay aspects of the State. Charlemagne not only revised by whom and how monasteries will be managed according to religious character but also tried to give it a laic aspect and renew its educational quality. So it was enriching the educational quality he was also aiming to enhance. But as it had always been expernced that religious orders was dominating the belief systems in all the monasteries all over the world. We can resemble it to the schools in the early times of Islam (and schools are still alive today's Islamic goographies).

Schools in Islam had their own conducts and their own points of views on how to apply islamic law, how to decide to do the right thing by way of the art of *hadith* or *fiqh*. Looking at the religious orders in monastic milieu, we can observe the same nature: telling what to do within the religious circle of monastic/Christian life and how to do it, and the reason why, etc. For example, although basically almost all the European monasteries were lead according to the Benedictine Rule, there was a time when most of the monasteries turned out to be following the Rule of Cluny. History even witnessed Charlemagne once gathered all the liturgic people to question whether they still follow the Benedictine Rule despite his order not to. Or a Monk like Benedictine did, could claim that a couple of hours spent by praying or applying daily counducts would be enough while another Augustinian would enlarge or shorten the duration, or change the nature of night time rituals, etc. *Consequently we can say that in Islam, Schools of Islamic Law; in Christian Monasticism Religious Orders were the*

influential aspects affecting the educational characters both of the institutions' and of the content of teaching.

3.1 LIBERAL ARTS AS HIGHER STUDY IN EARLY MEDIEVAL EUROPE & THE PLACE LIBERAL ARTS IN EARLY ISLAMIC HIGHER EDUCATION

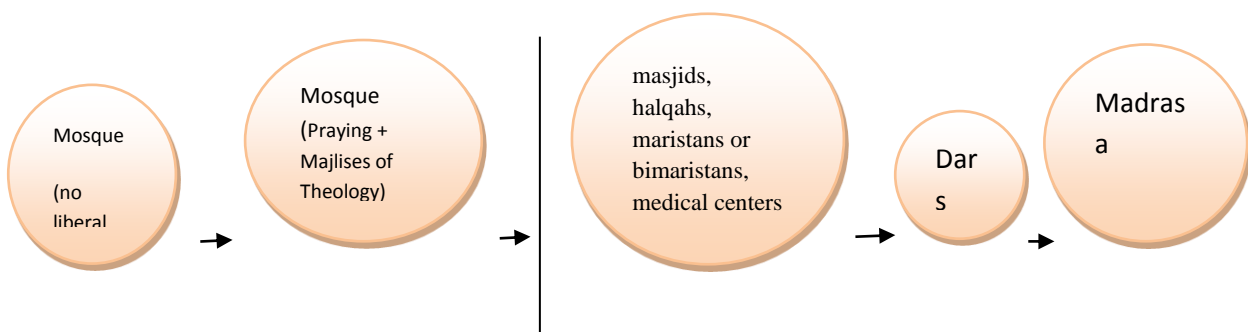
We know that trivium started to emerge in the New Education Period of Greek history. The main fields studied highly and prominently were grammar and rhetoric along with logic. Rhetoric formed almost the base of higher education in the Greek Period. This trivium essence then integrated with the quadrivium and began to constitute the main curriculum of all kinds of institutions which served higher study at the time.

The essence of Liberal Arts was to understand and interpret the world by reasoning through trivium & quadriviums and theology was mainly studied in monastic circles. Charlemagne invited abbots and theologian scholars like Walafred Strabo, Lupus of Ferrières, Theudolf, Einhard, Agobard, Angilbert, Benedict of Aniane, etc., to his court for liturgical and clerical advancement in his reform, his monks taught theology and religious sciences but it wasn't what the core of higher education derived from. Looking at Islamic education one can obviously see that what we call higher education at the time, all stemmed from theology. It all came out of theological contents what they taught in madrasas in the 10th and 11th centuries and onwards. There was also theology composing a large part of Carolingian educational reform but it was about reorganizing or enhancing the already existent systems but Islamic scientific studies came out of religious occurrences like mosques and became the core of a new educational constitution like "madrasa". So theology as a core was not irrelevant to the origin of the two.

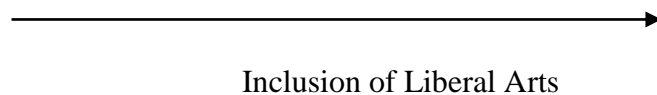
Theology based studies was the essence of early forms of educational institutions while liberal arts were studied as rational arts that had nothing to do with Islam but seen necessary to find out the times of religious courses of rituals like 'namaz' or the religious months like Ramadan, etc. so it was like a complement to the theologic studies. Actually, there was a turmoil after the death of Muhammed on how to do what and why; which in return led to the emergence of Islamic law schools. This resulted in a diversity of application and different points of views on basic theological topics. We can see that liberal arts began to take its place

more sharply with the rise of Islamic colleges like madrasas. To speak in sense of laic and non-religious institutions, Dar al-Ilms were the first to provide Liberal Arts in their curriculum. Shi'ite scientific centers like Bayth ul-Hikmah, in other words, House of Wisdom had basically scientific fields in its agenda rather than theological topics. Compared to Frankish Reform and its main motives, Islamic scientific studies had a dual-quality with Liberal Arts embedded in the Theological curriculums.

Illustration XII: Liberal Arts in Islamic Medieval Scientific Studies:



7th century onwards...

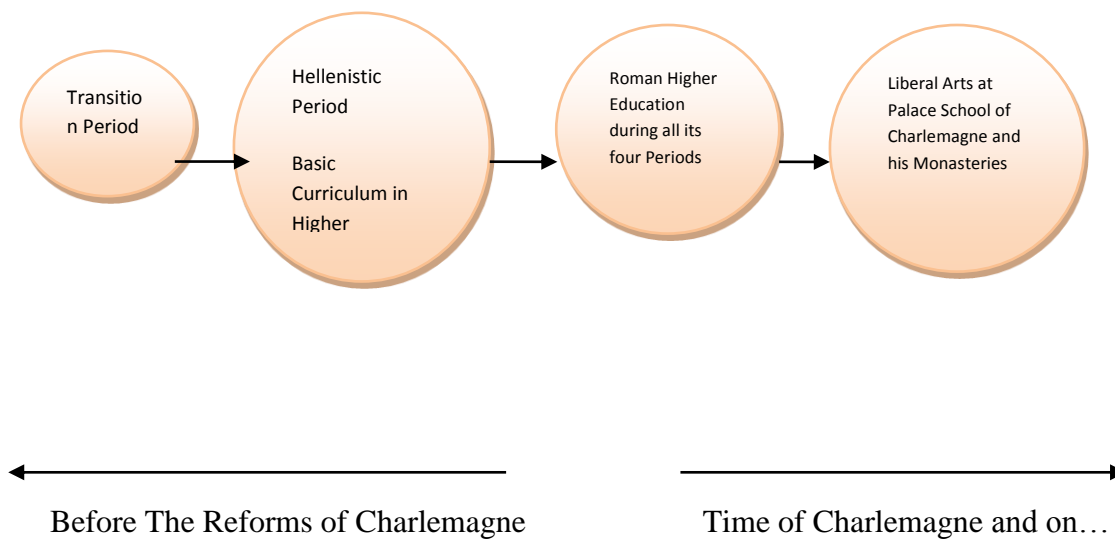


The origin of what we call Liberal Arts today was philosophy and around philosophy evolved grammar and logic which formed the *trivium*. We first see *trivium* in the New Greek Education Period and the core of *trivium* was philosophy, what grammar and logic evolved from. No matter what Philosophy was more respected than others and it started to progress with the teachings of Plato and Aristotle in the Transition Period which covers the centuries 450 to 300 B. C. and it was towards the late middle ages when *quadrivium*- arithmetics, astronomy, music and geometry- gained prominence before they all formed 7 Liberal Arts.

Rhetoric schools were the earlier forms of Greek higher education. Towards the end of Greek period with the rise and the systematic evolution of sophistic movement within philosophy as

the top liberal art lead to an unprecedented institution that can be thought of as the first university form in the history of education: the University of Athens, and even before that rhetoric schools provided higher education to Athenian youth. So, centuries before the rise of madrasas, or even the earlier forms like Dar al-Ilms, masjids, etc. Greek world had already established college-like institution, though its curriculum was not as advanced as the time of madrasas.

Illustration XIII: Liberal Arts in Medieval Europe and at the Time of Charlemagne:



3.2 EARLY EDUCATIONS OF CHARLEMAGNE AS A HEIR PRINCE AND AL-MA'MUN AS A CALIPH TO BE

Both Charlemagne and al-Ma'mun came from noble and prominent families in their own time. They both have brothers and they were one of the optional names for the future king / caliphs. Charlemagne was the member of a clan called "Carolingians who were preceded by another Frank called "Merovingians." These two can be names as the "mayors" the palace and it was a matter of political power, or strength to sit on the throne at the time. Charlemagne's father was Pepin the Short and the famous Charles Martel- by the name we can observe that Charlemagne wasn't the only one who was carrying the name "Charles" which signifies where the name "Carolingians come"- was his grandfather. He was known for his support and

the relationship he had for the Roman Church. He took steps to donate to Christianity and built great monasteries like St. Martin and St. Dennis. His father, Pepin the Short, even enlarged the power of the Frank Empire and named himself as the king of Franks defeating the last Merovingian King (ending the era of Merovingians at rule) and even after that he aided Pope to beat Lombards in Italy like Charlemagne in the years to come will do. Carolingians was a clan ruling the Frank Empire but they were called Barbarian Empire. Despite all those attributions the court wasn't so far from including intellectual facilities at large. We know that intellectual cultivation of a prince wasn't the higher priority in a Carolingian prince's education. Virtues on war or physical abilities that could work better in a battle were more of worthwhile. He, like other, got the education not so different from other Carolingian nobilities; he learned hunting and the use of arms. He was good at riding and swimming as well. As for intellectual aspect there not too much to talk about Charlemagne's early educational life because there is not a solid one. He didn't learn to write but he could speak contemporary Latin but not efficiently in four skills. He understood Latin but as it was spoken in Gaul, but the Latin he could use was not neat in Grammar like the ancient Latin. He didn't learn to write and he couldn't compensate it even after his reform on Carolingian minuscule and we already mentioned that he kept a tablet down his pillow to be able to practice before sleeping.

Charlemagne had a brother named Carloman and they led a joint reign on Frank lands. Charlemagne reigned the outer parts of the empire while Carloman reigned the areas which are less prone to attacks. But his brother died in 771 and then he took the possession of his brother's lands became the sole and the only emperor.

- His land had inherited a lot of monasteries and abbeys from his ancestors so we can say that he had a large army of abbots or bishops; in other words, an army of clergy with whose level he wasn't so pleased with their intellectual background in sense of liturgical or intellectual relations.
- What might have been effective in his educational reforms could be his experiences in Italy (which was a cultural capital in Europe at the time) both intellectually and architecturally- we know he got inspired by the Cathedral at Ravenna, Italy while building the Aachen Cathedral, Palatine Chapel.
- He believed the Empire needed some regulations and issued some charters dealing with social, political and intellectual areas of life believing the rotten system of the previous Kings were not that efficient in the organization. He started with organizing

civic life and what gave him the impetus could be counted as the fact he believes that education is the right of every individual who desires and only through education the society could enhance. So apart from the nobility getting some level of education within the palace itself, new schools should be instituted for lay boys- the highest educational opportunity for a lay boy at the time- apart from the education given in monastic cloisters.

As for al-Ma'mun's early life education, it is somewhat different from the one Charlemagne got. He was raised by a highly reputed Barmakid Family whose seniors served Caliphate as viziers. His mother was a slave he was mostly taken care of by Rashid's wife Zubayd whose son al-Amin was also a heir. He was Arab-descent on both side while Ma'mun wasn't. As was the custom they were both taken away by the aforementioned family. Ja'far al-Barmaki was one of the leading men in Rashid's court and he was left to him to be educated on how to become a Caliph.

- Firstly, the clan of al-Mamun was not a Barbarian one and there were some intellectual facilities before he became the Caliph and these were conducted by his father Harun al-Rashid. Most of the intellectual background on which he enlarged the intellectual studies of his time was what he inherited from his father. Harun al-Rashid was closely interested in intellectual activities in his time. And there had already been a great emphasis from the very early times of the Caliphate on the translation of ancient texts starting from the time of Caliph al-Mansur (in 750s). Thus al-Ma'mun could act like a pioneer in Abbasid period in establishing institutions like Bait al-Hikmah which was considered as an institute of science and a library also serves as a translation center. His father had started enabled the production of paper and founded paper factories in Baghdad, Damascus, Cairo and Samarkand which also contributed a lot to what al-Ma'mun took over and improved.
- The educational curriculum of al-Ma'mun was much more scientific and more profound compared to what Charlemagne received. He studied, as other Abbasid princes did, reading, writing, arithmetics, Grammar, poetry and historical-political reports of Abbasid Dynasty. He was much more able to reign as an intellectually advanced and politically conscious caliph.
- He also studied Qur'an, Qur'anic sciences and he had to memorize it. Looking at Charlemagne we cannot observe such an activity like memorizing the Holy Book in the education of a prince. But as we mentioned earlier on the education of Carolingian

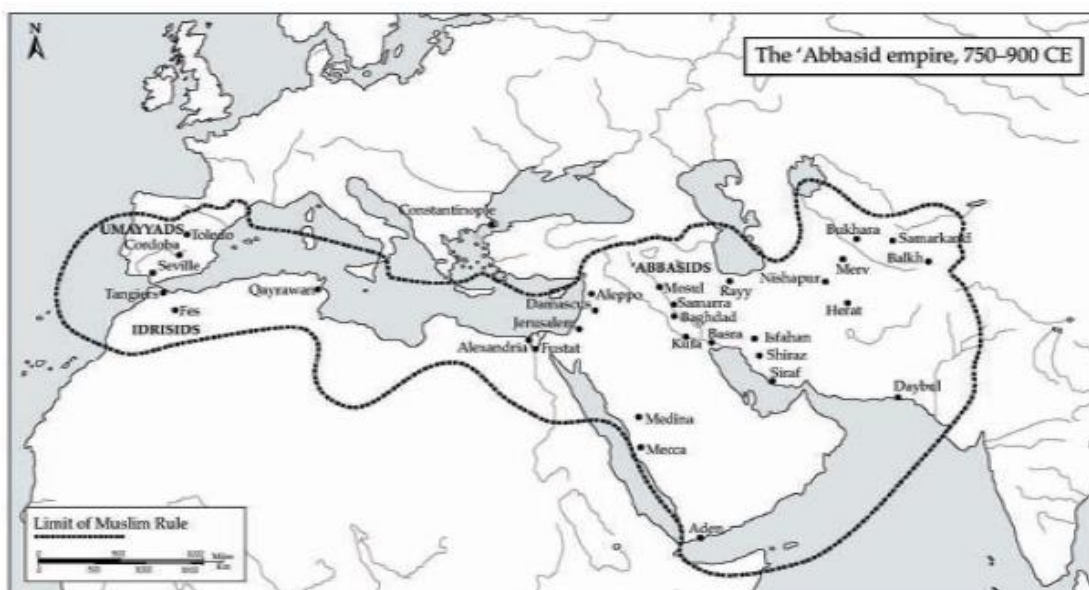
Princes some Carolingian princes were sent to monasteries to complete their theological and religious aspects.

3.3 GEOGRAPHICAL CAPACITIES OF THE TWO CIVILIZATION AND ITS EFFECT ON INTELLECTUAL REFORMS

To be able to fully comprehend the nature of an educational philosophy one needs to know about the geography that philosophy dwells on as well. Now that we compare Frankish and Islamic higher education, we also need to examine the geographies of Islamic and Frankish realms and their relations with other geographies whose cultures they got influenced from. Islam, to be taken as the source of Islamic Science and scientific studies was dominating a really vast piece of land when compared to Carolingian Empire. This was the result of a specific course of belief in Islam called “ghaza”. To have an idea one might have a look at the map below.

Abbasids took rule in 750 and they evolved a rapid development sociologically, economically and culturally. To illustrate the political and social power of the Abbasid realm on its intellectual capacity of Bennison in her book *The Great Caliphs The Golden Age Of The Abbasid Empire* uses the map below and depicts Abbasids as follows:

Illustration XIV: The Map of Abbasid Empire in 750-900 AD. (Bennison, 2009: 31).

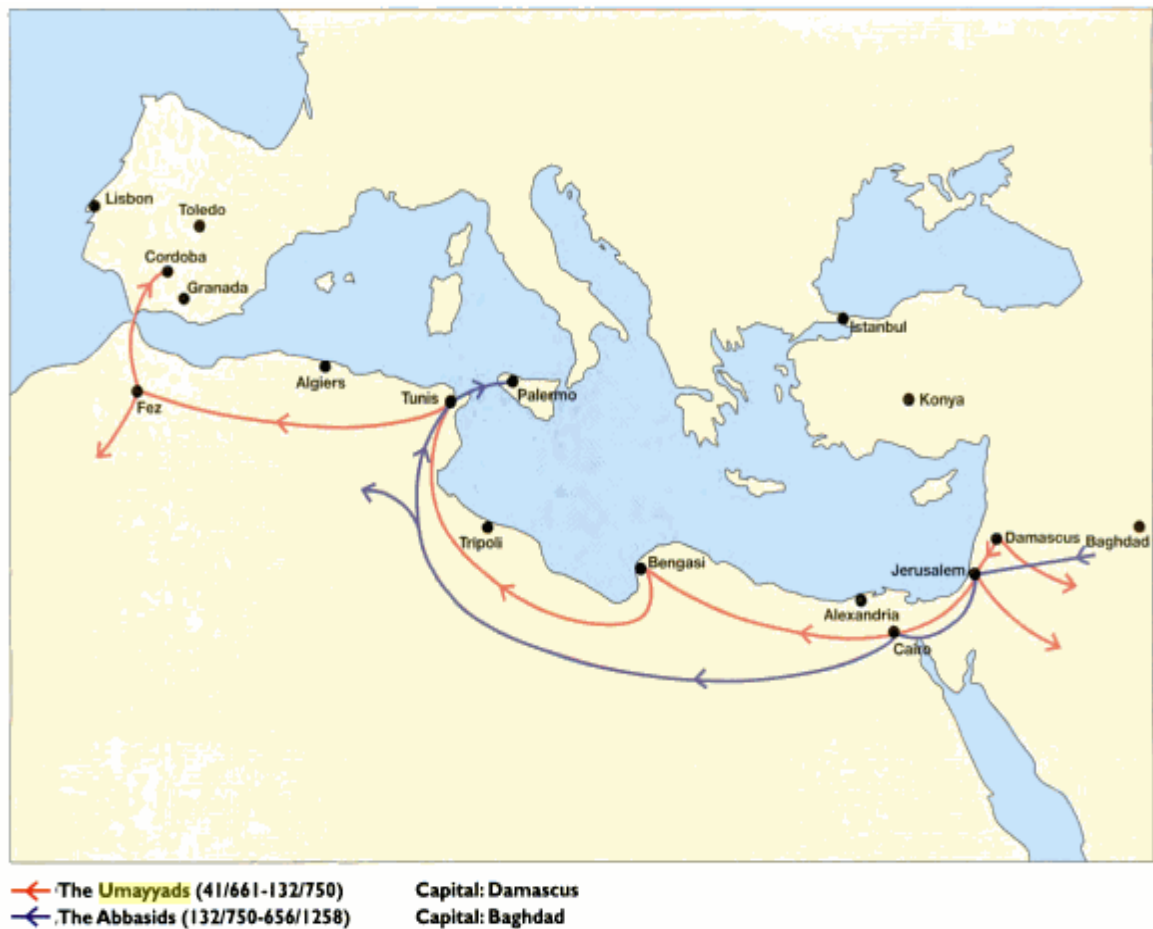


Moreover, the patronage which the ‘Abbasid courts at Baghdad and Samarra offered to scholars, artists, poets and many others ensured that Iraq exported cultural, architectural and intellectual models across the dar al-islam even after the ‘Abbasids’ political fortunes faltered and religious scholars wrested the right to define Islam from them. When the Fatimids in Egypt and the Umayyads in Spain threw down the gauntlet and challenged the ‘Abbasids for the caliphate in the tenth century, they tried to outdo them rather than totally rejecting the precedents they had set, establishing a political competition measured by pomp and ceremonial which also involved the Christian Byzantines in Constantinople. It is thus perfectly possible to see the ‘Abbasids and their Fatimid and Umayyad rivals, who emerged in Egypt and Spain respectively, as products of a common religio- political environment and proponents of variations on a single cultural theme, that of classical Islam (2009: 11).

As we can deduce from the map, Abbasid Caliphate was covering many present day countries like North Africa, South of Spain, Iran and Iraq. This meant a huge political power and it is no wonder its court needed some scientific researches as being a big empire meant not only political power but social power along with other kinds as well and education, in other words science was what could provide that.

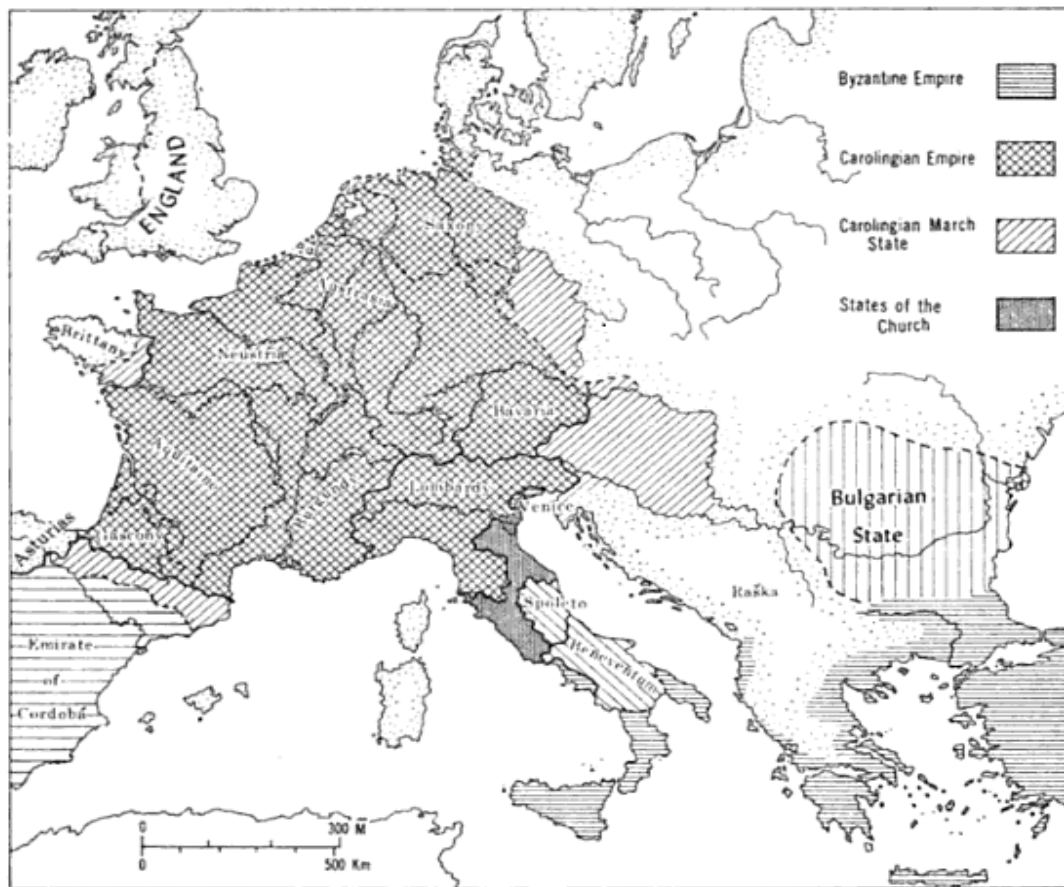
Looking at the map illustrating the movements of Umayyads and Abbasids during their existence taken from the book *The Umayyads, The Rise of Islamic Art* (2000: 12) below, we can see the extent to which they dominated before the Abbasids and the even got further after the Umayyad Prince Abd er-Rahman managed to flee to southern part of Spain which were to be called “The Republic of Cordoba” in the centuries to come. This happened after a dispute between the Abbasid and Umayyad clans and while Abbasids began to enrich what they cultural and scientifically inherited from Umayyads, the surviving descendants and their leaders Abd er-Rahman let the scientific studies thrive in Andalusia, especially in Cordoba where we can still see the **Cathedral-Mosque of Cordoba**, once happened to serve as a crucial scientific center in its time. To add, it wouldn’t be very difficult for Abbasid headquarters to involve in advanced high culture at the time thanks to Umayyads’ because they had encountered Byzantium and Persian cultures within their vast lands and were a able to diffuse their scientific background with theirs

Illustration XV: The Map on How The Umayyad and The Abbasid Empires Expanded. *The Umayyads, The Rise of Islamic Art* (2000: 12).



And below we can see the Carolingian map which depicts Carolingian; in other words, Frank Empire in 700s and 800s under the reign of Charlemagne. Though, barbarian it was such a strong and dominant empire in its time. He fought in Spain, Venetians beat Saxons who was a real problematic and plundering nation at the time. Charlemagne had such a strong reign that even the Pope requested help from Charlemagne about Lombards. And after being crowned as the Emperor of Rome he was not only interested in political power but he thought he needed a thorough renovation in his kingdom. So all these educational reformations came along with his social reforms in his society. Looking at the map we deduce that it wasn't easy to stand northern attacks but they managed to keep united and took the advantage of being close to countries like England, Italy etc which were highly intellectual at the time so much that it was his (Charlemagne's) sojourns in Italy which gave him the impetus to reform intellectual life as well.

Illustration XVI: The Map of Frank Empire under the Reign of Charlemagne. (Pounds, 1973:172).



So apart from all the other factors, even the measure and political strength of a land can be speculated to be an important factor for its advancements in science & education as in the case of Caliphs. Similar act is observable in Frank Empire as well. Charlemagne, too, gather scholars from all over the world no matter what their nationality or ethnic origins are. It is no different from what Caliphs did, to provide patronage to the eager scientists under his dominion. The same is the case for Charlemagne. He invited scholars from all kinds of ethnic origin and employed the most prominent ones in his palace. About that Henry Pirenne writes in his *Mohammed and Charlemagne* (1957) writes that as their countries were invaded by Arabs, a large number of Syrians, especially merchants continued to frequent to Gaul and Italy. And from Rome some of them with a higher knowledge of Greek language migrated to North and they had their manuscripts, ivories and jewelry with them. And he adds that the Carolingian sovereigns weren't late in employing them for the movement of literary and artistic revival which they were fostering. So we can deduce that Carolingians were not that meticulous about the origin of scholars they employed for their revival of learning. What mattered was the pure and genuine knowledge that was necessary for an accurate intellectual movement.

There are a few things that can be told about the resemblance between *Papacy* and *Caliphate* as well. As both are valid supreme titles in Islam and Christianity, it is possible to consider they had a saying on educational milieus at the time. It was “the Holy Roman Emperor” the title Charlemagne had in 800 when the Pope Leo III crowned him as Roman Emperor on Christmas night on the grounds that he protected him from his enemies in Rome. The Caliph was also seen the leading figure in Islamic world so it was the most natural thing for him to have authority on educational institutions as well. For neither of these it would be right to speculate they intervened or criticized the educational institutions but considering both were the highest title in sense of religious issues, they were the supreme names to refer. It was the Charlemagne himself who longed for an educational renovation and started the process along. Though, it was Alcuin who was appointed to the top of the educational occurrences of the Carolingian government (just like a minister of education) it was the Holy Roman Emperor himself who was the supreme person to utter the last words in the educational milieus. About that we can take an example what Duka wrote “Through these schools, Charlemagne hoped to produce intelligent administrators both in the church and the state. And in order to enforce his decrees and educational programs, Charlemagne bestowed upon his *missi domonici* or official messengers the power and authority to enter the monasteries without prior notice to observe whether or not his orders were carried out” (2006: 18). This quotation makes it highly clear that he was not only a concrete authority on the educational field but also never gave up inspecting the on-going educational processes. Similarly Makdisi quotes in his *Rise of Colleges* from Ibn al-Muqaffa (d.142/759) in his treatise in *Sahaba*, and says that he points out the wide divergences in jurisprudence and in the administration of justice existing in the great cities and in the various schools of law, the Iraqians, the Hijazis, and the others. “He proposed that the Caliph should review the different doctrines with their reasons, then codify and enact his decisions in the interest of uniformity” (1981: 134-140). Looking at this sentence we can say that apart from being the most important person in Islam, the Caliph also had the respect of his subjects being the theological authority.

3.4 CONNECTIONS BETWEEN CHRISTIAN FRANKLAND AND MOSLEM ABBASIDS

The Abbasid Caliph Harun al-Rashid, was the counterpart of Charlemagne at the time and the father of al-Ma'mun whom was going to give Islamic science its golden age. Harun Rashid

was also a leading figure within the Abbasid Caliphs who supported Liberal and Islamic studies under his reign but his descendant, his grandson al-Ma'mun was the one who stimulated what came to be the famous Medieval Islamic science that was the most prominent in its time. Harun al-Rashid was caliph for the period celebrated in *The Thousand and One Nights* and presided over the 'Abbasid empire at its height, when the word 'Baghdad' evoked opulence and splendour as far west as the court of the Carolingians (Bennison, 2009; 30). He was also the name who can be said to have set the base for the establishment of Baith al-Hikmah which Ma'mun was able to complement.

To talk about the family heritage of the two which also affected the all these simultaneous intellectual efforts we might also mention that neither Charlemagne nor the Abbasid Caliph al-Ma'mun was coming from trivial families; they both were monarchs, per se. But we all know that not all the Caliphs or Rulers or Kings had been fans of scientific studies or education during their reign. Franks were a remaining society remained after the Western Roman Empire who expelled Vizigoths and settled around the northern France and Western Germany (Austrasia).

Charlemagne's ancestors were the servants; in other words, majors of the Merovingian rulers in Austrasia, the succession of the dynasty called Merovingians and the clan he belonged used to be called the Carolingians. As can be derived from the word "major" they were like the majors within the Palace. It probably referred to a high status like the head of the army or the first man after king. His father Pepin the Short is not mentioned for any kind of intellectual movement under his reign at all but all the members of the Dynasty used to be educated within the Palace by a private instructor or an experienced member of the clergy.

As for what al-Ma'mun inherited culturally from his father was way extensive and way accumulated compared to what Charlemagne did. It was Harun al-Rashid who set the first phases for the establishment of Bait al-Hikmahs with which is Ma'mun famous for. What Ma'mun did was to develop and make it more sophisticated in all sense. Harun al-Rashid is known to initiate patronage that enabled the Abbasid court to gather scientific bits of data and gather them which made it a magnet for scholarly interest.

So it wasn't very difficult for Ma'mun to enhance what he got in hand unlike Charlemagne because he was the first among the Barbarian Frank Kings to take up an interest in educational reforms. He not only revised liturgical and cleric affairs which is quite dealt with theology but at least we can say that he was the first to take it that serious while what Ma'mun

did was to cherish what he inherited and develop it to very large scales and to higher standards.

To utter a few words about the political and social connections between the Frankish and the Islamic world is quite necessary at that point in sense of determining who had what in their bag within the level of higher study. We know that Umayyads were the first to take up a zeal in scientific realm in addition to theological studies. What they gathered scientifically almost served as a background for the rapid increase of scientific improvements in Abbasid Caliphate.

Up above these geographies like Persia, Arabia, Egypt and Upper Africa etc., there stood The Frankland in the Carolingian Period under the reign of Charlemagne. These two countries were almost undergoing the same intellectual interest and social transformation due to Haroun al-Rashid and Charlemagne. Different in geographies but within the same timeline and the in the same direction of interest these two names developed a friendship yet never met in person. It is a well-known fact that they exchanged gifts like elephants, the keys of cities, or hounds etc. Yet there are some historians who claim that this friendship was largely based on Jerusalem which was significant for Christian pilgrims.

There are remarkably few reported encounters between Muslims and western Europeans before the Reconquista and the Crusades. The Frankish chronicles mention an exchange of envoys that may have taken place at the beginning of the ninth century between Martel's grandson Charlemagne, king of the Franks and Holy Roman emperor, and the fifth 'Abbasid caliph Harun al-Rashid. More certainly, one hundred years later, the seventeenth 'Abbasid caliph al-Muktafi received in Baghdad an embassy from the daughter of the Frankish ruler of Lorraine.

Harun al-Rashid was caliph for the period celebrated in *The Thousand and One Nights* and presided over the 'Abbasid empire at its height, when the word 'Baghdad' evoked opulence and splendour as far west as the court of the Carolingians (Bennison, 2009: 30). So we can deduce that these two lands were equal in sense of social and cultural attraction and we know that their monarchs had a deep interest in high culture. They were not only the leaders of their dynasty but also important figures in sense of being the leaders of two prominent countries at the time. Papa had crowned Charlemagne the "Roman Emperor", though against his will while Haroun al-Rashid was the caliphate of the whole muslim lands.

3.5 FRANKS' AND ABBASIDS' FINANCIAL SITUATIONS THAT FOSTERED THE TRANSFORMATION

What enabled the two to focus on these and be economically generous expenditures in this way was somehow due to their wealth. In Carolingian Period under the reign of Charlemagne the state was quite substantial in its economy because:

- They had a strong agricultural system which enables them to receive abundant agricultural products and a reasonable income and as Verhulst (2004, 31) writes the agriculture was practiced by “free independent peasants”.
- Charlemagne applied a policy by which he drew the wealthy headquarters and nobles to his side so that he had an immense land and economical power.
- The treasure was solid, he could spare and use churches and abbeys for intellectual activity freely.
- He levied toll on merchants; there were free merchants within the Carolingian empire who were both Frank, Jew and Frisian.
- Charlemagne also enriched the treasure along with the plunders from the various wars he made against Lombards, Saxons, etc. thanks to his strong army and cavalries. All in all, he was the king of a barbarian realm and it was a part of their lives to feed on what they plundered in the kingdoms they defeated.

As for the Abbasid Dynasty we should consider similar opportunities that accelerated the scientific studies at the time some of which are:

- People from the elite tried to form their own, private libraries and to achieve that they used patronage as a way of making use of what scholars could produce, especially the ones who didn't have economical power.
- Following the scientific legacy which Umayyads left behind when forced to leave the country and flee into Southern Spain, Abbasids had already much in hand and all that was due to Umayyads' rich production of science which largely emerged as a result of interaction between qualified scientist from different cultures like Arabian, Persian, African, Indian in origin.
- The land had rich and wealthy capital like Baghdad, Kufa, Samarra etc among which Baghdad was the richest due to its trade and manufacturing sources. They were rich in copper, silk, iron etc. They could produce perfume, war gear, they could produce

energy by wind, water etc because they had engineers. Especially Baghdad's being such rich and sophisticated city enabled economy to draw people and students from all over the world and along with sophistication came advancement in science. The more it got prominent in science the more it rivaled other centers of science in the world, including the Palace School of Charlemagne in his Palace of Aachen, or in its original name Aix-la-Chapelle.

As can be seen and derived from the socio-economical background of the two lands, they both had the suitable opportunities and solid basis to set a transformation in their intellectual and socio-cultural heritages and but for the facts we counted above neither a complete Abbasid Intellectual Revolution nor a successful Carolingian Renaissance could be achieved.

3.6 CHARLEMAGNE'S PALACE SCHOOL & HARUN AL-RASHID & AL MA'MUN'S BAIT AL-HIKMA

Our study is concentrated on comparing medieval Islamic and Frankish Higher education at the time. We are confined to study on Charlemagne in the Christian West because during the dark ages there was nothing left in sense of higher education within the milieu of what was left from Western Roman Empire, except for a few monasteries in Britain and a few European lands. Before the dark ages although not largely scientific and highly rhetorical, there were educational; not solely scientific centers like Athens, Alexandria and Rhodes. If one needed higher education these were the places where higher education was extant in addition they were highly rhetoric in curriculum. We attempt to focus and compare what Charlemagne and al-Ma'mun did exactly in sense of active study it would be uneven to find correspondence between the two. What Charlemagne tried to form was a renaissance in sense of educational reform and it was realized in accordance with theological headquarters. His leading man was called Alcuin who was Irish in origin, taught by one of the greatest teachers at the time like Venerable Bede. He would be the name to lead all the organization for what Charlemagne had in his mind on this educational attempt. Most of the attendants of his Palace School were abbots or theologians which proves that he was mainly focused on clergy's education which later turned out to be a greater intellectual movement. His school was in the Palace, it was a palatial school. Yes, there were pariochial, cathedral or episcopal schools but what we call as the Educational Reforms of Charlemagne took place within the very Palace of Aachen or within the other courts in his other Palaces in other states. He started to invite prominent

scholars at the time to his palace to teach and each scholar brought books to be studied or translated or even later, to be copied in Carolingian scriptoria in the abbeys or monasteries. Its main motive was to teach clerics and courtiers merely the arts of reading and writing and the rudiments of grammar. Thanks to the itinerant monks visiting the east and bringing back some Greek Classics the preservation of an ancient Latin literature, and the earliest versions of many ancient Latin works were copied by the monks working in scriptoria in their monasteries.

Remembering all these of Charlemagne and looking back to the name al-Ma'mun we can see that his attempt was to establish a fully scientific centre which could account for an observatory, a library, a scriptorium for translation an application centre where various kind of “ilms”, sciences could be studied. It was intended to be a cultural cumulation and a base for higher levels of scientific study. Works of Euclid, *Galen*, and *Plato, Ptolemy*, were at focus. They not only studied or translated these but also developed them. They centered on astronomy not to specify some religious days and seasons as Romans or Western world did, they centered on the heaven through works done in observatories as a situation close enough to present day techniques. There was rationalism while theology dominated Charlemagne's system. To add a few more details comparing the types of formation as the chart below can be examined:

Chart: 9 Palace School and Monasteries of Charlemagne & Bait al-Hikmah

<i>Palace School of Charlemagne and in his Monasteries</i>	<i>Bait al-Hikmah and at al-Ma'mun's Millies</i>
Emerged as a result of Charlemagne's zeal for educating the clergy	Established by Caliph Ma'mun's father and culminated by himself to form a scientific center rather than an educational center
The school was itinerant in nature because what constituted the School was the court and Charlemagne didn't have only one Palace. As the school was Palatine, so was the Palace School	They were buildings established in Bahdad and Damascus. They were not itinerant on the contrary scholars would stay and produce in the same building.
Its students were Charlemagne himself, his	Any eager scholar could get accepted to study

<p>family (like his sister) his and his coutiers' children (people with blue blood) and clergy but in monastic circles there were both oblates and the lay boys so the education was aimed to diffuse to all levels of the Frank society.</p>	<p>by patronage or to study within the center.</p>
<p>Participants, Academicians and students were the residents of the Palace including the King himself so they were mainly Frankish, British, European in origin and they were largely Christian. And the monasteries and abbeys had multi-national student profiles.</p>	<p>Jews, Muslims even Christians could study in these institutions no matter who they are and where they came from. What mattered was to contribute to the activiy.</p>
<p>Theological content and Trivium dominated the curriculum.</p> <p>They studied rational science as well but not at as a higher level as Abbasids did.</p>	<p>Raitonal & Natural sciences including medine</p> <p>Were studied both in theoretically and in practice so;</p> <ol style="list-style-type: none"> 1) the literary arts; 2) the Islamic religious science; and 3) foreign science, especially Indian, Syriac and Greek
<p>Didn't have its own library or medical centers or scriptorium but monsteries did which complements the facilities of Palace School.</p>	<p>Had these within its body.</p>
<p>Largely used Question-Answer or Reasoning Method as a way of understanding the topics (philosophical methods)</p>	<p>Was more precise and scientific in its methods.</p>

3. 7 TRANSLATION MOVEMENT ON FRANK AND ABBASID LANDS IN THE 8TH CENTURY, SCRIPTORIUMS and OBSERVATORIES

Translation was the core of all these, what we have explained so far. It was like a starting point for the educational renovations and reforms on both lands. To make it more plausible we could say that all the world on the basis of educational content was nothing more than Ancient Greek and Late Roman works and their manuscripts. And Europe could not produce more than those until the Dark Ages before the Renaissance itself. And what the Islamic counterpart of Europe at the time didn't go further and

Charlemagne's Palace School had complementary aspects like lay boys' school founded within the body of monasteries, Episcopal schools or cathedral schools. Religious education was provided by the monasteries for lay or ordinary people. Monastic or Episcopal education was the highest level of education for a young lay man to have as that was a time in which there was no institution like universities or colleges in sense of higher study. They were different in nature and in process but they were both institutions established by the King and the Caliph themselves and they attended or tried to improve the conditions. *But one of the main functions of the two was to initiate the translation process which was what gave the world the Classical Greek and Latin works back.*

Compared to the translation practice of Charlemagne, Islamic effort was much more effective and extensive it wasn't something ephemeral and it was long-lasting over than a century: "A parallel translation program, from Greek to Latin, was underway at the time in medieval Christian Europe. Sponsored by monasteries such as Monte Cassino and by rulers such as Charlemagne, its goal was the same as that of the effort being undertaken in the Islamic hands: to produce translations of classical Greek texts. This effort, however, didn't match the Muslim output in scope or quantity until the twelfth century, when imperial Islam had begun to lose some of its political and cultural supremacy (Turner, 1997; 29)."

And about that Gutas in his book *Greek Thought, Islamic Culture: The Graeco-Islamic Translation Movement in Baghdad and Early Abbasid Society (2nd -4th/8th-10th Centuries)* (1998: 2) writes "The Graeco-Islamic translation movement lasted, first of all, well over two centuries; it was no ephemeral phenomenon. Second, it was supported by the entire elite of Abbasid society: caliphs and princes, civil servants and military leaders, merchants and

bankers, and scholars and scientists; it was not the pet project of any particular group in the furtherance of their restricted agenda. Third, it was subsidized by an enormous outlay of funds, both public and private; it was no eccentric whim of a Maecenas or the fashionable affectation of a few wealthy patrons seeking to invest in a philanthropic or self-aggrandizing cause.”

This translation effort was great and homogenous all along the Islamic lands which can be named valid in al-Andalus, Tunisia, Egypt, Syria, Palestine, Iraq and lasted even more than The Abbasid Empire’s reign. But considering the time we concentrate on:

Chart 10: Manuscript Production in Carolingians and in its Islamic Counterpart

<i>Scriptors and Scriptoriums, in Carolingian Empire</i>	<i>Manuscript Writing and Copying &, observatories in its Oriental Counterparts</i>
It was tuned out to be a scribal discipline and Carolingians gave a great emphasis on it training them, they combined scriptorias to monasteries. It was more institutionalized and systematized when compared to Islamic counterpart because it was held under the Caliph’s patronage.	It was common like in the Carolingians but the most significant translational facilities were held in Bayt al-Hikmahs. Thanks to some patronage, some scholars translated Greek, Persian or Sanskrit manuscripts and gave them to the libraries of mosques. It had more individual aspect than institutional ones.
The range of books or the genre translated was richer compared to the Islamic one. It included both pagan and Christian works.	They mainly focused on scientific works of the Greek, Persian or Sanskrit works especially at the time of al-Ma’mun and his father Rashid. They preferred to translate works of Euclid, Ptolemy, Galen, etc.
There was a great zeal for studying astronomy especially the ancient Greek-Latin works like Ptolemy’s, Macrobius’, Martianus Capella’s and Calcidius’	As for talking about astronomy in the Islamic counterpart of the Carolingian Empire, we can state that they were quite capable of observing the heaven and the

<p>works on astronomy. But upon reading Eastwood and others' <i>Planetary Diagrams For Roman Astronomy in Medieval Europe, Ca. 800-1500</i> (2004, 3), we can deduce that they were well aware of the heavenly movements of the planets but they had to ask other empires when an expected eclipse didn't occur. So we can deduce that they weren't expert on the planets or could not closely follow the heaven. But Carolingian scholars were closely interested with solar systems and it was them who draw the first illustrations for some of the works aforementioned above.</p>	<p>movements of the planets at the time. It is a well-known fact that al-Ma'mun had an observatory built in Baghdad and the Abbasids were the ones who set the base of many astronomical studies in the later years and in the succession of the empire.</p>
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3.8 MONASTERIES & MADRASAS

According to my point of view it would be possible to group monasteries with madrasas and Palatine School & Bait al-Hikmah because the former could provide educational services to the public no matter he is noble or from the clan or not while the second was not mainly inhabited by the royals or the scholars studying on higher education with advanced sciences.

Monasticism dating back to 4th century could be named to be the primary connotation to education during the Dark Ages during which there was no intellectual activity at all. Though it mostly consisted of religious content, monasteries were the places oblates enrolled to learn about the Rules in an educational course and along with that, if successful they could promote to higher levels of study. So what we can solely talk about educational institutions (though not including rational sciences) during the Dark Ages was Monasteries. This was the case before the time of Charlemagne, too. We have already mentioned he was the first to attempt an educational reform with what he had in hand and with the scholars he contacted around the world, largely Europe.

If studied, one can find in Carolingian Monasteries one can find the traces of some different types of Rules⁴⁰. This was a sign of currents in religious realm and indirectly affected the conducts and education of lay boys in monasteries.

3.8.1 Rules Observed in Carolingian Monasteries & Main Islamic Schools of Law

Benedictine Rule	Among these Rules, the most dominant (they correspond to different periods of monasticism or some were contemporary), the least ephemeral and the most accepted one was the Rule of St. Benedict.
Agustinian Rule	
Columban Rule	

The Rule of Saint Benedict has some possible references to sacred reading, as it calls it, or to some kind of program of knowledge. It assumes that the monks are literate, for example, a lot to assume at that time. But nowhere does Benedict say, "Please preserve the classical tradition by being scribes and writing and the Scriptorium. (Freedman, Open Yale Courses; Session on 19th Oct, 2011) This might be the starting point to answer the questions about why monasticism and all these reforms came together.

It was an era in which the monks were supposed to be worshipping God and be in seclusion. But instead it was the monks who dominated and overwhelmed the other scholars in Charlemagne's court. To my point of view it might be due to the fact that it was the "religion" which could be the strongest channel to reach out to the people and apart from the Court it was the monasteries that could be counted as some kind of solid authority people could lean on. So the monks were viewed as authorities that could keep the system together. Because in public eye, they live in a more purified and more celestial levels of life. It is the religion or the church itself that keeps people together so the Saints and monks were almost like leading figures in society and the they were considered to have certain level of wisdom despite they renounce it and seclude themselves. And this might be the reason why Charlemagne surrounded himself with that many monks and abbots. This also might be the reason why Religious Orders or Rules of Saints were so dominant in monastic life.

⁴⁰ Rules were the compiles of religous orders by prominent monks which depicts the rules and reasons how a monk should live, what his daily conducts, duties, should-shouldn't dos are, and why etc.

These were the Rules which monasteries were administered and ruled by. The monks worshipped or acted or thought as well as the way boys were taught because monks were the sole lecturers, teachers, mentors within the monasteries for the lay and the oblate boys. Along with the educational reform of Charlemagne came some decrees by which he orders that monasteries established schools within their body for the boys from the public apart from the oblates. Some basic grammar and arithmetic were taught in these schools though we are not sure whether lay-laic classes were taught by lay-teachers or all the educational stuff was made of monks. We know that they are a separate unit apart from the oblates looking at the Plan of St. Gall.⁴¹

There came times when Charlemagne ordered a change in Rules accepted by his monasteries and they differ one way or another but they were like a dictum.

Sunni : <i>Maliki, Hanbali, Shafi'I, Hanafi</i>
Shi'ah
Khawarij

Though not the same thing we can observe something similar in Medieval Islam and the rise of madrasas as centers for higher education. In medieval Islam after the Death of Muhammed occurred Schools of law which were different interpretations of how to apply Islamic teachings according to significant Islamic names and eventually came up the main schools which also influenced the process in which the madrasas emerged and evolved. For example apparently sunni Nizamiyya Madrasas which were intended to uniform the teachings on Islamic Theology in the geography are said to be established against its Shii'te counterparts. So one way or other specific points of views of specific names were somehow affective in determining the educational policy and the daily conducts. Apart from these schools of law there were some movements of thought which Caliph adopted and it inevitably affected the way intellectual facilities were held. For example, al-Ma'mun adopted Mutazila which was highly concentrated on rational philosophy and we can observe that in his zeal for scientific accumulation as opposed to scientific dogmas on intellectual issues because he tried to reach out every bit of universal teachings from what can be learned from the hieroglyphs to Sanskrit texts. Mutazila takes its reasoning source from the ancient Greece, especially Hellenistic philosopher's.

⁴¹ As stated the topic "Monastic Education" in the first chapter.

In short both in Medieval Islam and Medieval Monasteries there were some currents which affected the way educational procedures were evolved and education wasn't free from the religious and social formations within the both society.

To state again, Monasteries are not in one-on-one basis equivalent counterparts of madrasas in sense of providing scientific study in rational sciences along with the theological education. But as they were simultaneous institutions and they shared some characteristics in addition to basic differences.

3.8.2 Students in Monasteries & Madrasas

Thanks to the Charter regulating the social life in Carolingian Empire which Charlemagne ordered in 787, there needed to be inner schools for lay boys who was able to attend. We could take count them within cluster of higher education though they were not the same age as their contemporaries but there used to exist classes for liberal arts which corresponds to the supreme level educational content at the time. The reason for that was the need to increase the number of the literate people in Carolingian society and according to Charlemagne and Alcuin it could only be realized through the core, the family itself. The royal members or the children of clergy/officials/liturgic members of the court were within the reach of higher education in the court itself thanks to the Palace School of Charlemagne. So, though not learning the same curricula and the same content, there were three types of students in Frankland existing at the same time.

They were:

- the students in Palace School of Charlemagne who were consisted of people of different ages and ranks like Charlemagne, Alcuin, Charlemagne's children, officers' children at the palace, the children of clergy etc.
- the students in monastic educational circles or as they are named, cloisters.
- the students at the outer schools of Abbeys or Monasteries completely composed of lay boys.

A young boy could be enrolled in a monastery in two different ways at the time of Charlemagne depending on his aim by education: oblate and lay boy. They were mainly studying Psalms, office the hymns and learn canticles. Ferzoco and Muessing (2000; 31) write

that was what they did before starting to study extensive Grammar and science of music was also included in the course of beginner oblates. This can't be very different from the monastic applications in the Carolingian period considering the cults hardly changing under the Rules, as in Benedictine or others. But a student attending to a madrasa had to learn both theological and rational sciences. In monasteries age wasn't a criteria to get advanced, an oblate could be ahead of an older one. Two center were highly preferred: *Orleans* and *Theodulfus*. There was hierarchy among students dependig on the level how much they achieve singing chants or in grammar or in arithmetics or to what extend they manage to lead a neat monastic life.

It was even the case that a young prince sent to a monastery and we see that on some books that they got into monasteries to get a theological based education but we don't know exactly how much time they spent there. There was even literary type of works called "Mirrors"⁴² To reason that we might look at the following quotation to have an idea about that the education of a prince needn't solely take place in the Palace, he could enroll into a monastery as well to a monastery.

We know for sure that in Monastic Cloisters⁴³ and in his school Charles wanted to go beyond the classical teachings in the past. "But the circle which he found himself called upon to instruct at Charles' craved for something more than to learn to chant, read Latin, and calculate the return of Easter (Mullinger, 1911; 70)." This sentence summarizes the main conducts of monastic educational life perfectly in which monsteries can be uttered to be the only institution of education at the time and they served nothing but these in sense of education.

We don't have any idea about how much money paid by the lay students in the monasteries for their education and if they do but considering there was a charter by the Charlemagne himself that they be established it might be free of charge for a family to send their son to these schools. And I don't think oblates get any stipend or any kind of payment as what they were supposed to do was to let go of the material world.

I need to clarify here, that there were actually three types of student in the Carolingian counterpart at the time. This diversity was due to the newly reforms of Charlemagne's new educational policy. First of all there was the students we counted above; the ones in the court

⁴² Literary types used during the period and after to teach young boys the essence of being a pious and virtuous kin/emperor and how to act in specific circumstances morally.

⁴³ Monastic Circles composed of monastic individuals in monastic environments, within the monastery building or gathered for rituals.

itself. Second type can be divided into two in sense of thriving in the monastic circles: the oblates and the lay boys. Considering all these taking place in the early middle ages, and the educational background which was highly scarce at the time, what all these three had in sense of education could be counted as the higher education at the time.

As for the other pole, some students in some madrasas get stipends and they paid some amount of money before they registered their names. Considering madrasas were endowed institutions it is completely plausible. It wasn't a firm criteria for the both to be descending from a specific family to get enrolled. There were both hierarchy among students and scholars. While it was quite related to get advanced to the books one has accomplished and one could work as a lecturer once they got *ijhaza*⁴⁴ from their masters. But the same thing wasn't so existing in monasteries. Yes, an oblate could promote in his studies but could never leave the cloister to study theological or any other kind of science all he had to do was to learn how to be a perfect monk via the Rule that binds him and turn into a scholar monk, lead a decent monastic life and to educate the generations to come. As we stated before they could only move to grander monasteries depending on their success or expelled from the cloister for the sins and wrongdoings he committed.

Chart 11: Student Profile

<i>Student in a Carolingian Monastery</i>	<i>Student in a Medieval Islamic Madrasa</i>
Doesn't get stipends, has to work as well as study.(chores in the monastery)	Gets stipends, has to work as well as study. (chores in the madrasa)
Family heritage is not that important but who enrolled the oblate counts on some specific situations.	Family heritage is not important for the enrollment but the wealthier one's family is, the better madrasa one could choose. They could even get cheques from their lecturers to be paid later in case their money ends.
Accommodated in the monastery, could not accommodate anywhere else or could not even leave the cloister to outside world without permission of his supervising monk.	Accommodated in madrasa but to attend to a madrasa one doesn't have to be boarded at all. There were non-boarding madrasas as well.

⁴⁴ A diploma like document which declares that you are qualified to work or study on specific areas depending on the books you studied.

<p>There was hierarchy among the cloister. The more Psalms and chants he studies, the more advanced a student gets. As they were generally under the supervision by another monk, they were under strict discipline, could not have casual, everyday relationships in the cloister at all.</p>	<p>There was hierarchy in madrasa depending on the books you finished and the levels, scholars, personal realtions in the class etc. Older and more successful students dominated the classroom participation.</p>
<p>Preferably mustn't have mental or health problems.</p>	<p>Preferably mustn't have mental or health problems (in some madrasas they were even tested mentally).</p>

3.8.3 Physical Layout of Monasteries & Madrasas

Students in the monasteries were oblates to be monks so when a student was promising he used to be sent with a master that has a high reputation. Oblates and lay boys separated within the monstery because they needed to be secluded from the physical and psychologocial temptations of the outer life. The inner school was certainly by far the most important of the two; *the standard of teaching* was higher, *the course of instruction* was much longer. (Clark, 1926; 94). As we can see from the quotation ans as aforementioned, there were two ttypes of students in Carolingian monastic life. What they call inner school was more profound with Liberal Arts and more scientific in nature when compared to the oblates'. So I think their educational environments had to be within the same body (abbey or the monastery itself) but separete from eachother to be able to keep them away in order to prevent them from "interraction" –a hinderance for monastic cloisters and so they were. They were, according to my point of view, supposedly never integrated nor interacted with eachother because the course of education for the two was really distinct. But Hildebrant (1992, 63) writes that we have no evidence how monasteries handled their (lay boys') tutelage, whether they were taught with or separetely from the oblates, if they studied the same curriculum or whether they were day students or monastic residents.

In a Carolingian monastery there was nothing like division between Orders or Schools of Law. They were all lay or oblate Christians. But looking at the madrasa one can observe that

there were schools of law highly dominant in the formation of accomodation in madrasas during the courses and in the grouping of the students. We know that in a madrasa at the time that the students of the four schools of sunni law could study under the same roof even though they had different points of view or the content they study. Each of them would inhabit a different *iwan*⁴⁵ while hanafi students generally inhabited the room facing the *kiblah*. Both had a separete unit for praying during the day: the church within the monastery and the mesjid in the madrasas.

A monastery or an abbey would generally be like a complex in which hundreds of people both monks or oblates or lay people dwelled. They were dependent on their own in cooking, cleaning, maintanence, marketplace, and other kinds of production. They were like small towns with their own economy. As for madrasas they were also self-sufficient. Though not all of them, depending on their waqf standarts, most of the madrasas had their own field to produce their own food, cleaning, cooking, and similar chores of everyday life used to carried out within the madrasa itself. Emerged in many of them, students usually accomodated in the upper storey within the building. This might be intended and such a fact that students and teacher should not be together all the time to trigger respect to the academical stuff can be deduced.

Chart 12: Physical Layout

<i>Phsyical Layout in Carolingian Monasteries</i>	<i>Physical Layout in Medieval Islamic Madrasa</i>
It was decided to be applied according to the Plan of St. Gall but before that church had the crucified plan while residents in the abbeys or monasteries used to inhabit separate chambers both for education and accomodation as well.	Rooms for education and accomodation were separate and madrasas were inhabited according to the four-iwan plan.
They were like small villages or bases with can depend on itself in production.	There were some madrasas only consisted of the building and dwelled on what its regular income is while there are some others which made use of its own field or depend on any

⁴⁵ Rooms in a Madrasa or rooms in any kind of residence at the time.

	other type of institution to meet its needs.
Had cloisters an open area in the middle of the monastery as the common and open area.	Had a large opening in the middle of the iwans as the common area.
Churches included religious icons and displayed highly ostentatious embellishments with illuminations of gold & some theological classes took place in the church.	Doesn't include any iconic elements in its mesjids as it is strictly inappropriate to worship or expect divinity from a statue or something like statue.

Talking in general and apart from the use of the buildings and their physical layouts, one can easily realize the architectural difference between an intact cathedral and a madrasa. Cathedrals at the time, like Aachen Cathedral and its Palatine Chapel, are much more intricate in their architectural styles and the use of art within the surface. But examining a madrasa, it is not so difficult to realize the plainness and simplicity on the components of Madrasa. But considering madrasas emerged from majlises in mosques in the early times of Islam, we can observe almost the same intricate details on medieval Umayyad mosque in Cordoba. It is highly striking to see some certain parallelism on the architectural style between the Arches of the Palatine Chapel and the Umayyad mosque. Looking at the two pictures below it is not so difficult to observe the Moorish Arches which is a present of Andalusian Architecture to the medieval buildings. Considering Charlemagne also fought in Andalusia with Umayyads, the pictures speak of how he observed not only the political but also the social notations in the cultures he witnessed. To note: as we mentioned earlier the Chapel was inspired by the Cathedral in Ravenna in Italy while its front facade displays completely Carolingian in style which is another sign of how he observed and applied in his own environment.

Illustration XVII below: Cathedral Mosque of Cordoba & Arches of Palatine Chapel.



3.8.4 Lecturers Or Masters In Monasteries & Madrasas

Lecturers in Madrasas were from ulema or masters who have completed studying various books and have taken his ijhaza. It was important for them to be competent in foreign languages, to have a high reputation. In monasteries educators were the monks and abbots were the supreme status which has the last saying in an educational milieu after the King himself. Though not concentrating on the Franks the chart below can provide us some insight on the hierarchy among the academical staff in the two types, though some titles emerged much later, after the rise of college and universities, we can make a substantial comparison using the chart below. This is because first: the education in France could not completely free from The Carolingian features as it was a succession of this medieval empire. Second: monastic exercises much older in Britain, as we can remember Alcuin of York was invited to the Palace by the Charlemagne to reflect his British learning from his British master The Venerable Bede.

Chart 13: Ranks in Medieval Higher Educational Systems in Islam and in Europe

<i>Madrasa</i>	<i>Medieval College / University</i>	
Islam	France	England
1. Mutefaqqih	Escolâtre	Scholar
2. Sahib	Bachelier	Fellow
3. Mufti/muderris	Magister/Maître	Magister/Master

Above one can see the cross-corresponding titles in higher education both in European and the Islamic world at the medieval era according to the drawing line of Makdisi (1990). Makdisi states that these titles are originated from the same molds and they have some characteristics in common one of which is the triple characteristic of guilds at the time. “A major difference between the madrasa and the university, however, is that the former was an institution governed by laws. Islamic law does not recognize an abstract legal entity; even the state itself is no exception. Legally, the founder of a madrasa was an individual, not the state, even if he or she were the sultan, his wife or his daughter. The founder dictated the terms of the institution. The madrasa was the place where Islamic higher education was offered, but it was not a juridicial entity” (Hatina, 2009; 26).

The islamic world of the Middle Ages had no cultural institution that might offer an encyclopaedic knowledge of this kind. Though it is true that with the madrasa it had created a cultural institution of high quality and standard, teaching at the madrasa was always limited to religious knowledge. The instruction and study of medicine or astronomy, algebra or geometry, took place elsewhere in the often private circles of authorities in each of these sciences. The medieval Islamic world was superior to Europe in the same period in all scientific disciplines; but contrary to a position that has often been maintained, it had no institution that United all the disciplines under one roof- in other words, it had no university (Halm, 1997: 71).

3.8.5 Curriculum And Subject-Matters And Techniques In Monasteries & Madrasas

In Carolingian Monasteries, grammar taught the student to read, write, and speak Latin, the universal language of the Europe at the time while rhetoric was seen as the the art of adressing to public and also it was a preparation for literature; also there was logic which in later periods gave way to the introduction to the *quadrivium* that is composed of *arithmetic*, *geometry*, *astronomy*, and *music*. Theology dominated both the Palace School of Charlemagne and the monasteries where lay boys and oblates lived side by side. In the inner schools of monasteries boys were taught mathematics, basic calculations and grammar which can be judged as the higher rank of education for a lay boy in the empire. As for the Madrasas they both studied : “Sciences of the ancients” ‘ulum al-awa’il’ and Musluman Sciences. Islamic Jurisprudence and Fiqh constituted a considerable part of theological content. Liberal arts were included in the curriculum.

Chart 14: Curriculum

<i>Carolignian Higher Education Curriculum</i>	<i>Medieval Islamic Higher Education Curriculum</i>
<ul style="list-style-type: none"> ✓ Grammar, Latin, rhetoric, logic that makes Trivium, ✓ Arithmetics, ✓ Astronomy ✓ Music ✓ Geometry which makes Quadrivium ✓ Works of classical Greek like Virgil, Boethius, Cassiodorus and ✓ Theological contents. 	<ul style="list-style-type: none"> ✓ Classical Greek Works by the same and the contemporary names as Carolingians, ✓ Islamic sciences like Jurisprudence, Islamic Law, Fiqh, Kur’an, Hadith, Sunnah etc and ✓ Liberal Arts

But what to be taught was largely specified by the financial institutions called waqfs that organize the teaching system of the madrasas or it was the masters who could specify the curriculum to be taught. As for the Classical Greek works, they were studied in higher circles

like the very Palace School at the court of Charlemagne where they all reasoned philosophically under false names from the Bible. After the scriptoriums these works got many in number and it probably got easier to use them in the monastic circles as well.

Techniques used in madrasas were highly rote-learning as it was almost the core of the curriculum to memorize the Qur'an. The students also were expected to recite some prominent hadiths and basic rudiments in Islamic law. Repetition was highly covered as a technique and in case the master wasn't available, it was senior students' duty to supervise the younger ones during repetition. This non-skipping attitude proves that it was significant for students to recycle their learnings. Deliberation was important in sense of interpreting the jurisprudence and the hadiths. They took notes as well to have a record what they learned. Looking at the Carolingian Monastic circles and lay schools it is not difficult to say that memorization was far from the educational process. Students had to memorize chants and "the Rules" they need to finish Psalms and learn Grammar. But In Carolingian monasteries singing chants constituted a basic part of the novices' learning. They need to know certain techniques like singing in canons by using different intonation techniques. So singing was a technique students need to learn to sing chants. Oral teaching was dominant and with that it was intended to make students dependent on the teacher. They also had to learn writing neatly in order that they could work and write neatly in Scriptoriums in the future.

Chart 15: Techniques

<i>Techniques in Carolingian Learning Milieus</i>	<i>Techniques Used in Medieval Islamic Madrasas</i>
<ul style="list-style-type: none"> ✓ Memorization, ✓ Writing, ✓ Oral Teachings, ✓ Singing with various intonation techniques, in canons. 	<ul style="list-style-type: none"> ✓ Memorization, ✓ Repetition, ✓ Jadal ✓ Understanding, ✓ Mudhakara- a kind of reasoning on the cases between the members of the majlis and the notebook- note-taking process.

During the classes students used to sit in specific circles in madrasas and every student had his place according to his educational improvement. Student with older age or with more experience used to aid the master during the courses. There was a certain level of respect between the teacher and the student and a hierarchy, too. In monasteries as well there was a master-student relationship which was way more strict and distant when compared to the Islamic counterparts. Though some eras later, An oblate was under the word of a monk he was assigned and couldn't even do anything his master didn't tell him to. He had to go where his master told him to and do as he told as well. This was generally stricter in Cluny's Rules⁴⁶; he couldn't even look at his eyes directly. This level of dominance was the result of a way of thinking in Cluny that they were sinful and ignorant, the novice. Depending on the Philosophy of the Order, the relationship and indirectly the nature of the exterior teaching between the two differed as well.

3.9 EDUCATIONAL OPPORTUNITIES FOR GIRLS IN THE CAROLINGIAN AND ABBASID THOUGHTS

As we have already mentioned during the course our study on Middle Ages weren't not a highly tolerant era for educating the girls;, in almost any part of the world it wasn't something seen as a necessity to educate a girl, especially on an intellectual level. Because even from the earliest times of Greeks, girls weren't seen as potential mothers and supposed to be agile and physically perfect nominees to bear healthy childrens to be soldiers.

It wasn't very different in Roman Era as well, with the onset of what we are especially dealing, Carolingian Period in Frankland, girls in the court started to be a part of the Palace School in Charles the Great. A noble girl needed to be sophisticated and be able to utter a few words on courtly milieus. We know that Charles provided intellectual circles for the clergy, his family –sisters, wives and daughters- children – within his court and he invited a great British scholar, Alcuin, to regulate educational organizations of the empire.

For a noble girl, life wasn't so difficult at all, all she needed to learn how to be a qualified noble mother or wife and the daughters of Charlemagne were not different from the others. They attended Palace School which consisted of scholars, their father and the other students wherever court was located at the time. We don't have very specific notes on how they were

⁴⁶ A Religious order's name and its Rules

educated on specific subject matters or what their programme and when it was during the course of the day. All we know is that they attended the Palace School and apart from that they were educated as young princesses which was less significant when compared to a Prince's education. Considering there were literary genres on how to educate a noble king- The Mirrors for Princes- royal girls were not that highly valued in political environments.

Apart from the royal girls at the Carolingian court, there were lay girls who could get into a convent to get some degree theological education along with some of the other secular basic-level sciences. Where lay girls were sent for a proper Christian education were called convents. The most desired virtue for a girl was to have virginity both in physical and psychological body and it was what these convents were trying to provide for the girls. They were educated by Nuns so another name for these institutions was "nunnery". We know that Irish monasticism was effective in their nature and royal girls could get higher ranks and could vow in prestigious abbeys. Nuns also took part in copying manuscripts in Carolingian Renaissance, besides, some early medieval Carolingian convents had scriptorias. Some elites in the Carolingian clan have entered to convents to get religious instruction as well as boys.

Garver mentions the basic facilities in a convent as

- learning Psalms

- learning how to sing and pray

- studying scripture (so that they read scripture they must be learning Latin as well) (2012: 131).

She also states that the nuns and the abbess had to act according to Christian virtues and set a good example for the newly enrolled girls and become a qualified role model for the novices.

Outside the convents aristocratic women could donate to convents or could have highly effective thoughts on convents's cloisters which still echoes today.

As for the Islamic part, we can not witness the same thing on Arabian or Persian lands. Girls were leading more closed and restricted life compared to their medieval counterparts. As in Islamic thought, the women are at some level subordinate to men, they didn't have that much freedom as men did. And as we mentioned above their society had a patriarchal way of life which leaves little saying to women. They are seen as precious and sacred beings but they aren't as tolerated as men are.

A muslim woman in the era, could get her elementary education in a mosque and higher education as well if there is any. But as mentioned in the second chapter, she could get higher education thanks to her father if she was born to a scholar father because, then, most of the classes were given in the house of the scholar. Besides it would include theological sciences like fiqh, hadith, jurisprudence etc. So we could deduce that, apart from exceptional cases, it wasn't very likely for a muslim girl or women to reach into an education with liberal arts. To sum up, we can comment that Islamic counterpart was less fortunate than the Carolingian.

Chart 16: The Education of Girls

<i>Girls/Women in Carolingian Era & Education</i>	<i>Girls/Women in Islamic Counterparts & Education</i>
Less isolate and more individual (valid for aristocracy)	Highly dependent on male which limits her role in society
Could be enrolled in convents and could reach high ranks like Abbessy.	Didn't have a chance in educational promotion in educational institutions.
Could be present & take part in cultural-intellectual milieus	Not possible at all for a muslim women in general.
Coul even produce literary works, especially the ones working in convents as nuns or Abbesses.	Not that common on Islamic world but there are some works of female Islamic scholars from Cairo and Damascus as mentioned in the second chapter in the related section.

3.10 COMPARING MEDICAL SCIENTIFIC STUDIES AT CAROLINGIAN AND ISLAMIC PARTS AT THE TIME

Considering what we are talking about is Middle Ages, it would not be fair to expect too much from the contemporary physicians in these lands. But as courts are essences of the empires and so are the kings or caliphs, they needed keep healthy for the sake of their people. Carolingian medical activities was not so ahead of its time but there were some scholarship on

the medical ancient texts. They were, too, translated and tried to be preserved as a part of the aforementioned translational process. Especially works of some scholars like *Stephanus of Alexandria* and *Agnellus from Ravenna* and *Cassiodorus*'. But looking at the literature it is highly difficult to assume that they introduced fully new knowledge to the medical literature that has come to be known today. But in sense of getting making potions, remedies, diets, medical explanations and quotations translated they made a great contribution to the preservation of the accumulated medical knowledge of our time. But apart from the medical applications for ill or wounded people and the medical education of monks to provide medical help to their communities or the scriptorias where producing the replicas of ancient Greco-Roman medical works took place, there were no solid and separate institutions in the Carolingian lands that corresponds to a hospital or a "bimaristan" in Islamic sense. What we call hospital today was just a unit in a monastic complex or what we call physician was the curator of the king himself, like a court doctor.

But in Islamic medicine we encounter buildings named as "bimaristans" hospitals of today. Hospital started to spread in the 8th century and apart from studying medicine, medical students started to learn medicine at hand, by practice with bedside experience. This was was different from what the Carolingian world did. It is ture they contributed to the preservation of the great antique medical works but they didn't produce much in medical practice. Abbasids were the first to found apothecary shops and educate and assess pharmacology students. Compared to Abbasid scholars, Carolingians seems not to have gone beyond producing potions. But the extent to which these apothecary medicines worked could a matter of try-and-see kind of application.

CONCLUSION

All the comparisons in this thesis were to signify the similarities and differences between their approach and how they handled all these renovations, the implementation process of their higher educational and intellectual policies. Comparing the two one can see that the impetus which fostered all these intellectual reforms could be resulted from the educational and family background of the two, al-Ma'mun and Charlemagne.

We have discussed what Abbasid Caliphate and Carolingian Empire under the reign of Charlemagne have attempted in the name of producing educative milieus, creating a scientific accumulation and renovating intellectual background of their society so far. The reason Charlemagne and al-Ma'mun are the leading names in the study lies in the fact that they were two great monarchs in their century and they were reigning over the grandest lands of their time. Charlemagne was the Great Emperor (after being crowned as The Great Emperor on 800's Eve) on what we call Northern Western Europe today (which consists of the present Germany and France) so, looking at what he has achieved or thrived intellectually could be addressed as the roots of present higher education in today's European universities. There was not a system that could be referred as systematized teaching in Europe, let alone the term "university."

Another reason why Charlemagne sits in the middle of this thesis (as well as al-Ma'mun in its Asian-African minor) was that the 700s and 800s A.D. were an era right before the middle ages, towards the end of which the real form of university got its prototype and then the present day form. It was middle ages what brought Renaissance and Reform which closely affected the intellectualism of the following centuries. It was Charlemagne and Alcuin who created a renaissance before the exact Renaissance itself in Europe. What they planned to do could be argued as a kind of Reform in quality as well because they tried to enhance and improve:

- The intellectual and literal level of the clergy (which would alter the way “the core of the administration” and the emperor himself would think and produce.) It was aimed directly on the court and the theological organs of the empire. Moreover, to be able to diffuse this movement to the society, Charles issued charters that would facilitate educational uplift among the lay boys. So not only the governing individuals but also the people would be capable of literacy and a certain level of intellect.
- The theological organs of the empire were no longer efficient that he wasn’t content with the rituals and theological applications within the court and the monasteries as well. So, theological and ecumenical processes were also within the range of all these.

As for the Abbasid counterpart we can assume the time under the reign of al-Ma’mun as the high times in Abbasid scientific life. It was his zeal for seeking the valid scientific data that he provided all kinds of economical and logistic support. He even tried to make use of what Byzantium had in its libraries and sent a board of scholars to ask for some basic manuscripts in its libraries. He enhanced the Islamic scholarship in his land and it was paralleled with some other parts where Islamic people dwelled like Andalusia. While Baghdad was a prominent Abbasid city in science, Cordoba in Andalusia (the southern parts of Present Day Spain) was a rivaling city in sense of scientific community. All these were likely to give a rise to a an Islamic higher educational institution like “madrasa.” To sum up we can group their common characteristics that led to their golden age of intellect for the two as:

- Both Ma’mun and Charlemagne provided patronage or supported scientific efforts in their time.
- Both had institutions, pre-started systems for educational renovations. They had both descended from monarchy and their fathers were somehow related with the intellectual life. Though with adominance in Islamic science, Abbasid Caliph Ma’mun had something already structured in his hands: the bayt al-hikmahs. As for Charlemagne, he also had inherited some prominent Abbeys or monasteries from his Carolingian and even older, Merovingian antecedants. So, “the zeal” for fostering learning and acquiring a scientific accumulation wasn’t something new to neither of two monarchs in question. And what enabled them was having the “title” and “power” to carry out all these and what kept all Greek/Latin/Roman works at hand was this dual spontaneous zeals on different parts of the world.

- Both were within the reach of outer lands to enlarge their scientific accumulations
- Both had Liberal Arts in their curriculum
- Both got under the influence of political or theological elements like Mutazila or schools in Islam and the Orders in Christianity which affected the Caliph's or the emperor's attitude towards intellect.
- Both individually attend to lecture and classes thanks to their intellectual curiosities
- Both in Islamic and Carolingian counterparts translation was the essence of scientific contribution to later periods.
- Neither had systematized or standardized curriculum which was homogenous in every part of the land.
- Both provided a primal background to present day university systems
- Both were involved at medical studies but apparently Carolingian one couldn't go beyond basic medical practices in monastic buildings, medical scholarship and as a medium for these classic medical works to pass on to next generations but there were bimaristans, hospital like institutitons in Baghdad within the same century.
- Both got aid and gained insight from scholars (Charles from Alcuin & al-Ma'mun from the members of Barmakid family who were like viziers in Abbasid palatial hierarchy.)
- Both contributed a lot to the preservation of classical works which was the core of scientific data we have at hand today and it was thanks to the manuscripts by Carolingian and Abbasid sriptors of Carolingian monasteries and the Bait al-Hikma.
- Both attended not enough to the education of the female. There were convents in Carolingian part but almost no educational facility for the girls at all in the Islamic part.

But the two differed in:

- Their origin: Carolingian intellectual movements had some rooths in Roman higher education which descends from Ancient Greece. But considering the era in which the world witnessed the rise of Islam (6th century) Islamic higher education are comperatively young and don't date as far back as the European roots.
- Their goal: Charles' was to renovate clergy to get rid of their rusty and inefficient intellect while al-Ma'mun's, to accumulate all the scientific knowledge on earth and gather what he could in his Caliphate. So Charles' aim was more directed to the Empire itself while al-Ma'mun was trying to create a pool of valid scientific data; at

an extreme end we can “speculate” that he was trying to create a scientific monopoly on his lands. Science was a very effective strategy considering the prosperity it brings along as we mentioned earlier with examples like the production of perfume, irrigation systems, metal works for warfare etc.

- Charles’ educational attempts were a part of his governmental reformations but it was al-Ma’mun’s personal interest which deepened the scientific studies in his time.
- Charlemagne started with Clergy and diffused his act to the lay boys. He kept renovating intellectual life in every layer of the Carolingian community. But al-Ma’mun’s efforts were a bit far from the people and their young boys. Examining the interior and exterior schools in Charles’ renovations one can see that educating the clergy and then the boys were aimed. But as for al-Ma’mun’s case, what he tried to do was to foster the scientific facilities in his palatial institutions like Bait al-Hikma. Compared to Palace school of Charlemagne, al-Ma’mun’s Bait al-Hikma was educating scholars, not students. It used to educate officers for public offices, medicals, architects or engineers for public service in addition to producing scientific production. There were *maktabs* for elementary education.
- We can assume that Carolingians were behind the intellectual level of the Islamic side as unlike Carolingian scholars, Islamic ones could study in observatories, they could measure the size of the earth (Biruni) or commission a study for mapping the world. We also know that Alcuin and Charlemagne sent an astronomer to Italy to inquire why when an expected moon eclipse didn’t occur which depicts the interest and effort but inadequacy in astronomy.
- Al-Ma’mun didn’t attempt to sponsor for any literary or cultural research, rather it was science he was interested in. And as theology was already a great part of the Islamic learning, they didn’t concentrate on theological and literary aspect. But Carolingians were more concentrated on Trivium and at the arrival of Alcuin at Charles’ palace, he enlarged the aspect they are interested in to Quadrivium as well.
- Carolingian intellectual renovations could be described as a tree with two branches as palatial, monastic branches and the latter also divided into exterior and interior school which gives it a multiple characteristic. But Islamic intellectual efforts were one-directioned. We can, again, “speculate” it was like a “science for science” movement in Islamic-Abbasid lands.

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