



TREATMENT OF KNOWLEDGE: THE CASE OF  
AL-BĪRŪNĪ AND IBN BAṬṬŪṬA

BY

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## ABSTRACT

Al-Bīrūnī and Ibn Baṭṭūṭa were two outstanding figures that the Muslim civilization of the Middle Period had produced. Al-Bīrūnī's extensive scholarship and learning surpassed his reputation as a traveller whilst Ibn Baṭṭūṭa's celebrated journey camouflaged his intellectual achievement. Irrespective of these facts, our study largely revolves around their treatment of knowledge. In so doing, their educational and intellectual geography, philosophy, objective, epistemology and methodology of knowledge, and their contribution to the Muslim intellectual and scientific tradition dominate our discussion. In the course of our analysis, similarities and differences surface, much to our delight for the knowledge that they seemed world apart at the preliminary stage of this study. Al-Bīrūnī and Ibn Baṭṭūṭa can be considered pioneers in their field. Up to the time of modern means of communication, Ibn Baṭṭūṭa surpassed others in his feat whilst al-Bīrūnī's major works still needed to find their match. The Muslims rejoice and celebrate their achievements but most importantly the positive attitude towards knowledge as exemplified by both and the early Muslims must be upheld. The Muslim intellectual and scientific tradition should be the beacon, thereby helps to manoeuvre in uncharted grounds. Today's challenge demands some original and creative thoughts in providing solutions to contemporary problems. This could only be achieved by embracing Islam as its Worldview is replete with concepts and principles in building a real civilization. For this to materialize, our approach to the Muslim intellectual and scientific tradition must be that of contemporary Islamic *Aṣālah*. To again play our role as '*ibād and khulafā*', the dynamic role of the towering Muslim figures of the past must be emulated and treatment of knowledge should result in *ta'dīb* and thus forms the foundation for the revival of the future Muslim Civilization.

## ملخص البحث

كان البيروني وابن بطوطة شخصيتين بارزتين صنعتهما الحضارة الإسلامية في القرون الوسطى من التاريخ. لقد اشتهر البيروني بغزارة العلم أكثر من شهرته كرحال، بينما كانت رحلة ابن بطوطة أكثر شهرة من إنتاجه العلمي. وبغض النظر عن هذه الحقائق، فإن بحثنا هذا يركز بصورة عامة على طريقة تناولهما للمعارف والعلوم. ومن هذا المنطلق، فإن ما يركز عليه بحثنا هنا هو دراسة جغرافية التعليم والفلسفة وطرق ووسائل المعارف لديهما. ومن خلال تحليلنا، فإن وجوه الشبه والاختلاف بين العلوم - التي قد تبدو مختلفة كل الاختلاف - تظهر كثيراً في خطواتنا الأولى في هذه الدراسة. وبالإمكان اعتبار كلا من البيروني وابن بطوطة رائدين في ميدانيهما. وحتى عصر وسائل الاتصالات الحديثة، فإن ابن بطوطة فاق غيره في مجاله، وكذلك نجد أن أعمال البيروني الرئيسة فريدة لا نظير لها. والمسلمون يعتزون ويهناون بإنتاجهما، لكن الأهم هو الموقف الإيجابي من هذه المعارف والعلوم والذي مثله كلا الرجلين والمسلمين الأوائل، والذي يجب الاقتداء به والتشجيع عليه. وينبغي أن يكون تراث المسلمين العقلي والعلمي منارة يستضاء بها في الجوانب المجهولة من العلوم. إن تحديات العصر الحاضر تقتضي إيجاد أفكار خلاقة ومبدعة حتى توفر حلولاً للمشكلات المعاصرة. وهذا لا يمكن أن يتحقق إلا من خلال تبني الإسلام بوصفه منظوراً عالمياً حافلاً بالمفاهيم والمبادئ التي تساعد على بناء حضارة حقيقية. من أجل تحقيق ذلك، فإن طريقتنا إلى تراث المسلمين العقلي والعلمي لا بد أن تكون أصالة إسلامية معاصرة. ولكي نقوم بدورنا عبادةً وخلفاءً لله في أرضه، فيجب أن ندرك هذا الدور الرئيسي "الديناميكي" الذي لعبه المسلمون الأوائل، ويجب أن يظهر التأديب كنتيجة لدراستنا للمعارف والعلوم، والتي ستكون أساساً لنهضة المسلمين الحضارية المرتجاة في المستقبل.

## **APPROVAL PAGE**

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## DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. I also declare that it has not previously or currently submitted as a whole for any other degrees at IIUM or other institutions.

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AL-BĪRŪNĪ AND IBN BAṬṬŪṬA**

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To my offspring

Let there be among you *qurrat al-a'yun* and *imām li al-muttaqīn*,  
who will consistently be engaged in the pursuits of knowledge.

*Amīn Amīn Yā Rabb al-‘Ālamīn*

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Its program – make it possible for prospective seekers of knowledge coming from any background to pursue post graduate studies in Islamic thought and civilization.

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Its professors – masters of their own fields with whom intellectual encounters become fulfilling and enriching.

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# INTRODUCTION

## BACKGROUND OF THE STUDY

The Muslim intellectual and scientific traditions will always remain as the foremost and invaluable heritage and legacy of Muslims. These rich traditions have not only fascinated and benefitted Muslims, but others as well, though seldom acknowledged.<sup>1</sup> Right from the first verse revealed in Islam, the Muslims of the pioneer generation were furnished with the worldview of Islam.<sup>2</sup> After a series of stages commencing with the early period in Makkah, the latter period, and then the period in Madīnah, the Muslims had grasped and acquired sufficient vocabularies, enough to form the structure of Islamic knowledge. The latter in turn provided the Islamic scientific frameworks for the Muslims to embark on their intellectual and scientific activities. Pursued by a series of expansion and enrichment among the later generations of Muslims, we have inherited their rich and sometimes unsurpassed intellectual legacy.<sup>3</sup>

It is important to note that ‘certain worldviews cannot lead to the rise of sciences’<sup>4</sup> and therefore generate the unprecedented intellectual vigour and scholarly activities as exemplified by the Muslims of the formative period,<sup>5</sup> the Graeco-Arabic

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<sup>1</sup> See Cemil Akdogan, “Muslim Influence upon European Scholarship and Learning” in *Al-Shajarah, Journal of International Institute of Islamic Thought and Civilization*, vol. 6, no. 2 (2001) for the often refusal to attribute the birth of modern science to Muslim contribution.

<sup>2</sup> See Alparslan Acikgenc, *Islamic Science: Towards a Definition* (Kuala Lumpur : ISTAC, 1996), 9-31 for detailed explanation of the nature and rise of worldviews specifically the Islamic worldview.; S. M. N. Al-Attas, *Prolegomena to the Metaphysics of Islam: An Exposition of the Fundamental Elements of the Worldview of Islam*. (Kuala Lumpur : ISTAC, 1995). for the fundamental elements of the worldview of Islam .

<sup>3</sup> See Alparslan Acikgenc, *Islamic Science...*, 61-92 for full and detailed explanation on the development of Muslim intellectual and scientific tradition.

<sup>4</sup> *Ibid.*, 63.

<sup>5</sup> See W. M. Watt, *The Formative Period of Islamic Thought*. 1st South Asian Edition. (Oxford : Oneworld Publication, 2006) for the development of Islamic thought from the beginning up to 950 A.D. during this formative period.

translation movement period,<sup>6</sup> and the assimilation and transmission period<sup>7</sup>. This is attested by the fact that, although Greek sciences were prevalent during the Roman Byzantine period among its subjects, books, schools, and scholars were met with much indifference or hostility,<sup>8</sup> apart from the whole of Greek legacy which was becoming obsolete.<sup>9</sup> In retrospective, it is therefore amazing that the Muslim civilization of the past provided fertile ground for a staggering number of erudite figures of cosmopolitan background to engage seriously in knowledge, virtually covering all that of their time, and whose treatment by these two selected personalities has become the interest of this study.

## **TREATMENT OF KNOWLEDGE IN THE MUSLIM INTELLECTUAL AND SCIENTIFIC TRADITIONS**

Treatment of knowledge, which is the core of this thesis, claims our attention due to its distinctive effect to the early Muslims rightly orienting themselves at the practical and religious levels in the field. Their knowledge acquisitions, which were propelled by the religio-socio-political circumstances of the time, embraced the scope and depth as attested by their voluminous work and the intricacies of the discussion. Undoubtedly, the quest for intellectual expansion had its roots in the teachings of the Qur'ān and the Ḥadīth of the Prophet P.B.U.H. Signalling by the word *Iqra'* (read), the Muslims ventured far and wide, physically and spiritually, intellectually and

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<sup>6</sup> See Dimitri Gutas, *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbasid Society (2<sup>nd</sup> – 4<sup>th</sup> / 8<sup>th</sup> – 10<sup>th</sup> centuries)*, (London and New York: Routledge, 1998), xiii for 'a study of the major social, political, and ideological factors that occasioned the unprecedented translation movement from Greek into Arabic in Baghdad'.

<sup>7</sup> See J. L. Kraemer, *Humanism in the Renaissance of Islam: The Cultural Revival during the Buyid Age* (Leiden, New York, Koln: E. J. Brill Publication, 1992) for this period is dubbed as "the Renaissance of Islam" owing to 'a powerful assertion of individualism, a burst of personal expression, in the domain of literary creativity and political action'.

<sup>8</sup> Amin A. Khairallah, *Outline of Arabic Contributions to Medicine* (Beirut: American Press of Beirut, 1946), 23-24; Ibn Khaldūn, *The Muqaddimah: An Introduction to History* 3 Vols., translated from Arabic by Franz Rosenthal (New York: Bollingen Foundation, 1958), 3:115.

<sup>9</sup> Amin A. Khairallah, 22.

religiously, exerting themselves in their chosen fields of endeavour. A number of them displayed originality of thought whilst some others brilliantly appropriated sources from other than their own. Most significantly, they set a precedent in many fields of scholarship.

Within a century, Muslims were thus able to develop their peculiar intellectual life and founded the specifically Arab Islamic sciences of tradition, law, and history. This immensely rapid intellectual development, which was a result of interaction of the Hellenistic tradition in Syria and the Qur'ān, remains one of the marvels of the intellectual history of mankind.<sup>1</sup>

Knowledge in relation to its meaningful treatment, determines the rise and fall of a civilization.<sup>1</sup> Research on past civilizations of Greek, Persian, Indian, Chinese and Roman testifies to the statement. Inadvertently, once a civilization loses its sedentary elements, knowledge ceases to be pursued and developed.<sup>1</sup> From the seventh through to the fifteenth century, the Muslims had left an indelible mark in the area of scientific intellectual traditions, which peaked between the eighth and the thirteenth century. Their preoccupation with knowledge is aptly enlightened by Rosenthal as

there is no other concept that has been operative as a determinant of Muslim civilization in all its aspects to the same extent as *'ilm*... There is no branch of Muslim intellectual life, of Muslim religious and political life, and of the daily life of the average Muslim that remained untouched by the all pervasive attitude towards "knowledge" as something of supreme value for Muslim being. *'ilm* is Islam even if the theologians have been hesitant to accept the technical correctness of this equation.<sup>1</sup>

Undoubtedly, *'ilm* is one of those concepts that has dominated Islam and transformed Muslim civilization into its distinctive shape and feature. The Muslims of

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<sup>1</sup> Fazlur Rahman, *Islam* (Chicago and London : University of Chicago Press, 1979, 2nd Edition), 3.

<sup>1</sup> See F. Rosenthal , *Knowledge Triumphant: The Concept of Knowledge in Medieval Islam*. (Leiden: E. J. Brill, 1970), 1.

<sup>1</sup> See *The Muqaddimah*, 2:258 for concise meaning of sedentary.

<sup>1</sup> Franz Rosenthal, *Knowledge Triumphant...*, 2.

the formative period<sup>1</sup> , embarking upon the two primary sources which have always been al-Qur’ān and al-Ḥadīth, developed the Islamic thought to form the basis for numerous disciplines which are in existence today. Whilst following the period<sup>1</sup> , other intellectual sciences were well appropriated, developed, and expanded to their maturity. The succeeding Muslims were ready to venture into areas of knowledge beyond its roots. It was so because every aspect of the Muslims’ lives of the period such as intellectual, political, and religious were centered on the dominant concept of knowledge.<sup>1</sup>

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Scientific process<sup>1</sup> , which constitutes stages<sup>7</sup> commencing with a worldview to problems, disciplines, naming, and progress had produced a multitude of multidisciplinary scholars and disciplines to the extent of some being encyclopedic. It is from this fountain of intellectual and scientific traditions that the Europeans in the renaissance period quenched their thirst and inherited the Muslim legacy, which served as the basis of their intellectual awakening.<sup>1</sup> The Muslim legacy is<sup>8</sup> a rich intellectual heritage that springs from various sources which are the Qur’ān and al-Ḥadīth, and also from the civilizations of Greek, Persian, Greco-Roman, and Indian.

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<sup>1</sup> The formative period is the period of development of religious doctrine, which was central to the intellectual life of the whole community and whose span is from 632 AD to 945 AD. See W. Montgomery Watt, *The Formative Period...*,1.

<sup>1</sup> The period between 945 to 1500 is referred to as the Middle Period. See Marshall G. S, Hodgson, *The Venture of Islam : Conscience and History in a World Civilization* 3 Vols (Chicago and London : The University of Chicago Press, 1974), 2:3.

<sup>1</sup> Op cit.

<sup>1</sup> Scientific process is elaborated in detail in Alparslan Acikgenc, *Decline and fall of Islamic Scientific Tradition*. Paper presented at First ISTAC International Conference on Islamic Science and the Contemporary World, 9th – 10th January, 2008.

<sup>1</sup> See Cemil Akdogan, ‘Muslim Influence upon European Scholarship and Learning’ ;W. Montgomery Watt, *The Influence of Islam in Medieval Europe*, (Edinburgh: Edinburgh University Press, 1972), 58-92.

## STATEMENT OF THE PROBLEM

It is our concern that the intensity of seeking knowledge is not witnessed among the Muslims of this period. Rather, its pursuance is driven by academic achievement and excellence at the expense of its real purpose.<sup>1</sup> In addition, the progress and development in the information communication technology (ICT) and globalization have oriented the Muslims' lives into keeping pace with the changes in the society. As a result, terms like progressive and competitive seem to dictate the on-goings in the Muslim education system. Thus, a shift in emphasis particularly in the school curriculum is often implemented at the expense of alienating the aim of knowledge and education. In so doing, not only Islamic principles and values are at stake but worse still, the Muslims are at a loss with respect to their attitude towards knowledge and education. Rote learning replaces the genuine interest in pursuing knowledge. To aggravate matters, accumulation of certificates or credentials has assumed greater importance in judging a person's worth. As a consequence, a displacement of the aim of education to one in which economic and social ends receive greater emphasis, has relegated true knowledge to a backseat position.

The aim of this research is to develop the right attitude towards knowledge and education in line with the Islamic principles. Hence, the study analyses the treatment of knowledge by two selected early Muslim intellectuals particularly al-Bīrūnī<sup>2</sup> and Ibn Baṭṭūṭa. Noteworthy, the revival of the Muslims in the areas of scholarship or

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<sup>1</sup> Muslims agree in general that the real purpose of knowledge or education is to inculcate *adab* or to be *'abid* and *khalīfah*.

<sup>2</sup> The name of this scholar is spelled this way throughout the thesis despite other variations. See Kamar Oniah Kamaruzaman, *Early Muslim Scholarship in Religionswissenschaft* (Kuala Lumpur: ISTAC, 2003), 29, n.1.



scientific and technological achievements needs to be aligned with the Islamic principles for any progress or development to be meaningful.<sup>2</sup>

1

## **OBJECTIVE OF THE STUDY**

Al-Bīrūnī and Ibn Baṭṭūṭa had once dominated the scenes of the Middle Period. Their lifetimes were coincident to the peak period of the Muslim intellectual and scientific achievements. Despite the fact that other Muslim scholars lived during the Middle Period, al-Bīrūnī and Ibn Baṭṭūṭa remained prominent. Their distinctive engagements and contributions in the area of knowledge capture our attention. Being the towering figures in their respective fields, al-Bīrūnī and Ibn Baṭṭūṭa deserve our respect and attention.

Al-Bīrūnī and Ibn Baṭṭūṭa, whose lives were spent in the early and later Middle Period of the Muslim history respectively, initially appear as an inappropriate subject for comparative study. Apart from both had travelled or compelled to travel, one has to reach hard to the recess of one's mind in order to strike a resemblance between the two. Some comfort lies in the fact that they both spent some years in India and their intellectual routes did sometimes converge or overlap in the countries they visited. Al-Bīrūnī and Ibn Baṭṭūṭa came from two periodically different Muslim socio-political contexts, as evident from the almost 300-year gap. It should be expected that a comparative study of this nature will face less problems in comparison with two different cultures or civilizations.<sup>2</sup> Comparative analysis<sup>2</sup> of Muslim scholars belonging to the early and later Middle Period is plausible for the fact that concepts, theories, doctrines, and ideas of the philosophical enterprise of these periods, are

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<sup>2</sup> The need for Muslims especially scientists to work within Islamic conceptual scheme in order to give rise to Islamic science; see Alparslan Acikgenc, *Islamic Science...*, 93-106.

<sup>2</sup> Alparslan Acikgenc, *Being and Existence in Sadra and Heidegger: A Comparative Ontology*, (Kuala Lumpur: International Institute of Islamic Thought and Civilization, 1993).

objectively similar for what is being investigated is of the same reality.<sup>2</sup> However, it must be understood that ‘the earlier Middle Period, up to mid 13<sup>th</sup> century, differed in its historical conditions rather importantly from the later Middle Period, since the period after the Mongol conquest had introduced new political resources.’<sup>2</sup>

Thus the three main objectives responsible for embarking on this study and simultaneously form our research questions are the followings:

1. Al-Bīrūnī and Ibn Baṭṭūṭa are prominent and celebrated figures in their respective fields. Their contributions specifically in the treatment of knowledge namely philosophy, objective, methodology, epistemology in the pursuit of knowledge, and intellectual achievements will add volume to the field.
2. Al-Bīrūnī and Ibn Baṭṭūṭa lived in two different periods separated by the 300-year gap. This will inevitably provide opportunity for the researcher to study the extent of their treatment of knowledge which was shaped by the culturo-socio-political environment of the respective periods.
3. These two personalities subscribed to different *madhhab* (sect). Whilst al - Bīrūnī is presumed to be inclined to Shī‘ism<sup>2</sup> , Ibn Baṭṭūṭa was firmly brought up on Sunnī Mālikī with reverence towards *taṣawwuf* practices.

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<sup>2</sup> Ibid.

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<sup>2</sup> Marshall G.S. Hodgson, *The Venture of Islam: Conscience and History in a World Civilization*, (Chicago and London: The Univ. of Chicago Press, 1974), 2: 4.

<sup>2</sup> He was born into a Shī‘ite Muslim family. See Bill Scheppler, *Al-Bīrūnī: Master Astrologer and Muslim Scholar of the Eleventh Century*, ( New York: The Rosen Publishing Group, 2006), 26; al-Bīrūnī was a Shī‘ite Muslim. See ‘Abu Ar-Rayhan Muhammad ibn Ahmad al-Bīrūnī’ <<http://www.britannica.com/EBchecked/topic/66790/al-biruni> > (accessed 28 November, 2008); al-Bīrūnī was a Persian of Shī‘ite origin. See Hamed A. Ead (Edit. & Prepared), “The Time of al-Bīrūnī” in *History of Islamic Science 6* <<http://www.levity.com/alchemy/islam17.html> > (accessed 28 November, 2008). ‘much of nobility and educated classes’ one of whom is al-Bīrūnī was of Shī‘ite Muslim <<http://www.absoluteastronomy.com/topics/islam-in-iran> > (accessed 28 November, 2008)

<sup>2</sup> Here Al-Bīrūnī is also thought to be a follower of Ash‘arite. See Ziaudin Sardar, “Science in Islamic Philosophy” <<http://www.muslimphilosophy.com/ip/rep/H016.htm>> (accessed 28 November, 2008).

The researcher proposes that matters of faith indirectly determine their philosophy, attitude, methodology and epistemology of knowledge.

## LITERATURE REVIEW

Areas of knowledge have been the trodden fields for many scholars and writers.<sup>2</sup> Various aspects of knowledge have been discussed passionately and scrutinized from its multi-faceted angles. However, treatment of knowledge as the field understudy conveys diverging interpretations. For this particular study, we shall confine our discussion in this subject to first and foremost the worldview that is largely responsible for determining the manner of treating knowledge. A particular worldview will definitely determine the philosophy and attitude in the pursuit of knowledge, the epistemology and methodology of knowledge, and the dissemination and contribution of knowledge. All these will be central to the development of the thesis. Equally significant is the cultural, social, and political variants current to the time that are largely responsible for injecting the impetus to the intellectual dynamism. An effort to comparatively analyze al-Bīrūnī's and Ibn Baṭṭūṭa's treatment of knowledge is rather daunting due to the seemingly little literary works done at probing the intellectual life of Ibn Baṭṭūṭa in relation to al-Bīrūnī. Abundance of literature on or by al-Bīrūnī is contrasted with a modest share on Ibn Baṭṭūṭa and his sole *Riḥla*<sup>2</sup>.

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To our knowledge there is not a single literature wherein al-Bīrūnī and Ibn Baṭṭūṭa claim its central discussion. However, they are often highlighted in passing

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<sup>2</sup> See Al Ghazzāli, *The Book of Knowledge*, (Nabih Amin Faris, Trans.), (Lahore: Sh. Muhammad Ashraf, 1987); F. Rosenthal, *Knowledge Triumphant...*; Wan Mohd. Nor, *The Concept of Knowledge in Islam : Its Implication for Education in a Developing Country* (London & New York : Mansell Publishing Limited, 1989); Franz Rosenthal, *The Classical Heritage in Islam*, trans. from German by Emily & James Marmorstein (London : Routledge & Keagen Paul, 1975); Osman Bakar, *Classification of Knowledge in Islam* (Cambridge : Islamic Texts Society, 1998); Wan Mohd. Nor, *Penjelasan Budaya Ilmu* (Kuala Lumpur: Dewan Bahasa dan Pustaka, 1997).

<sup>2</sup> *Riḥla* is used throughout this thesis in referring to Ibn Baṭṭūṭa's renowned *Tuḥfat al-Nazar fī Gharā'ib al-Amṣār wa 'Ajā'ib al-Asfār*.

whenever topics such as travel, geography, ethnography, or anthropology in the Muslim history are discussed. In addition, the fact that they shared some life experiences in India often made them capture the attention of certain writers. Our attempt to link them together especially in the treatment of knowledge faces some challenges in relation to our effort at acquiring the relevant literary materials. We almost rely entirely on the translation of Ibn Baṭṭūṭa's *Rihla* for the purpose of extracting his treatment of knowledge. The introduction by H. A.R. Gibb in 'Ibn Baṭṭūṭa: Travels in Asia and Africa' provides and enhances the socio-religio-political background of his time. Further, pertaining to socio-religio-political variants during Ibn Baṭṭūṭa's time, the knowledge of them is generously supplemented by Ross E. Dunn in 'The Adventures of Ibn Baṭṭūṭa: A Muslim Traveler of the 14<sup>th</sup> Century'. Elsewhere, L. P. Harvey furnishes with the attitudes of Ibn Baṭṭūṭa towards foreign culture, Ibn Baṭṭūṭa's knowledge in other areas, and some controversial aspects of *Rihla*, while majority of other books on Ibn Baṭṭūṭa are simply translations of *Rihla* or its abridgements in slight variations. However, Tim Mackintosh-Smith's 'Travels with a Tangerine: From Morocco to Turkey in the Footsteps of Islam's Greatest Traveler' provides an unforgettable glimpse into both the present-day and 14<sup>th</sup> century Islamic worlds by tracing Ibn Baṭṭūṭa's first part of the journey.

A rather extensive literature on al-Bīrūnī has facilitated our search. However, a subject on the treatment of knowledge by al-Bīrūnī as we envisioned, is not exclusively written as such. Thus, we had to gather our materials from many sources. M. G. S. Hodgson furnishes us with the details of socio-culture-political variants of the Middle Period in his volume two 'The Venture of Islam: Conscience and History in a World Civilization'. This is supplemented by other literature on the history of Muslim or Islamic civilizations as cited in the footnotes. As for al-Bīrūnī's

background, specifically his link with anything Hindu or other civilizations is gathered from C. Edward Sachau's preface in his al-Bīrūnī's translations of *Taḥqīq mā li al-Hind min Maqūlatin Maqbūlatin fi'l-'aql aw Mardulatin*<sup>2</sup> and *al-Athār al-Bāqiah 'an al-Qurūn al-Khalīqah*<sup>3</sup>. 'Al-Bīrūnī Commemorative Volume' edited by Hakim Mohammed Said provides the much needed materials on philosophy, attitude or objective, epistemology, methodology of al-Bīrūnī in his pursuits of knowledge, and contribution. 75 scholarly papers presented at the al-Bīrūnī International Congress by imminent scholars and writers throughout the world can be regarded as authoritative and reliable owing to the considerable materials on al-Bīrūnī which demand extensive research involving primary sources. Many people have written on al-Bīrūnī's intellectual and scholarly contributions upon which we organize that particular section to the extent that electronic materials do not escape our attention.

Working on these resources, a comparative study is conducted whereby we analyse the differences and similarities between their treatment of knowledge and evaluate the pertinent areas which are relevant to contemporary Muslim education.

## **SIGNIFICANCE OF THE STUDY**

The significance of this study is attributable to the fact that both al-Bīrūnī and Ibn Baṭṭūṭa shared some common attributes, which to this date are still relevant to education of the contemporary Muslims. Firstly, their characters portraying determination, observant, objectivity, and passion are most instrumental in the area of knowledge and education. Secondly, either with ease or hardship they braved some tough situations which benefitted them as learning adventure. Last but not least,

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<sup>2</sup> Hereafter cited as *Taḥqīq mā li al-Hind*.

<sup>3</sup> Hereafter cited as *al-Athār al-Bāqiah*.

though inconspicuous or sometimes implicit, they often fell back onto their Islamic belief in their intellectual or physical ventures.

The hardships, the life threatening moments, bereft of almost everything, and left at the mercy of their captors act as their common denominators, yet al-Bīrūnī remained productive intellectually and Ibn Baṭṭūṭa, undeterred in his journey of myriad purposes. In their transits, the existing knowledge, custom, culture, and practices of the local inhabitants be they Muslims or not were studied and absorbed. They earned the respect and trust of rulers, chiefs, and even the people of different beliefs. Al-Bīrūnī left an unrivalled intellectual heritage in his epistemology and methodology, and Ibn Baṭṭūṭa, the unsurpassed recollection of the later Middle Period's socio-culture-political contexts particularly of the Muslim World of the 14<sup>th</sup> century. In the span of their travel, knowledge of different genres was sought, gathered, and transmitted verbally or in writing. All these make sufficient ground for comparison specifically in their treatment of knowledge, which would make significant contribution to the Muslim contemporary education.

Specifically, it is hoped that the findings of this study:

- i) Al-Bīrūnī's and Ibn Baṭṭūṭa's philosophy, objectives, methodology, and epistemology in the pursuit of knowledge
- ii) Al-Bīrūnī's and Ibn Baṭṭūṭa's adaptability to the multicultural setting and their treatment of knowledge or culture of foreign sources
- iii) Al-Bīrūnī's and Ibn Baṭṭūṭa's contribution to the Muslim intellectual and scientific traditions

will contribute positively to Muslim contemporary education. The study will enhance the positive aspects of being in a multicultural context and justify the need to travel to distant land for the purpose of pursuing knowledge. With globalization, the Muslim

world has become more transparent and hence exposed to knowledge from various sources. These two scholars spent their lives amidst the cosmopolitan and metropolitan world during the Middle Period, which portray some common characteristics to the pluralistic and globalized nature of some contemporary Muslim societies. Therefore, it is justifiable to learn the way these two scholars benefitted from the multiethnic and multicultural societies of their period. A new challenge for the Muslim *Ummah* (community) is that, there has to be a major paradigm shift with respect to practices in education or to be more exact, attitudes in the acquisition of knowledge. These attitudes must lead to the ability to offer Islamic solutions to contemporary problems. For a person of that calibre, sound knowledge of Islamic principles supported by a good grasp of present day knowledge replete with sufficient knowledge of *farḍ 'ayn* (obligation towards the Self) and *farḍ kifāyah* (obligation towards the Society) is a necessity.

## **METHODOLOGY OF THE STUDY**

This study employs a qualitative research methodology particularly the use of case study, common to the social sciences field. Owing to its nature, the research involves entirely an analysis of documents and materials, thus the search for sources is confined to mainly library research. In the process, textual and documental evidence representing primary and secondary sources in the form of books, journals, documents, and wherever possible manuscripts are referred and analyzed. However, we almost entirely rely on secondary sources apart from some translations of the primary sources. Upon procuring these sources, we conduct a comparative analysis, and an evaluation of them.

## **ORGANIZATION OF THE STUDY**

The study is organized in the following manner. Chapter one surveys the literature wherein al-Bīrūnī and Ibn Baṭṭūṭa are often linked together prior to reviewing the political, social, and intellectual orders of their periods in general. Next, the life background of al-Bīrūnī and Ibn Baṭṭūṭa is supplemented so as to enhance their educational and intellectual geography, which is subsequent to the former. Chapter two commences with short introduction on the *Riḥla* (journey, travel) culture among the Muslims prior to conducting a general survey of Muslim centres of learning. Next, al-Bīrūnī's and Ibn Baṭṭūṭa's philosophy or attitude, objective or motivation, methodology, epistemology, and ease of facilities extended or available to them dominate our discussion. In chapter three, we look at the cosmopolitan and metropolitan world of the Muslims during the Middle Period. Subsequently, we provide the political, social, and intellectual situations in depth and simultaneously trace al-Bīrūnī's and Ibn Baṭṭūṭa's journeys in the midst of the cosmopolitan and metropolitan Muslim World of the Middle Period. We conclude this chapter with the attitudes of al-Bīrūnī and Ibn Baṭṭūṭa towards knowledge or culture of foreign sources. Chapter four elucidates the contribution made by al-Bīrūnī and Ibn Baṭṭūṭa to the Muslim intellectual and scientific traditions, and its dissemination. We conclude this study with some relevance, findings, and suggestions for Muslim contemporary education.