

AL-BIRUNI SHENASI IN PAKISTAN

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ABSTRACT

Abu Rayhan Muhammad Ibn-e- Ahmad, known as Al-Biruni (362-440 H), a Persian philosopher, physician, scientist, sociologist, historian, mathematician, chronologist, linguist, astrologist and thinker enjoys the unparalleled fame in the world of knowledge. Al-Biruni, one of the greatest thinkers of Medieval Islamic world, travelled extensively in the search of knowledge. He visited a number of cities of present Pakistan. He engaged himself in learning different areas for more than a decade in this region. This article is a tribute to this multidisciplinary icon of knowledge from Persia. The purpose of this study is to acknowledge the recognition of the contributions Persian scholars like Al-Biruni in Pakistan, the subcontinent then. The main focus of this paper is the work done in Pakistan on Al-Biruni. The information presented in this paper is mostly cited from publications like literature for children to extensive works of translation in Pakistan is assessed to appreciate the contributions of Pakistanis on Al-Biruni Shenasi. This is a qualitative research made through content analysis approach. It is found through extensive reviews that his introduction is included in national curriculum of Pakistan (academic books) at different levels. Al-Biruni's work has been translated by Pakistani writers along with the publishing of conference proceedings. Research is also done on his contributions in various fields of knowledge. This study will help define the role of Persians in knowledge addition in neighbouring regions and the acknowledgement of Al-Biruni Shenasi in Pakistan.

Key words: Al- Biruni, Persia, Pakistan, curriculum, translation, children literature

Introduction

The light of Islam penetrated in the subcontinent as early as 712 A.D from the West with the Arab General Muhammad bin Qasim and during the 10th century A.D from the North with the Turk Sultan Mahmud of Ghaznah.¹ Commencement of Islam in this region opened the doors to the travelers who added to the knowledge of this region in terms of scientific studies and artistic skills. Abu Rayhan Al-Biruni is one of such eminent scholars who added value to the knowledge of the region. The fourth and fifth century of the Hijra calendar represent a turning point in the history of Islam in all respects. 5 Riaz Ahmed writes on importance of Al-Biruni in the following words:

It was because of the efforts of the scholars like Al-Biruni whose contributions brought new ideas and observations in the thought of Muslims not only in Central Asia, Pakistan and Iran but in the Arab, North African and Spanish lands. (Ahmed, 2010:168)

Importance of this Study:

This study is made to pay tribute to Abu-Rayhan Al-Biruni, a distinguished scholar of the Muslim world. This is to recall the glorious past of Muslim scientists and scholars, who worked to form the foundation of the modern scientific achievements. This study will give a holistic picture of *Al-Biruni Shenasi* in Pakistan by introducing the publications on him in Pakistan.

Scope of Study: The scope of this study is to review the Al-Biruni Studies in Pakistan. It is limited to the work on Al-Biruni by Pakistani writers, translations of his work in Pakistan, his introduction in national curriculum of Pakistan and other publications like literature for children on Al-Biruni.

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Methodology:

Research methodology used for this paper is descriptive content analysis. Publications on Al-Biruni in Pakistan are reviewed to describe his life and works. The different fields of publication on Al-Biruni are discussed with examples of each along with the brief introduction of some prominent writers contributing in *Al-Biruni Shenasi* in Pakistani.

The Life of Al-Biruni

Al-Biruni emerged as a famous scholar of Central Asia, Pakistan and India. He was a prolific writer. His writings covered the areas of history, philosophy, society, culture, astronomy, mathematics, geography and other areas. Al-Biruni's full name was Abu Rayhan Muhammad bin Ahmed Al-Biruni. He was born on Zi Hajjah of Hijri calendar year 362, equivalent to September 973 and was died on 3rd of Rajab of Islamic Hijri year 440, equivalent to 13th December 1048 ADⁱⁱ. Al-Biruni was born in Kheva, the suburb Khwarazm, due to which he was named Al-Biruni. At the age of 21 in year 994 A.D. he went to Gurganj, about 12 miles in the north of Kheva. (*Urdu Jameh Encyclopedia*, 1987: 119) Sultan Mahmud Ghaznavi conquered Kheva and brought Al-Biruni, along with other scholars and philosophers, to Ghaznah. Al-Biruni was then sent to the region near Kabul where he established his observatory. Later he was deputed to the study of religion and people of Kabul, Peshawar, and Punjab, Sindh, Baluchistan and other areas of Pakistan and India under the protection of an army regiment. (Ahmed, 2010: 167) It is stated that he lived for around 40 years in India. (Durrani, 2017: 20)

When he engaged himself with the Indian and Pakistani studies by going through travel and learning in these areas specially the areas of present Pakistan where at that time Sanskrit was prevalent and he met Hindu Pandits and Buddhists and remained with them for more than a decade, it added to his researches on mathematics, astronomy, geography, chronology and natural sciences including natural resources and jewels. (Ahmed, 2010: 169)

He was so keen of learning that it has been said that he had never dropped pen from his hand and his sight never missed reading a book but only for two occasions in a year i.e. *Nourouz*ⁱⁱⁱ and *Mehregan*^{iv} to arrange food for himself. (Azad, 2006: 30) For West he is the most learned mathematician that Muslim World has ever produced. (*Urdu Jameh Encyclopedia*, 1987: 119)

He was already well versed with Greek, Arabic, Persian, Turkish languages. On the basis of command over these languages he made himself aware of the literature in these languages. By his extraordinary skill he wrote about 180 books in Arabic and Persian languages, of which few have survived the test of time. (Ahmed, 2010:168) This has been mentioned in a text book as 150 books on different topics (General Science, 2017: 5). Some of his famous works are as under:

1. *Asar-ul-Baqiah*: He wrote this book in 1000A.D. and attributed to Qaboos Washmageer, the governor of Jorjan.
2. *Tahqeeq Ma Fi Al-Hind*: While his stay in Hindustan he did the scientific study of life and culture prevailing there and reflected his observations in this renowned work. Even for Indians his work is an unmatched reference on Ancient Indian Studies. After the death of Sultan Mahmood in 1030, he completed his *Kitab al-Hind*, a compendium on the history, religion and thought of the people of Pakistan and India then.(Ahmed, 2010: 168)

3. *Qanoon Al-Masoodi*: His another work attributed to Masood Ghaznavi, successor of Mahmood Ghaznavi. (*Urdu Jameh Encyclopedia*, 1987: 119). This book is a work on astronomy explaining different movements of sun and moon. (*General Science*, 2017: 5). *Al-Qanun* is an up-to-date Encyclopedia of Astronomy supplanting all previous works. In this monumental work he gives Tables of Longitudes and Latitudes, map of India, Afghanistan and Pakistan by showing distances between various cities such as Ghaznah, Kabul, Peshawar, Jhelum, Nandna, Lahore, Multan, Sialkot, Somnath, Qanoj, Bombay, Daibal (a place near modern Karachi), and Allahabad. For measurement *farsang* was used which is equal to British $3\frac{3}{4}$ miles. (Ahmed, 2010: 172) Giving extract from *Qanoon al Masudi*, N.A. Baloch quotes:

If the same eclipse is observed in the territories of Sindh and in Spain and its time is recorded at both the places as we have explained, it will become clear from this that the noon of Sindh is the sunrise of Spain while their (Spaniards) noon is the sunset of Sind. (Ahmed, 2010: 170-71)

4. *Ghurrat al-Zijat* or *Karana Tilaka* by Al-Biruni is a handbook of astronomy translated from the original Arabic was published by Dr. N.A. Baloch in 1973. In his introduction to this translation of Al-Biruni's work, Dr. Baloch discusses in detail about the visits of Al-Biruni to a number of cities like Mansura, Uchch, Multan, Lahore, Nandana (near Chakwal), Peshawar and other places.

5. *Kitab al-Jamahir fi Ma'rifat al-Jawahir*: After the death of Maudood, son of Masood, became Sultan in 1041 AD Al-Biruni completed his work on mineralogy known as *Kitab al-Jamahir fi Ma'rifat al-Jawahir*. (Ahmed, 2010:169)

6. *Kitab Al-Saidana* (Materia Medica): the book holds description of more than 700 drugs. It also gives the length of treatment of various diseases. (Jangda, 2004: 22)

Al-Biruni and Pakistan:

He visited a number of cities like Mansura, Uchch, Multan, Lahore, Nandana, Peshawar and some other places of present Pakistan. It was an addition to his research in mathematics, astronomy, geography, chronology and natural sciences including natural resources and jewels. Al-Biruni was an astronomer. He has calculated the latitude of cities of Pakistan including Lahore, Jehlum, Sialkot, Multan and Peshawar. He also calculated the distance of polar star. He remained mostly in Multan or Jehlum (today's district Chakwal). He devised his own method of determining the radius of the earth by means of the observation of the height of a mountain in Tilla Jogian - The highest peak in the Eastern Salt Range in Province of Punjab, Pakistan. He calculated the circumference and parameter of earth from a hill top in the town Nandana located in Division Pind Dadan Khan near Kalar Kahar. On the happening of Millennial Birth anniversary of Al-Biruni, a monument was erected on this hill top. Dr. N.A. Baloch and Hakim Muhammad Saeed were contributed in the organization of this event. (Durrani, 2017: 21)

According to Dr. Attash Durrani, Al-Biruni, the contemporary to Omar Khayyam and Ibn-e-Sina, during his stay in India wrote his books like *Kitab-ul-Jamahir Fi Marfa-tul-Jawahir*, *Kitab-ul-Hind*, *Aasar-ul-Baqia*, and the *Qanun-e-Masoodi* were written in Rohtas For, District Chakwal, the present day Pakistan. (Durrani, 2017: 19)

Publications on Al-Biruni Shenasi in Pakistan

Some of the prominent Scholars of Pakistan who have contributed in *Al-Biruni Shenasi* are as follows:

Hakim Mohammed Saeed (9 January 1920- 17 October 1998) is an exclusive name in the field of medical science in subcontinent. He composed about 200 books. These include books on Religion, Tibb (medicine), and Health & Sciences, books on Literary, Social and Scientific topics and Travelogues. Large numbers of books written by Hakim Mohammed Saeed are the ones for children and the younger generation. His publications on Al-Biruni are as follows:

1. Al-Biruni: His Time, Life, and works. Its 1st edition comprising 244 pages and co-authored by Dr. Ansar Zahid Khan was published by Hamdard Academy Karachi in 1981. It is a masterly work written by one of the most intelligent scholar to have ever graced Pakistan.^v
2. Al-Biruni's Book on Pharmacy and Materia Medica, was edited and translated by Hakim Muhammad Saeed and R.E. Elahi. This was first English translation of this work of Al-Biruni published by Hamdard Academy, intended to celebrate his Millenary of Al-Biruni in 1973.^{vi}
3. *Medicinal Herbal: A Textbook for Medical Students and Doctors* by Hakim Mohammad Saeed, Aftab Saeed was published by Hamdard Foundation Pakistan, 1996.
4. Al-Biruni Commemorative Volume. Proceedings of the International Conference held in Pakistan on the occasion of Millenary of Abu Rayhan Muhammad ibn Ahmad el-Biruni (973-ca.1051 A.D.) November 26, 1973 to December 12, 1973. Its editor was Hakim Mohammed Saeed. It was published in hardcover by Hamdard Foundation; Ministry of Education; UNESCO (1979)^{vii}

Pakistan's foremost archaeologist and author of 30 books, Ahmad Hasan Dani, archaeologist, linguist and historian, born 20 July 1920; died 26 January 2009. In 1945 he had worked with the great British archaeologist Sir Mortimer Wheeler on the ruins at Mohenjo-Daro, the 4,500-year-old city settlement in Sindh province, southern Pakistan. He was fluent in 15 languages, including French, Tamil and Turkish. From 1950 to 1962, Dani was East Bengal's superintendent of archaeology, a history professor at Dhaka University and the curator at Dhaka museum. In 1993 he established the Islamabad museum.^{viii} Professor Ahmed Hasan Dani: (20th June 1920-26 January 2009). He published various texts in different languages. His work on Al-Biruni is as follows:

1. *AlBiruni's Indica: A record of the cultural history of South Asia about A.D. 1030*. Published by University of Islamabad (now Quaid-i-Azam University) Press, Islamabad in 1973 is his important work on Al-Biruni.^{ix} Dr. A.H. Dani's, Al-Biruni's Indica is an abridged and annotated version of Dr. Sachau's English translation of Al-Biruni's Indica.

Dr. Attash Durrani (22 January 1952) is a Pakistani linguist, researcher, critic, author and educationist. He has written more than 260 books and 480 papers in Urdu and English. He has recently translated Al-Biruni's *Kitab-ul-Jamahir Fi Marafat-ul-Jawahir*, as *Kitab-ul-Jawahir* in Urdu, under publication by National Book Foundation, Islamabad, Pakistan. In preface he has given brief description of Al-Biruni's Knowledge of precious stones.

Dr. Ali Reza Naqvi affiliated with Islamic International University, Islamabad, Pakistan, was one of the expert of Persian language and literature in Pakistan. He passed away on 12th December

2017. He has a number of books and research papers on his credit.^x He translated the work of Al-Biruni titled: *Asar-ul-Baqia* in Urdu as a series of translation of Great Books, published by Department of Promotion of Urdu (former, Muqtadrah Qomi Zaban Urdu), Islamabad, in 2002.

Haroon Ishaque Jangda, graduate of arts and law from university of Karachi in year 1960 and 1962 respectively. In 1969 he was called to the English bar by the Lincoln's Inn, London. He has been practicing Civil and Constitutional Law in the District Courts, the Sindh High Court and the Supreme courts of Pakistan. A prolific writer he has been awarded the "Citizen Four Seasons Award" by the Reader's Digest Association Far East Ltd. Apart from writing, the author is a keen social worker. His work, titled: "Al-Biruni" is an account of Al-Biruni's early Life and Times, Political Condition and his search for knowledge, his visit to India, his works and discoveries and the end of the luminary. (Jangda, 2004: 3) Haroon Ishaque Jangda gives 1048 A.D. as the year of death of Al-Biruni while quoting this unmatched incident from Al-Biruni's life when he was on death bed:

It is related that Adbul Hassan Ali, a jurist and friend of Al-Biruni visited him when he was terminally ill. Al-Biruni requested him to repeat the mathematical problem he was once discussing with him. Thinking that it was not an appropriate occasion^{xi} to talk about it, the jurist remained silent. Al-Biruni insisted upon having a reply and said: "Is it not better to die with knowledge than to die in ignorance?" Abul Hassan repeated that problem to which Biruni listened intently and grasped it. A few moments later he passed away at the age of 75 in 1048 A.D. and was laid to rest in Ghazna. Thus he acted upon the saying of the Holy Prophet (peace be upon him): "Acquire knowledge from the cradle to the grave. (Jangda, 2004: 25)

Encyclopedias of Pakistan and *Al- Biruni Shenasi*:

1. *Urdu Jameh Encyclopedia*, Volume 1, chairman board of encyclopedia: Justice S.A. Rahman, published by Sheikh Ghulam Ali and Printers, Lahore, in collaboration with Franklin Institute of publications, New York, 1987, page 119.

Other Publications on Al-Biruni in Pakistan:

1. *Al-Biruni's India: An account of the religion, philosophy, literature, geography, chronology, astronomy, customs, laws and astrology of India, about A.D. 1030*, English Edition, translated by Dr. Edward C. Sachau, in two volumes, Printed under the authority of government of west Pakistan, 1962, price: Rs.17.50, Printed at the Ferozsons Ltd, 365, circular road, Lahore, volume 1, 543 pages, volume 2, 606 pages.

2. *Al-Biruni*, by Haroon Ishaque Jangda, was published by Ferozsons (Pvt) Ltd., Lahore, Rawalpindi, and Karachi in year 2004.

Urdu publications on Al-Biruni in Pakistan:

Books of Al-Biruni in Urdu language, including Urdu translations of his different works in Urdu are as follows:

1. *Al-Biruni aur Jugrafiya-e-Aalam*, i.e. by: Maulana Abul Kalam Aazad, is published many times from different publication houses of Pakistan such as by:
 - Purab Academy, (2006) Islamabad, Pakistan.
 - Idara-e-Tasneef-o-Taleef, (1982), Karachi, Pakistan.
 - Data publishers, Lahore.
2. *Kitab-ul-Hind- Al-Biruni* (2008), translated by Syed Asghar Ali, Al-Faisal Publications, Lahore.

National Curriculum of Pakistan and *Al-Biruni Shenasi*:

Abu Rayhan Al-Biruni is introduced as a skillful physicist, mathematician, geologist, and astronomer in national curriculum of Pakistan. (General Science, 2017: 5) Introduction of Abu Rayhan Al-Biruni in some of the text book of Pakistan is made to make his contribution familiar to the young minds.

1. Text book titled: *Understanding History*- based on the Pakistan National Curriculum 2006, for class 7th, by Imtiaz Riaz, printed by, Oxford University Press 2013, sixth impression 2017. In Chapter 2 titled: “Muslim Inventors and Scholar”, Abu Rayhan Al-Biruni is introduced on page 9 as under:

Al- Biruni (973-1050) was perhaps the most the most famous Muslim scientist of early times. He was a polymath and a linguist with command over Persian, Turkish, Syriac, and also Sanskrit, but he always wrote in Arabic. He wrote more than a hundred well-searched books on medicine, geography, astronomy, mathematics, physics, philosophy, travels and history, but sadly many of these books are lost. Al-Biruni also visited India in 1017 and then wrote Kitab-ul-Hind, his famous book on India, its people, languages, society, and culture. He also suggested that the earth rotated on its axis and that the Indus Basin was once under the sea.

2. Text book: *Understanding History*-based on the Pakistan National curriculum 2006 for class 6th, by Imtiaz Riaz, first published 2013 by Oxford press. It is observed that date of birth and date of death of Al-Biruni, given in history book of class 6th is (970-1030) which are surprisingly entirely different dates given in the history book of class 7th, by the same writer and publisher as mentioned in above quotation as (973-1050).
3. Text book of, “*General Science*” in Urdu for Class 9th & 10th. Federal Text book board, Islamabad, published by National Book Foundation, Islamabad.
4. *2-Timeline: History of Secondary Level, 1000 years of Change*, (2007), by Martin Roberts, Oxford University Press: This text book informs that: “He was not only an outstanding astronomer, but also an observant traveler. He recorded his observations in *Tarikh-al-Hind*. (Roberts, 2007: 9)
5. *Tareekh-6*, for Academic year 2012-13, 4th edition, by, Malik Muhammad Ashraf, Tahira Shahzad. This text book give the same introduction of Al-Biruni in Urdu.

Children Literature:

Children literature is produced to introduce youth with the contributions of Muslims scholars and scientist, e.g. on Al-Biruni:

1. *Al-Biruni: Great Muslim Scientist Series* is written by Teh Sharufuddin and M. Razak-Al-Aidrus. It is published by Paramount Books (Pvt.) Ltd in Karachi. It give a detailed account of Al-Biruni's life and work to young readers with coloured pictures. Some important dates of Al-Biruni's Life history are given in this book:

- 4th Sep 973 AD → born in suburbs of Kath
- 990 AD → computed the latitude of Kath
- Before 995 AD → wrote number of short works
- 995 AD → escaped to Rayy from the civil war in Khwarazm
- 24th May 997 → returned to Kath and observed moon eclipse
- 19th February 1003 → observed lunar eclipse
- 14th Aug 1003 → observed lunar eclipse in Gurgan
- June 1004 → observed moon eclipse in Jurjaniyya
- 3rd July 1017 → Mahmud marched in region and Al-Biruni left with victorious Mahmood as prisoners
- 14th Oct 1018 → Al-Biruni managed to improvise quadrant to calculate the latitude of Kabul
- From 1018- 1020 → Made observations in Ghaznah to determine its latitude
- 17th September 1019 → observed another lunar eclipse
- 1050 → passed away peacefully

Conclusion:

Science seems to be the sole concern of west as currently East have remained comparatively inactive in the field of science but same is not the case since ever. At one time Muslims were noted for their dedication in science, i.e. the Golden Age of Islam (Medieval age). Muslim scientist laid the foundation of the modern scientific achievements, which is rightly appreciated by west as well, such as George Sartan^{xii} recalls him:

His critical spirit, toleration, love of truth and intellectual courage were without parallel in medieval ages. (Jungda, 2004:26)

In January 1971, America named a corner of the moon after Al-Biruni. Year 1973 was celebrated throughout the world as his millennial year. (*“Urdu Jameh Encyclopedia”*, 1987: 119).

Dr. Abdus Salam (1996), the Nobel Laureate for Physics in 1979, observes Al-Biruni as a pragmatic scientist as he quotes in his book of essays titled: *“Ideals & Realities”*, published in 1989 in Singapore that:

The golden age of Islam was doubtless the age around the year 1000 CE, the Age of Ibne Sena the last of the medievalists, and of his contemporaries, the first of the moderns, Ibn Al-Haitham and Al-Biruni... Al-Biruni (973-1048), Ibne Sena's second illustrious contemporary, worked in today's Afghanistan. He was an empirical scientist, as modern and as un-medieval in outlook as Galileo, six centuries later^{xiii}.

Recommendations:

It is recommended to translate remaining works of Al-Biruni in Urdu language for further *Al-Biruni Shenasi* in Pakistan. Research based studies can be made at different academic levels to develop thesis in the field of history, literature, natural sciences, medical sciences, mathematics, physics etc. even to study his approach and methodology towards research.

It is further more recommended that curriculum text books should be developed through quality research so as to minimize the contradictions in facts and figures of iconic historic universal figures like Abu-Rayhan Al-Biruni.

REFERENCES

- ⁱ . http://heritage.gov.pk/html_Pages/islamic.html assessed on 14/11/2017
- ⁱⁱ . Riaz Ahmed has written his date of death as 1050 AD in his article: “Al-Biruni: A Great Muslim Scientist, Philosopher and Historian”, in Journal of Pakistan vision (2010), Vol 10. University of the Punjab, Lahore, Pakistan Study Center. <http://pu.edu.pk/images/journal/studies/PDF-FILES/Artical%20-%2010.pdf>, assessed on 05/01/2018
- ⁱⁱⁱ . Iranian New Year Festival, starting from 21st March of solar year. <https://en.wikipedia.org/wiki/Nowruz> assessed on 05/01/2018
- ^{iv} . Mehregan is an Iranian festival celebrated in honor of Mithra, the divinity of covenant, and hence of interpersonal relationships such as friendship, affection and love. http://www.iranreview.org/content/Documents/Mehregan_Thanksgiving_Festival.htm assessed on 05/01/2018
- ^v . (<https://catalogue.nla.gov.au/Record/262359>) assessed on 16/12/2107
- ^{vi} . (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1081647/?page=1> assessed on 16/12/2017
- ^{vii} . <https://www.amazon.com> assessed on 16/12/2017
- ^{viii} . <https://www.theguardian.com/science/2009/mar/31/ahmad-hasan-dani> assessed on 04/01/2018
- ^{ix} . <https://www.scribd.com/document/283112868/Ahmad-Hasan-Dani-pdf> assessed on 14/11/2017
- ^x . <http://www.saadifoundation.ir> assessed on 04/01/2018
- ^{xi}
- ^{xii} . George Alfred Leon Sartan was a Belgian-born American chemist and historian. https://en.wikipedia.org/wiki/George_Sarton assessed on 05/01/2018
- ^{xiii} . <http://apnaorg.com/prose-content/english-articles/page-158/article-5/index.html> assessed on 05/01/2018