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THE CONTRIBUTION OF *BAITUL HIKMAH* TO THE DEVELOPMENT OF SCIENCE AND EDUCATION DURING THE ABBASID DYNASTY

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Abstract: *The Abbasid dynasty reached its peak in education with the establishment of Baitul Hikmah in 830 AD as an integrated intellectual center. This institution became a symbol of the progress of Islamic civilization through the movement of translation, research, and scientific development. This research aims to analyze the history, role, and impact of Baitul Hikmah as a multifunctional educational institution that encouraged scientific transformation during the Abbasid period. This research uses a descriptive qualitative method with a library research approach, which examines literature sources such as books, journals, and documents related to Baitul Hikmah. The results of this study show that Baitul Hikmah acted as a translation center, academy, and library that gave birth to prominent Muslim scientists such as al-Khwarizmi, Ibn Sina, Ibn Rushd, and various other figures. This institution also triggered the establishment of public libraries in various Islamic cities. In addition, Baitul Hikmah became the foundation of the transformation of Islamic education through cross-cultural scientific integration. Its contributions not only impacted the Abbasid period, but also inspired the development of modern education.*

Keywords: Abbasid Dynasty, Baitul Hikmah, Educational Transformation, Scientific Center, Translation

Abstrak: Dinasti Abbasiyah mencapai puncak kejayaannya dalam bidang pendidikan yang ditandai dengan lahirnya *Baitul Hikmah* pada tahun 830 M sebagai pusat intelektual terintegrasi. Lembaga ini menjadi simbol kemajuan peradaban Islam melalui gerakan penerjemahan, riset, dan pengembangan ilmu pengetahuan. Penelitian ini bertujuan menganalisis sejarah, peran, dan dampak *Baitul Hikmah* sebagai institusi pendidikan multifungsi yang mendorong transformasi keilmuan pada masa Abbasiyah. Penelitian ini menggunakan metode kualitatif deskriptif dengan pendekatan *library research*, yang mengkaji sumber literatur seperti buku, jurnal, serta dokumen terkait dengan *Baitul Hikmah*. Hasil dari penelitian ini menunjukkan bahwa *Baitul Hikmah* berperan sebagai pusat



penerjemahan, akademi, dan perpustakaan yang melahirkan ilmuwan Muslim terkemuka seperti al-Khawarizmi, Ibn Sina, Ibn Rusyd, dan berbagai tokoh lainnya. Lembaga ini juga memicu pendirian perpustakaan umum di berbagai kota Islam. Selain itu, *Baitul Hikmah* menjadi fondasi transformasi pendidikan Islam melalui integrasi keilmuan lintas budaya. Kontribusinya tidak hanya berdampak pada masa Abbasiyah, namun juga menjadi inspirasi bagi pengembangan pendidikan modern.

Kata Kunci: *Baitul Hikmah*, Dinasti Abbasiyah, Pusat Keilmuan, Penerjemahan Transformasi Pendidikan.

INTRODUCTION

The golden age of Islam reached its peak during the Abbasid Dynasty, especially in its early period, which was marked by a strong focus on developing Islamic civilization and culture, rather than solely on territorial expansion. This difference was the main distinction compared to the Umayyad Dynasty, which was more focused on expanding its power.¹ Didin Saefudin quoted Azyumardi Azra's view, which highlighted the significant differences in progress between the eras of the Prophet Muhammad, the Rashidun Caliphate, the Umayyad Dynasty, and the Abbasid Dynasty. According to Azra, Islamic progress during the Prophet's time focused more on religious and political aspects; while during the Rashidun Caliphate, it developed in the political and military spheres; and during the Umayyad Dynasty era, it encompassed the political, economic, and military dimensions. On the other hand, the Abbasid Dynasty is considered to have significantly expanded the scope of this progress, covering politics, military, economy, science, and civilization as a whole.²

The Abbasid Dynasty's excellence lay in its ability to create a progressive Islamic civilization, with Baghdad as the center of influential scientific development.³ Major achievements in the field of education were later evidenced by the establishment of an institution called *Baitul Hikmah*, located in Baghdad and built during the reign of Caliph al-Makmun, which became an important milestone in the structured intellectual development of the Islamic world at that time. The success of *Baitul Hikmah* in supporting education can be seen in the emergence of prominent Muslim intellectuals, the rapid development of educational institutions, and the growth of scientific traditions such as discussions and the movement to translate foreign works.⁴ Therefore, the birth of *Baitul Hikmah* is a strong indicator that the Abbasid government had succeeded in reaching the highest point of glory

¹ Samsul Munir Amin, *Sejarah Peradaban Islam*, Cet. 8 (Jakarta: Penerbit Amzah, 2019).

² Didin Saefudin, *Zaman Keemasan Islam, Rekonstruksi Sejarah Imperium Dinasti Abbasiyah* (Jakarta: Grasindo, 2002).

³ Haidar Putra Daulay, Zaini Dahlan, and Yumita Anisa Putri, 'Peradaban Dan Pemikiran Islam Pada Masa Bani Abbasiyah', *Edu Society: Jurnal Pendidikan, Ilmu Sosial, Dan Pengabdian Kepada Masyarakat* 1, no. 2 (2021): 229.

⁴ Samsul Bahri, 'Kontribusi Peradaban Islam Terhadap Sains Dan Teknologi: Refleksi Untuk Masa Depan Digital', *Arba: Jurnal Studi Keislaman* 1, no. 2 (2025): 112.



in the history of Islamic civilization,⁵ even recognized as a witness to the golden age and a representation of the most outstanding library in Islamic history.⁶

A number of studies have enriched our understanding of the role of this institution. One of them is a study conducted by Maudy Salsa Sofyani, which examines the role of *Baitul Hikmah* as a center of cultural and scientific acculturation, focusing on the theological motivation that gave birth to an inclusive intellectual environment, the mechanism of acculturation in the form of a critical translation process through *tahqiq* and *ta'liq*, and the impact of scientific synthesis, which includes the preservation of Greek intellectual heritage, scientific innovation in the Islamic world, and the transmission of knowledge to Europe as a trigger for the Renaissance.⁷ In addition, there is another study conducted by Khaerudin discussing the history, function, and transformation of *Baitul Hikmah* from a private library to an educational institution, as well as a reflection of its values for the development of a modern civilization based on literacy and dialogue.⁸

Unlike the two studies mentioned above, this study offers a new approach by positioning *Baitul Hikmah* as a multifunctional educational institution that includes a library, a translation center, and a formal educational institution. In addition, this institution became a model for the establishment of public libraries in various Islamic cities as centers for scientific study and discussion. The main objective of this study is to describe in comprehensive history, role, and contribution of *Baitul Hikmah* in shaping the scientific and educational landscape during the Abbasid period. Through this research, it is hoped that it will be clearly illustrated how *Baitul Hikmah* is not only a symbol of past glory, but also an eternal inspiration for the development of science and education.

METHOD

This study applies a descriptive qualitative method with a *library research* approach. This approach is carried out through the process of collecting, reviewing, understanding, and analyzing various literature sources that are relevant to the research topic. The sources used include textbooks, scientific journals, seminar papers, academic works, and various other library references.⁹ The literature study was conducted by exploring information from various collections sourced from libraries to obtain the data needed for the research. Clearly, this type of approach

⁵ Mahfud Ifendi, 'Dinasti Abbasiyah: Studi Analisis Lembaga Pendidikan Islam', *Fenomena: Jurnal Penelitian* 12, no. 2 (2020): 140.

⁶ Abdul Rahim Chandio, 'The House of Wisdom (Bait Al-Hikmah): A Sign of Glorious Period of Abbasids Caliphate and Development of Science', *International Journal of Engineering and Information Systems (IJE AIS)* 5, no. 3 (2021): 1.

⁷ Maudy Salsa Sofyani, 'Analisis Gerakan Pnerjemahan Era Abbasiyah: Studi Kasus Baitul Hikmah Sebagai Pusat Akulturasi Budaya Dan Ilmu', *Azka: Jurnal Aktualisasi Pendidikan Islam* 20, no. 1 (2025).

⁸ Khaerudin, 'Baitul Hikmah Sebagai Pusat Peradaban Intelektual Oada Masa Dinasti Abbasiyah', *Tajdid: Jurnal Pemikiran Keislaman Dan Kemanusiaan* 8, no. 1 (2024).

⁹ Miza Nina Adlini et al., 'Metode Penelitian Kualitatif Studi Pustaka', *Edumaspul: Jurnal Pendidikan* 6, no. 1 (2022): 975.



only focuses on library materials without involving field research activities.¹⁰ The application of this type of literature study approach aims to deepen methodological aspects, strengthen the theoretical basis, and gain insights related to similar studies that have been conducted by other researchers.

RESULTS AND DISCUSSION

Background and History of the Establishment of *Baitul Hikmah*

The Abbasid dynasty made remarkable historical achievements in the field of education, which greatly contributed to the advancement of Islamic civilization at that time.¹¹ This success was inseparable from the important role played by the early caliphs, such as Abu Ja'far al-Mansur, Harun al-Rashid, and al-Ma'mun, who actively encouraged the growth of scientific traditions. The peak of scientific development began when Harun al-Rashid established Baghdad as the intellectual center of Islam. He was known as a leader who cared deeply about scientists and supported the establishment of various madrasas or halaqah filled with scholars in the fields of fiqh, Sufism, language, and others.¹²

These conditions made Baghdad a magnet for students from various parts of the world, so that scholars emerged who led the city to its heyday.¹³ In this context, the rapid development of education and science reflected the caliphs' commitment to the intellectual development of the Muslim community. This success was not only local in nature, but also had a global impact in shaping a strong tradition of scholarship in the Islamic world.

As a form of institution that supported educational transformation, the Abbasid caliphs established *Baitul Hikmah* or *House of Wisdom* in 215 AH/830 AD.¹⁴ In general, *Baitul Hikmah* was an intellectual institution that functioned as a library, an integrated translation center, and an academic

¹⁰ Mestika Zed, *Metode Penelitian Kepustakaan*, Cet.III (Jakarta: Yayasan Pustaka Obor Indonesia, 2014).

¹¹ Asih Kartika Putri et al., 'Dinasti Abbasiyah: Kemajuan Pendidikan Islam Dan Kontekstualisasinya Pada Masa Kini', *Tsaqofah&Tarikh* 8, no. 1 (2023): 5.

¹² Anto Apriyanto, 'Kesejahteraan Ummat Dan The Golden Age of Islam: Telaah Historis Pemberdayaan Masyarakat Di Masa Khalifah Harun Ar-Rasyid', *ICODEV: Indonesian Community Development Journal* 1, no. 1 (2021): 3.

¹³ Dzulkifli Hadi Imawan, *Daulah Umayyah & Daulah Abbasiyah (Sejarah Peradaban & Dinamika Sosial Intelektual Hukum Islam Pada Puncak Kejayaannya)*, Cet.I (Yogyakarta: Universitas Islam Indonesia, 2021).

¹⁴ Imawan.



institution.¹⁵ This institution became a symbol of the systematic development of science and a manifestation of the integration between classical knowledge heritage and the spirit of intellectual renewal built by the Abbasid leaders.

If traced further, *Baitul Hikmah* was actually born as a response to the intellectual dynamics initiated by the caliphs of the Abbasid Dynasty, such as Abu Ja'far al-Manshur and Harun ar-Rasyid. Caliph al-Mansur is known to have pioneered the establishment of *Baitul Hikmah*, focusing his work on high-quality books from Arab works and translations from various languages,¹⁶ even though at that time there was no official institution overseeing these activities. Then, during the reign of Caliph Harun al-Rashid, institutional efforts began to take shape through the establishment of *Khizanat al-Hikmah* or the Treasury of Wisdom, a simple library that became the forerunner of *Baitul Hikmah*.¹⁷

After Harun al-Rashid's reign, Caliph al-Ma'mun continued to develop the institution and officially established it as *Baitul Hikmah*.¹⁸ Under his leadership, *Baitul Hikmah* experienced rapid progress, not only functioning as a library, but also transforming into a center for research, scientific writing, and academic discussion.¹⁹ During the Abbasid Dynasty, *Baitul Hikmah* was recognized as one of the most influential centers of knowledge in the Islamic world,²⁰ so it was often nicknamed *The Baghdad Academy of Sciences* or the Baghdad Academy of Knowledge.²¹

The existence of *Baitul Hikmah* did not appear suddenly, but was a historical response to intellectual dynamics that had been ongoing since the seventh century, when the regions of Iraq, Syria, and Egypt began to develop various centers of learning, such as schools in Alexandria, which later moved to Syria and finally to Baghdad. Students from Christian

¹⁵ H.M. Taufik, 'Bayt Al-Hikmah: Kontribusinya Terhadap Perkembangan Budaya Ilmu Pengetahuan', *El-Ghazy* 3, no. 2 (2015): 145.

¹⁶ Raghib As-Sirjani, *Sumbangan Peradaban Islam Pada Dunia* (Terj. Sonif, M.Irham & M.Supar) (Jakarta: Pustaka Al-Kautsar, 2009).

¹⁷ Mohammad Al-Farabi, 'Bayt Al-Hikmah: Institusi Awal Pengembangan Tradisi Ilmiah Islam', *Miqot* 37, no. 1 (2013): 64.

¹⁸ As-Sirjani, *Sumbangan Peradaban Islam Pada Dunia* (Terj. Sonif, M.Irham & M.Supar).

¹⁹ Imawan, *Daulah Umayyah & Daulah Abbasiyah (Sejarah Peradaban & Dinamika Sosial Intelektual Hukum Islam Pada Puncak Kejayaannya)*.

²⁰ Phillip K. Hitti, *History of Arab's; From the Earliest Times to the Present* (Jakarta: PT. Serambi Ilmu Semesta, 2005).

²¹ Ibnu Rusydi, Didin Saepudin, and Murodi, 'The Golden Age of Islamic Intellectuals and The Development of Science During The Abbasid Dynasty', *Tafkir: Jurnal Interdisipliner Pendidikan Islam* 4, no. 4 (2023): 604.



backgrounds, including those from the Sabian community and the Nestorian college in Gondeshapur, were active in scientific activities, particularly in the fields of philosophy and medicine. These institutions played a role in producing intellectuals who served the Abbasid court, including doctors at the court of Harun al-Rashid.

These intellectual interactions opened the eyes of the Abbasid caliphs to the importance of acquiring Greek knowledge through the translation of classical texts. The need to formulate a systematic agenda for the development of science prompted Caliph al-Makmun to establish an official institution that accommodated translation, research, and higher education activities. Thus, an institution was formed which later became known as *Baitul Hikmah*.²²

There are other sources that describe the background to the establishment of *Baitul Hikmah*, one of which is based on the personalities of the caliphs who had a high level of concern and love for science, as seen in Caliph al-Makmun.²³ Due to his deep love for knowledge, it is not surprising that many historians agree that the reign of Caliph al-Makmun was an important point in the history of the Abbasid Dynasty, marked by the revival of knowledge (*nahdlatul ilmiyah*) in various disciplines.

In addition, upon closer inspection, *Baitul Hikmah* was also established as a result of early interactions between Islamic civilization and Greek culture. This relationship encouraged the Abbasid caliphs to absorb and master the legacy of Greek knowledge. The initial process of scientific development was carried out through translation activities, but this process was considered suboptimal without a special institution to coordinate it. On that basis, *Baitul Hikmah* was formed. However, the establishment of *Baitul Hikmah* was also motivated by the character of the Abbasid caliphs, who were known as leaders who greatly respected and loved science.²⁴

Regardless of the various arguments that exist, the author concludes that the main motivation for the establishment of *Baitul Hikmah* was the deep interest of Caliph al-Makmun to explore and deepen scientific knowledge. This interest was not merely a personal pursuit, but was manifested in the allocation of significant funds to support educational institutions, a support that proved crucial to the development of education

²² W. Montgomery Watt, *Islam Dan Peradaban Dunia: Pengaruh Islam Atas Eropa Abad Pertengahan* (Terj. *The Influence of Islam on Medieval Europe*) (Jakarta: PT. Gramedia Pustaka Utama, 1995).

²³ Haddad Khalid, *Duabelas Tokoh Pengubah Dunia* (Terj. 'Alaamul Fikril 'Arabi) (Jakarta: Gema Insani Press, 2009).

²⁴ Al-Farabi, 'Bayt Al-Hikmah: Institusi Awal Pengembangan Tradisi Ilmiah Islam'.



and science around *Baitul Hikmah*.²⁵ This initiative itself was seen as a continuation of the scientific tradition initiated by Caliph al-Mansur and Harun ar-Rashid,

Table 1: The Evolution of Baitul Hikmah under the Abbasid Caliphate

Caliphal Period	Key Initiatives and Institutional Development	Institutional Status & Primary Functions
Abu Ja'far al-Mansur	<ul style="list-style-type: none">Pioneered the collection of high-quality manuscripts (Arab works & translations).Instituted rewards, notably gold equal to the weight of translated books.	Proto-Institution: Translation and collection activities occurred without a formal, dedicated institution.
Harun al-Rashid	<ul style="list-style-type: none">Established the Khizanat al-Hikmah (Treasury of Wisdom), a foundational library.Solidified Baghdad's status as the intellectual capital of the Islamic world.	Precursor Institution: Functioned primarily as a royal library, serving as the direct predecessor to Baitul Hikmah.
Al-Ma'mun	<ul style="list-style-type: none">Formally founded Baitul Hikmah (830 CE/215 AH).Orchestrated expeditions to acquire rare manuscripts from Byzantium, India, etc.Recruited a multidisciplinary corps of scholars, translators, and scribes.	Full-Fledged Academy: Served as a multifunctional center for translation, library sciences, advanced academia, and scientific research (including an observatory). Widely recognized as "The Baghdad Academy of Sciences."

Therefore, *Baitul Hikmah* holds a historical narrative that continues to grow in relevance. This institution not only played a strategic role in its time, but also continues to inspire the intellectual revival of contemporary Muslims. As an icon of the golden age of Islamic civilization, *Baitul Hikmah* remains a source of motivation for scientific development among Muslims

²⁵ Erizal Candra Efendi et al., 'The Glory of Science in Classical Islamic Civilization: The Abbasid Dynasty as a Center for Innovation', *International Journal of Social and Education (INJOSEDU)* 2, no. 4 (2025): 4.



to this day.²⁶ One of its main contributions that shaped this intellectual foundation was its role in the massive translation movement.

The Contribution of *Baitul Hikmah* to the Development of Science and Education during the Abbasid Period

Baitul Hikmah was originally established as a storage space for the personal literature collections of the Abbasid caliphs. However, during the reign of Caliph al-Makmun, this institution underwent significant functional development and was used as a center for storing ancient manuscripts from various civilizations, including Persia, Byzantium, Ethiopia, and India. As part of this scientific initiative, Caliph al-Ma'mun sent a number of figures to various regions, including India, Syria, and Egypt, to search for and collect rare works that would later be stored at *Baitul Hikmah*. One of the figures who played an important role in this mission was Hunain Ibn Ishaq, who traveled to Palestine to obtain *the Book of Al- Burhan*.²⁷

In an effort to develop science, al-Makmun employed scientists who were registered as librarians at *Baitul Hikmah*, such as Muhammad ibn Musa al- Khawarizmi, who was known for his contributions in the fields of algebra and astronomy. In addition, several Persian scientists also participated in intellectual activities at *Baitul Hikmah*, which at that time was under the leadership of a Persian figure, Sahl Ibn Harun.²⁸ Furthermore, al-Makmun also employed professionals in the field of book copying and binding. One of the most famous bookbinders active during the reign of al- Makmun was Ibn Abi al-Haris. Meanwhile, other well-known manuscript copyists were Abu Sahlu al-Fadhu Ibn Nubak and Allan al-Syu'ubi.²⁹

Caliph al-Makmun's success in promoting the advancement of *Baitul Hikmah* as an intellectual institution continued throughout his reign. The institution, which originally functioned as a repository for ancient manuscripts from various civilizations, developed into a center for

²⁶ Aris Nurohman, 'Perpustakaan Baitul Hikmah, Tonggak Kebangkitan Intelektual Muslim', *Al-Ma'mun: Jurnal Kajian Kepustakawan Dan Informasi* 1, no. 1 (2020): 44.

²⁷ Ziauddin Sardar, *Tantangan Dunia Islam Abad 21 (Terj. Information and The Muslim World: A Strategy of the Twenty-First Century)* (Bandung: Mizan, 1991).

²⁸ Lathiful Khuluq, *Sejarah Peradaban Islam: Dari Masa Klasik Hingga Modern* (Yogyakarta: Penerbit LESFI, 2017).

²⁹ Afrah Ibrahim, 'Eksistensi Bayt Al-Hikmah Sebagai Pusat Pendidikan Pada Masa Khalifah al-Makmun', *Jurnal Azkia*, no. 2 (2021): 158.



translation and scientific study, similar to the academic activities found in formal institutions today.³⁰

As a translation institution, *Baitul Hikmah* played an important role in the early stages of the internalization and mastery of various disciplines.³¹ The translation activities that took place at this institution became a crucial foundation for the transfer of knowledge from other civilizations into the Islamic intellectual tradition. Through *Baitul Hikmah*, Muslims carried out an intellectual movement that promoted the transfer of knowledge from Greek, Persian, and other traditions into Islamic scientific heritage. From the 9th to the 10th centuries, there was a great wave of translation of classical works, especially from Greek through the intermediary language of Syria, given that many of these works were available in a form accessible to the Syrian-speaking Christian community. The availability of translators who were fluent in Arabic and Syria also supported the intensity of this process, marking the beginning of a major transformation in the history of the development of Islamic civilization.

However, as scientific needs developed, translations began to be done directly from Greek. These translations were not merely a process of language transfer, but became the basis for the development of Arabic scientific vocabulary, which was initially very limited. With the development of original Arabic writings in science, revisions were made to improve accuracy and intellectual competitiveness. Interfaith and intercultural collaboration, such as that which occurred in Spain in the 10th and 11th centuries, reinforced the universal value of this process.³²

The translation of foreign works carried out at *Baitul Hikmah* became part of the state agenda, such as the translation of Ancient Greek philosophy, Persian intellectual traditions, and Indian thought. The Baghdad government's policy on translation developed beyond mere administrative policy and became a broad cultural movement. The process of translating various languages into Arabic expanded significantly, covering almost the entire intellectual and literary heritage of humanity from around the world, including the fields of philosophy, theology, and science.

³⁰ Imawan, *Daulah Umayyah & Daulah Abbasiyah (Sejarah Peradaban & Dinamika Sosial Intelektual Hukum Islam Pada Puncak Kejayaannya)*.

³¹ Husni Laili, Hasan Asari, and Siti Zubaidah, 'Bayt Al-Hikmah: Sejarah Transmisi Ilmu Pengetahuan Antar Peradaban', *Edu-Riliggia* 3, no. 2 (2019): 198.

³² Watt, *Islam Dan Peradaban Dunia: Pengaruh Islam Atas Eropa Abad Pertengahan* (Terj. *The Influence of Islam on Medieval Europe*).



Through these activities, science deepened its role as a basic need of society at that time. The Islamic world cannot ignore the significant contribution of Caliph al- Makmun in fostering an intellectual climate. The relationship between the Islamic world and the Hellenistic tradition cannot be separated from the role of al-Makmun, whose interactions gave rise to a process of cultural acculturation. This process began with the adoption of Greek ideas and thoughts, which were then further developed in the fields of culture, social systems, and especially science.³³

As translation activities expanded at *Baitul Hikmah* and knowledge flourished at that time, many Muslims began to study various disciplines directly in Arabic. This led to the emergence of Muslim scholars who not only studied and commented on translated works, but also corrected misunderstandings about the past, created new ideas, and expanded scientific research to uncover the secrets of nature. This process began with the tracking down of ancient manuscripts left behind by Greek philosophers such as Aristotle, Plato, and Socrates. These manuscripts were then brought to Baghdad to be translated and studied at *Baitul Hikmah*, which subsequently gave birth to innovative ideas.³⁴

The construction of *Baitul Hikmah* was an important achievement of Caliph al- Makmun, who aimed to adopt constructive elements from Greek culture into the Islamic intellectual landscape.³⁵ As a result, classical Islamic civilization was greatly influenced by Greek culture, which enriched its intellectual foundations. The openness of Muslims towards the scientific heritage that preceded Islam gave rise to a new perspective on the development of science, which ultimately formed an important foundation for the growth of Islamic civilization.³⁶

As a leading translation institution during the Abbasid Dynasty, *Baitul Hikmah* was home to many talented translators. One of the most prominent translators was Hunain Ibn Ishaq, a Christian from Syria who was recruited by Caliph al-Makmun as a teenager to translate Greek scientific works into Arabic. Hunain's extraordinary intellectual abilities led to him being entrusted with the leadership of *Baitul Hikmah*, which was later

³³ Syamsul Bakri, *Peta Sejarah Peradaban Islam*, Cet.I (Yogyakarta: Fajar Media Press, 2011).

³⁴ Anas Salahudin, Acep Komarudin, and Asep Andi Rahman, *Sejarah Pendidikan Islam*, Cet.I (Bandung: Remaja Rosdakarya, 2019).

³⁵ Salahudin, Komarudin, and Rahman.

³⁶ Laili, Asari, and Zubaidah, 'Bayt Al-Hikmah: Sejarah Transmisi Ilmu Pengetahuan Antar Peradaban'.



continued by his son, Ishaq Ibn Hunain.³⁷ During his career, Hunain successfully translated a number of important works into Arabic, such as books by Euclid, several works by Galen, Hippocrates, Apollonius, Plato, Aristotle, and a medical work written by Pope al-Gini.³⁸ made him a central figure in the development of Islamic scientific knowledge originating from Greek civilization.

Hunain's extraordinary abilities were widely recognized by historians. Hunain was even nicknamed "sheikh" among translators, an honorary title given by Arab society to figures considered to be among the most prominent scientists of their time. Hunain, known for his meticulousness in translation, was even reported to have received a salary of five hundred dinars per month for himself and his team. Al- Makmun himself rewarded him with gold equal to the weight of the books he successfully translated.³⁹

In addition to Hunain Ibn Ishaq, the translation movement during the Abbasid period was also supported by a number of other well-known translators. Among them was Sindhanta, a traveler from India who introduced various books on astronomy to Baghdad and translated them into Arabic. He also contributed to the translation of an important work in the field of mathematics.⁴⁰

Another notable figure was Jurjis Bakhtisyu', a medical expert who also served as the personal physician of Caliph Ja'far al-Manshur. His work was continued by Bakhtisyif bin Juris and Gibril, students of Bakhtisyu', who were also active in translation activities. Al-Hallaj bin Matar also played a significant role, known as the first person to translate Euclid's famous work Elements. Meanwhile, Abu Yahya al- Batriq enriched the scientific treasury by translating most of the medical works of Hippocrates and Galen.⁴¹

The initial translation process of Greek works focused on books that offered practical benefits to Arab society at that time, especially in the fields of medicine and astronomy. Interest in astronomy was influenced not only by the popularity of astrology, but also by the scientific need to determine the direction of prayer. In addition, mathematics was also a focus of translation because of its practical application in everyday life, and it was

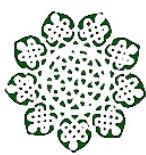
³⁷ Taufik, 'Bayt Al-Hikmah: Kontribusinya Terhadap Perkembangan Budaya Ilmu Pengetahuan'.

³⁸ A. Syalabi, *Sejarah & Kebudayaan Islam* 3 (Jakarta: Pustaka Al-Husna Baru, 2003).

³⁹ Taufik, 'Bayt Al-Hikmah: Kontribusinya Terhadap Perkembangan Budaya Ilmu Pengetahuan'.

⁴⁰ Syalabi, *Sejarah & Kebudayaan Islam* 3.

⁴¹ Syalabi.



from this field that the early scientific achievements of Muslims were born.⁴² This statement is reinforced by what Khuluq wrote, that during the heyday of the Abbasids, most of the works translated focused on practical sciences such as medicine, astronomy, and mathematics.⁴³ The influence of the translation movement during this period gave rise to prominent Muslim scientists. In the field of astronomy, al-Fazari is known as the first Muslim astronomer to use an astrolabe. Al-Fargani, known in Europe as al-Faragnus, compiled a summary of astronomy that was translated into Latin by Gerard Cremona and Johannes Hispalensis. In the field of medicine, al-Razi was an important figure who distinguished between smallpox and measles and wrote a book on pediatric medicine. After that, Ibn Sina, a philosopher, successfully discovered the human circulatory system and his work *al-Qanun fi al-Thibb* became the largest medical encyclopedia. Not only that, in chemistry, Jabir ibn Hayyan believed that tin, iron, and copper could be turned into gold or silver by mixing certain substances. In addition, in the field of mathematics, Muhammad ibn Musa al-Khawarizmi was known as an expert in astronomy and the creator of algebra, with his book *al-Jabr wa al-Muqabalah*.⁴⁴

During the Abbasid Dynasty, Muslims engaged in an intellectual movement that led them to glory in the field of science. Through translation activities, they succeeded in absorbing and mastering intellectual wealth from various traditions, such as Greek and Persian. Ultimately, they were able to give birth to a scientific tradition that encompassed religious aspects, philosophical thought, and science. This success was not only limited to the production of scientific works, but also had an impact on the transformation of the entire education system and institutions.

Baitul Hikmah's contribution in dynamizing the flow of cross-cultural knowledge became the starting point for the emergence of an intellectual tradition that helped shape the structure of Islamic education at that time. The next role of *Baitul Hikmah* was to become an educational institution that actively encouraged the birth of a new intellectual tradition in the Islamic world. Increased scientific activities such as philosophical discussions, scientific development, and the provision of research facilities marked this change. Based on strategic considerations, Caliph al-Makmun established

⁴² Watt, *Islam Dan Peradaban Dunia: Pengaruh Islam Atas Eropa Abad Pertengahan* (Terj. *The Influence of Islam on Medieval Europe*).

⁴³ Khuluq, *Sejarah Peradaban Islam: Dari Masa Klasik Hingga Modern*.

⁴⁴ Badri Yatim, *Sejarah Peradaban Islam: Dirasah Islamiyah II*, Cet.29 (Depok: PT Raja Grafindo Persada, 2018).



Baitul Hikmah as an academic institution with an official institutional structure. This institution became a meeting place for intellectuals from various backgrounds, including Greek and Indian philosophers, Khawarij and Sunni figures, as well as non-Muslim thinkers.⁴⁵ *Baitul Hikmah* developed into an intellectual center that facilitated discussion and became a meeting point for various schools of knowledge, cultural traditions, and civilizations during the Abbasid Caliphate.⁴⁶

In line with the above description, the rapid progress of the *Baitul Hikmah* institution encouraged the expansion of its functions, which initially focused only on translation activities. This institution then developed into a center for documentation and scientific information services for the community. In addition, *Baitul Hikmah* also served as a forum and center for the development of science, supported by research facilities such as an astronomical observatory. Not only that, this institution also functions as a center for planning and implementing structured educational programs.⁴⁷

The development of these educational institutions reflected the overall development and advancement of science. Badri Yatim mentioned that this progress was largely determined by the role of Arabic, both as an administrative language and as a language of science. In addition, there were two main factors that drove the advancement of education during this period. *First*, there was assimilation between the Arabs and other nations that had already experienced development in the field of science. During the Abbasid period, many non-Arab nations converted to Islam. The assimilation was effective and valuable. These nations contributed significantly to the development of science. *Second*, the influence of a large-scale translation movement had a significant impact not only on general science but also on the understanding of religious science.⁴⁸

Against this backdrop, it is only natural that the Abbasid period is known as a fertile period for Islamic thought, particularly in the field of fiqh. Beginning in the early second century AH until the mid-fourth century AH, which is referred to as the golden age of fiqh and the widespread development of ijtihad, there were scholars who laid down the principles of

⁴⁵ Syamruddin Nasution, *Sejarah Peradaban Islam*, Cet.I (Depok: Rajawali Pers, 2018).

⁴⁶ Imawan, *Daulah Umayyah & Daulah Abbasiyah (Sejarah Peradaban & Dinamika Sosial Intelektual Hukum Islam Pada Puncak Kejayaannya)*.

⁴⁷ Nurohman, 'Perpustakaan Baitul Hikmah, Tonggak Kebangkitan Intelektual Muslim'.

⁴⁸ Yatim, *Sejarah Peradaban Islam: Dirasah Islamiyah II*.



usul fiqh and the procedures for ijtihad and istinbath in dealing with issues that were not mentioned in the Qur'an or hadith.⁴⁹

In this regard, the aforementioned advances show that *Baitul Hikmah* emerged as a symbol of the transformation of Islamic education, an institution that not only represented the intellectual movement during the Abbasid period but also became a central point for the birth of a systematic, open, and research-based education model. The government and society's concern for science, as well as their respect for scholars, became catalysts for the growth of a tradition of literacy that gave birth to private, public, and semi-public libraries in various Islamic regions.⁵⁰

Baitul Hikmah not only strengthened Baghdad's position as a center of science and civilization, but also played a vital role in promoting the development of science, stimulating intellectual enthusiasm in Abbasid society, and preserving scientific heritage.⁵¹ One of the most amazing proofs of this support is the provision of a comprehensive range of services that are entirely free that include access to collections reading, translation services, and even the provision of ink and paper, all of which were sponsored by the Caliph and accessible to anyone regardless of age, race, or social status.⁵²

The success of this model led to a broader transformation in education, with *Baitul Hikmah*, as a public library and center of learning, becoming a powerful influence on the development of similar institutions throughout the Islamic world. Many major cities in the Islamic world then built libraries as open learning facilities for the community, allowing anyone to read, write, and access a variety of knowledge without restrictions, while also functioning as active facilities in supporting research and independent study activities.

In this case, *Baitul Hikmah* played an important role in strengthening Baghdad's position as a center of science and civilization. In addition, this institution encouraged scientific progress and instilled a spirit of intellectual development among the Abbasid community, while

⁴⁹ Imawan, *Daulah Umayyah & Daulah Abbasiyah (Sejarah Peradaban & Dinamika Sosial Intelektual Hukum Islam Pada Puncak Kejayaannya)*.

⁵⁰ Agus Rifai, 'Perpustakaan Dan Kepustakawan Di Dunia Islam Pada Masa Klasik', *Media Pustakawan* 17, no. 1 (2010): 70.

⁵¹ Imawan, *Daulah Umayyah & Daulah Abbasiyah (Sejarah Peradaban & Dinamika Sosial Intelektual Hukum Islam Pada Puncak Kejayaannya)*.

⁵² Adel M. Abdul Aziz Algeriani and Mawloud Mohadi, 'The House of Wisdom (Bayt al-Hikmah), an Educational Institution during the Time of the Abbasid Dynasty: A Historical Perspective', *Pertanika: Journal of Social Science & Humanities* 27, no. 2 (2019): 1305.



preserving scientific heritage so that it would not be lost over time. Along with this, madrasas and public libraries in Baghdad continued to develop, making it easier for the community to access knowledge and conduct research more broadly.⁵³

In the mid-10th century, evidence of this transformation became even more apparent with the emergence of various libraries in other cities. The city of Mosul had a library built by one of its citizens. At this library, visiting students were provided with paper and other writing materials free of charge. In Shiraz, the ruler of the Buwaihi Dynasty, 'Adud al-Dawlah, also established a library whose collection was arranged on shelves, registered in a catalog, and systematically managed by administrative staff. During the same period, in the city of Basra, there was a library where scholars worked and received wages from its founder. Meanwhile, in the city of Rayy, there was an institution known as the "House of Books," which is said to have stored thousands of manuscripts transported by more than four hundred camels. All of these manuscripts were registered in ten volumes of catalogs, and the library was used as a space for discussion and scientific debate.⁵⁴

The establishment of *Baitul Hikmah* during the Abbasid period also had a significant impact on the development of libraries in various Islamic cities. This institutional inspiration encouraged aristocrats and community leaders to build libraries as open study centers that could be accessed by the public. These libraries were not only it served as a place to store manuscripts and books, but it also had a collection of works on logic, philosophy, astronomy, and various other fields of study.⁵⁵ The library's function then evolved into a productive space for research, learning, and scientific discussion that encouraged the intellectual advancement of Muslims in various regions, confirming its role as a major catalyst in educational transformation.

Regardless, the creation of mature education and intellectualism during the Abbasid Dynasty was built on three main pillars: (1) economic stability as the foundation of the scientific environment, as evidenced by the provision of decent living facilities by Caliph Harun al-Rashid and generous rewards from al-Ma'mun for scientists. (2) high regard for science, such as the practice of Caliph al-Mansur who gave gold equal to the weight of

⁵³ Imawan, *Daulah Umayyah & Daulah Abbasiyah (Sejarah Peradaban & Dinamika Sosial Intelektual Hukum Islam Pada Puncak Kejayaannya)*.

⁵⁴ Hitti, *History of Arab's; From the Earliest Times to the Present*.

⁵⁵ Hitti.



translated books; and (3) the commitment of state leaders such as Caliph al-Mansur, Harun al-Rashid, and al-Ma'mun in encouraging intellectual progress through systematic policies.⁵⁶

Table 2: Contributions and Impact of Baitul Hikmah

Aspect of Contribution	Description and Key Examples	Long-Term Impact and Legacy
Translation Movement	<ul style="list-style-type: none">• Large-scale translation of Greek, Persian, and Indian scholarly works.• Key Figures: Hunain Ibn Ishaq (pre-eminent translator), Sindhanta (Indian astronomy), al-Hallaj bin Matar (Euclid's <i>Elements</i>).• Initial focus on fields with practical application: Medicine, Astronomy, Mathematics.	<ul style="list-style-type: none">• Development of a robust Arabic scientific lexicon.• Enabled the integration of classical knowledge into the Islamic intellectual tradition.• Laid the foundation for original scientific innovation.
Advancement of Sciences	<ul style="list-style-type: none">• Emergence of pioneering Muslim scholars through the assimilation and development of translated knowledge.• Exemplars: Al-Khwarizmi (Algebra, Algorithms), Al-Razi & Ibn Sina (Medicine, Pharmacology), Jabir ibn Hayyan (Alchemy/Chemistry), Al-Fazari & Al-Fargani (Astronomy)	<ul style="list-style-type: none">• Catalyzed the Golden Age of Islamic science.• Their seminal texts became foundational references in European universities for centuries.
Educational Transformation	<ul style="list-style-type: none">• Evolved from a translation bureau into a structured center for higher learning and research.• Fostered interdisciplinary dialogues among scholars of diverse religious and intellectual backgrounds.• Provided free public access to collections, writing materials, and translation services.	<ul style="list-style-type: none">• Served as a model, inspiring the proliferation of public libraries and madrasas across the Islamic world (e.g., in Mosul, Shiraz, Rayy).• Established a paradigm for open, systematic, and research-based education.

⁵⁶ Nasution, *Sejarah Peradaban Islam*.



Aspect of Contribution	Description and Key Examples	Long-Term Impact and Legacy
Underlying Success Factors	<ul style="list-style-type: none">• Economic Stability: Substantial state patronage, salaries, and rewards for scholars.• High Cultural Value of Knowledge: Caliphal reverence for scholars and their work.• Systemic State Commitment: Sustained policy support across multiple caliphates for intellectual advancement.	<ul style="list-style-type: none">• Created a unique ecosystem conducive to scholarly excellence.• Defined the Abbasid era as the zenith of Islamic intellectual thought and cultural flourishing.

From the above description, it can be seen that *Baitul Hikmah* has proven to make a real and significant contribution to the development of Islamic civilization and science. With its equally strong influence, this institution has also encouraged the advancement of science and education in various parts of the world, an influence that is still felt today.

CONCLUSION

Baitul Hikmah, which was officially established in 215 AH/830 AD during the era of Caliph al-Makmun, was the pinnacle of the Abbasid Dynasty's commitment to the advancement of science and education. This institution developed from the initial initiatives of Caliph Abu Ja'far al-Mansur and Harun al-Rashid, who encouraged the scientific tradition in Baghdad, to become a multifunctional intellectual center that included a library, an integrated translation center, and an academic institution. Its establishment was driven by the caliphs' love of knowledge and the systematic need to assimilate the classical intellectual heritage, particularly from Greek culture, into Islamic knowledge, making it a symbol of knowledge integration and intellectual renewal.

The contribution of *Baitul Hikmah* lies in its role as a driving force behind massive translation, which transferred and internalized various disciplines from Greek, Persian, and Indian civilizations into Arabic. This activity not only enriched the Arabic scientific vocabulary, but also sparked a renaissance of science that gave birth to leading scholars in the fields of astronomy, medicine, chemistry, and mathematics. Furthermore, *Baitul Hikmah* transformed the Islamic education system by becoming a forum for



research, scientific discussion, and structured curriculum development. Its existence strengthened Baghdad's position as a center of knowledge globally and inspired the emergence of libraries and research centers around the world. This shows that the existence of *Baitul Hikmah* made it a major factor in intellectual progress that can still be felt today.

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