

# Syeikh Tahir Jalaluddin's Role In The Development Of Calculation-Based Fiqh In The Malay World

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## ABSTRACT

Syeikh Tahir Jalaluddin (1869–1956) occupies a central place in the development of calculation-based fiqh in the Malay world during the early twentieth century. More than a religious scholar, he reshaped Malay Muslim intellectual traditions by grounding fiqh in authentic textual evidence and introducing modern scientific methods into Islamic scholarship. His reformist stance reflected the tensions between the Kaum Muda (reformists) and the Kaum Tua (traditionalists), situating him as a thinker whose influence extended across jurisprudence, inheritance law (faraid), and Islamic astronomy (falak). This study examines his contributions to calculation-based fiqh, focusing on three dimensions that are his jurisprudential critiques, his systematic treatment of faraid, and his innovative application of mathematical methods in falak. Adopting a qualitative methodology, it draws upon books, theses, and journal articles, alongside primary sources, particularly his Personal Letters (SP10) preserved at the National Archives of Malaysia. Document analysis forms the core method, complemented by inductive, deductive, and comparative approaches. Findings show that Syeikh Tahir consistently advanced an intellectual project that combined scriptural fidelity with computational precision. In fiqh, he rejected ritual practices unsupported by sound textual foundations; in faraid, he devised pedagogical tools and calculation methods to simplify inheritance distribution; and in falak, he pioneered the use of logarithms and spherical trigonometry to determine prayer times and the qiblah. Collectively, these contributions shaped a paradigm of calculation-based fiqh that bridged tradition with modernity. Although his views were resisted by traditionalists, his works remain preserved in archives and continue to inform contemporary Islamic scholarship in the Malay world.

**Keywords:** Syeikh Tahir Jalaluddin; Malay World; literature review; fiqh; faraid; Islamic astronomy (falak).

## INTRODUCTION

Knowledge has long been recognized as the foundation of civilizational advancement. In its absence, societies risk stagnation, confined not only by material deprivation but also by the constraints of inherited experiences. Without the pursuit of knowledge, communities merely replicate the struggles of earlier generations, unable to move beyond subsistence. Conversely, the acquisition and dissemination of knowledge foster intellectual growth, elevating standards of living, and reshaping ways of thinking. In the Malay world, this dynamic was especially evident in the development of educational and intellectual institutions. (Bachtiar 1994; Mustajab 2003).

It was within this intellectual context that Syeikh Tahir Jalaluddin rose to prominence. His writings combined theological precision with a reformist vision, aiming to restore Islamic practice to its authentic foundations. At the same time, his scholarship engaged broader socio-political realities, offering both spiritual renewal and intellectual tools for resisting colonial domination (Bachtiar 1994; Mustajab 2003). In this sense, Syeikh Tahir's contributions illustrate the transformative power of knowledge not only as a means of religious clarification but also as a catalyst for social change and cultural modernization in the Malay world. This study therefore examines his legacy through the lens of calculation-based fiqh, focusing on his contributions in jurisprudence, inheritance (faraid), and Islamic astronomy (falak), which collectively demonstrate the integration of textual authenticity, mathematical reasoning, and scientific precision in Malay Islamic scholarship.

## INTELLECTUAL JOURNEY OF SYEIKH TAHIR JALALUDDIN

Syeikh Tahir Jalaluddin (hereafter Syeikh Tahir) occupies a prominent place in the intellectual and reformist history of the Malay world. His full name was Muhammad Tahir bin Syeikh Muhammad, though he became more widely recognized as Syeikh Muhammad Tahir Jalaluddin al-Falaki (1869–1956). Born on Tuesday, 4 Ramadan 1286 AH (9 December 1869 CE) in Ampek Angkek, Bukit Tinggi, West Sumatra, Indonesia, he descended from a lineage of distinguished scholars. His grandfather, Tuanku Nan Tua, was a celebrated Minangkabau scholar, while his cousin, Syeikh Ahmad Khatib, rose to prominence as a leading Malay scholar in Mecca (Zakariya 2006). Losing both parents at an early age, Tahir was raised by his aunt, Limbak Urai, who provided him with his first religious education. At the age of eleven, he traveled to Mecca and came under the tutelage of his cousin, Ahmad Khatib, a jurist of the Shafi'i school whose influence was decisive in shaping Tahir's early intellectual orientation (Fadhlullah 2003).

He spent thirteen years in Mecca mastering diverse branches of Islamic sciences, in addition to gaining fluency in Arabic and English. Both languages later proved essential in engaging the Malay intellectual community, whose religious practices were often intertwined with local customs. He subsequently continued his studies at al-Azhar University in Cairo, where he received the high certificate (Shahādah al-ʿĀlamiyyah). It was during this period that he encountered the reformist (islah) movement, drawing inspiration from leading figures such as Jamaluddin al-Afghani, Muhammad Abduh, and Muhammad Rashid Rida. His close connection with Rashid Rida, a direct disciple of Muhammad Abduh, provided him with both intellectual direction and a platform for disseminating reformist ideas (Hafiz 2019; Zakariya 2017).

Upon his return, Syeikh Tahir established himself as a central figure in the intellectual and cultural revival of Malaya. He was more than a religious teacher; he became a reformist thinker who challenged entrenched practices and advocated for a return to the authentic principles of Islam. His reformist writings were not only theological but also social and political, encouraging Muslims to strengthen their intellectual and cultural identity while resisting colonial domination. Publications such as *al-Imam* and *al-Ikhwān* featured his writings on issues ranging from jurisprudential understanding (fiqh) to their practical application in worship (ʿibadat), which he insisted must be strictly and exclusively grounded in authentic *naṣ*. This uncompromising stance was evident in both his lectures and writings, where he frequently offered critical responses to questions raised by the community. These contributions demonstrate his dual role as both an educator and a prolific writer who sought to reform not merely ritual practices but the very mindset of the Malay-Muslim community (Hafiz Zakaria, 2005).

His influence, however, was not without controversy. Many of his views, particularly those aligned with the *Kaum Muda* (Reformists), were resisted by traditional scholars (*Kaum Tua*) and the local elite. Syeikh Tahir rejected *bid'ah* and openly opposed it during a religious polemic held in 1952 at Kepala Batas, Penang. In the same vein, he dismissed the position of the traditional scholar Haji Bakar regarding the legitimacy of performing the supererogatory prayer prior to the Friday congregational prayer (Hafiz Zakaria, 2005). His reformist stance, which often rejected blind adherence to any single school of law, was regarded as radical by many, and his critiques of customary practices were sometimes perceived as excessively harsh. This intellectual polemic underscores his position as a figure who was ahead of his time, challenging prevailing norms in ways that unsettled established authority (Mohamad Amin 2012; Mohd Puaad & Ahmad Faisal 2023).

Analytically, Syeikh Tahir's significance lies not only in his written contributions but also in his broader intellectual agenda. He sought to cultivate a reformist consciousness within Malay society, combining legal scholarship (fiqh), as well as reformist ideals (tajdid). His role illustrates how Islamic scholarship functioned simultaneously as a tool of religious renewal and as a strategy for socio-political empowerment. In this sense, he was not merely a transmitter of knowledge but an architect of intellectual transformation, positioning Islamic thought as a dynamic force in the modern history of the Malay world (Hafiz Zakaria, 2005).

## SYEIKH TAHIR'S SCHOLARSHIP IN FIQH

In Malaysia, the understanding of fiqh discipline was shaped in part by Salafiyyah thought, which influenced reform-oriented students and scholars returning from their studies in the Middle East. The spread of Salafiyyah

thought in the Malay world can be traced to the early twentieth century, influenced by Egyptian political journalism, including al-Ittihad (1913), as well as the reformist writings of Rashid Rida and Muḥammad ‘Abduh. Their call was twofold: to resist Western colonial domination and to purify religion from innovations and practices not grounded in the original nas. These reformist currents inspired Muslims across the region to initiate renewal efforts within their own communities, Malaysia included (Hafiz Zakaria, 2005). This influence was further reinforced through the circulation of Salafiyyah publications, such as al-Manar, which found readership among audiences in Malaya. Syeikh Tahir Jalaluddin’s scholarship in fiqh is primarily discerned from his writings preserved in the Personal Letters (SP10) collection (Mukhtar 1980). Within this field, his contributions to fiqh consisted of six significant works. Unfortunately, it is a great loss that most of these texts are no longer available today, except for those safeguarded at the National Archives of Malaysia in Kuala Lumpur (Zakariya 2006; Mustajab 2003).

One of the earliest modern works that examined his contributions is *Kitab Ta’yid Tadhkirah Muttabi’ al-Sunnah fi al-Rad ‘ala al-Qa’il bi Sunniyah Rak’atayn qabl al-Jum’ah*. In Malay, the text was rendered as “Ini Huraian yang Membakar Taman Persuraian Haji Bakar”, and was first published in Cairo by al-Marbawiyyah Press in 1350 AH. The original manuscript, written in Arabic, was later reprinted by Haji Abdullah Muhammad Nur al-Din al-Rawi Press in Penang in 1953 CE. The book measures 26 x 18 cm and contains 61 printed pages, with much of its content drawn from a series of articles previously published in *Pengasuh* magazine in 1921 (Hafiz Zakaria, 2005).

This work illustrates Syeikh Tahir’s intellectual depth in Islamic jurisprudence, as well as his mastery of classical Arabic texts, which he expressed in a distinct Malay scholarly style enriched with *usul* and *fiqh*. Within the text, he addressed the issue of performing two rak’ahs of Sunnah prayer before the Friday prayer following the first *azan*, which he categorised as *bid’ah* (religious innovation). Yet, because the practice had become deeply embedded in the religious life of the local Muslim community, his criticism was perceived as overly severe and, consequently, was not widely accepted by his contemporaries (Mohd Pua’ad Abdul Malik, 2014).

Syeikh Tahir played an active role in advancing a sound understanding of fiqh, one that he argued must rest on authentic scriptural evidence. During his time, many in the community observed religious practices that were not derived from authoritative sources but rather from later additions by certain jurists, often supported by weak or fabricated hadith. Among the Malay customs he strongly criticized were *tahlil*, *talqin* (Hafiz Zakaria 2005), and the organization of *Maulud* gatherings (al-Imam, 1906). Viewing such practices as misleading and potentially harmful to the community’s religious consciousness, he took it upon himself to fulfill what he regarded as a *fardu kifayah*, a collective obligation to guide society away from *bid’ah* (religious innovation).

He also questioned the widely accepted requirement of forty individuals as a condition for the validity of the Friday Prayer, asserting that no definitive nas or authoritative Islamic text prescribes a specific number of participants (Hafiz Zakaria 2005). These concerns are most clearly articulated in *Kitab Ta’yid Tadhkirah*, where Syeikh Tahir underscored the need to realign communal practice with the true teachings of Islam by discarding rituals lacking sound textual basis (Mohd Puaad & Rahimin Affandi 2024; Mohd Puaad & Ahmad Faisal 2017). His uncompromising stance, however, also marked him as a leading figure of the *Kaum Muda*, and his sharp critiques of entrenched traditionalist positions likely contributed to the neglect or deliberate marginalization of his fiqh works by the *Kaum Tua* establishment (Zakariya 2006; Mustajab 2003).

## RESEARCH METHOD

In this study, the researchers employed a qualitative approach, utilizing several methods to gain a thorough understanding of the subject. One of the key methods applied was library-based research. This approach is a structured, inquiry-driven process that treats documents such as books, journal articles, theses, archival records, newspapers, statutes, reports, and other curated materials as primary sources of data (Corbin, J., & Strauss, A. 2015). The aim is not merely to summarize existing knowledge but to develop new syntheses, critical interpretations, or conceptual frameworks. The strength of this method lies in its systematic search procedures, clearly articulated inclusion criteria, rigorous evaluation of sources, and analytical integration of the evidence gathered (Snyder 2019). For this study, several physical works on Syeikh Tahir were examined, including those written by Mohd Puaad Abdul Malik and Ahmad Faisal Abdul Hamid, in addition to earlier scholarship on his

contributions presented in theses, books, and journal articles (Mohd Puaad & Ahmad Faisal 2017, 2021, 2023; Mohd Puaad & Rahimin Affandi 2024). In addition, primary sources in the form of Syeikh Tahir's Personal Letters (SP10), preserved at the National Archives of Malaysia, were also consulted as critical references to substantiate and strengthen the study's findings (Mukhtar 1980). This was further complemented by extensive library searches, which involved online databases such as Google Scholar, ResearchGate, and various local university e-journals. Key repositories accessed included the Hamzah Sendut Library at Universiti Sains Malaysia, the Main Library and Za'ba Memorial Library at Universiti Malaya, as well as relevant collections at Universiti Kebangsaan Malaysia, the International Islamic University Malaysia (IIUM), and the National Library of Malaysia.

For the analytical stage, this study employed the method of document analysis. Document analysis refers to a systematic procedure for reviewing and evaluating documents such as manuscripts, letters, books, articles, and archival records in order to interpret meaning, gain understanding, and develop empirical knowledge (Bowen 2009). In this research, data gathered and extracted from the documents were examined using inductive, deductive, and comparative strategies. The synthesis of information was conducted from a historical perspective, while also considering the socio-political context and the broader national and state agendas on knowledge development, particularly the influence of Islamic scholarship during that period.

Furthermore, comparative analysis, reinforced through triangulation across different types of data and sources, was applied to achieve a more comprehensive and nuanced interpretation of the evidence. This multi-layered approach was intended not only to clarify the historical context but also to shed light on the actual role and significance of Syeikh Tahir in shaping intellectual and religious thought in the Malay world.

## CONTRIBUTIONS OF SYEIKH TAHIR IN CALCULATION-BASED FIQH

This study examines the contributions of Syeikh Tahir to calculation-based fiqh through two areas of knowledge that require computational expertise, namely the law of inheritance (fara'id) and Islamic astronomy (falak). Mastery of fara'id distribution demands skill in numerical calculation, particularly in deriving the original share denominator (*asl al-masalah*) before apportioning the estate among heirs, whether proportionately or equally. A similar level of precision is necessary in the field of astronomy, where one must determine the positions of the sun and moon through the application of logarithmic and algebraic calculations. Such advanced competencies could not be attained without exceptional intellectual ability and sound analytical judgment.

### Contribution in Fara'id

Among Syeikh Tahir's contributions to the discipline of fara'id (Islamic inheritance law) are two notable works: *Irshad al-Kha'id fi 'Ilm al-Fara'id* (1929 CE) and its continuation, *Tatimmah Irshad al-Kha'id li 'Ilm al-Fara'id* (1952 CE). Both were published by al-Matba'ah al-Ahmadiyyah in Singapore, with the earlier text measuring 19 cm by 13 cm and comprising 69 pages. The first volume serves as an introductory treatise, outlining the foundations of fara'id by discussing its definition, objectives, virtues, and the legal obligation of studying it. It further elaborates on the essential components of inheritance law, including its pillars, conditions, causes of entitlement, impediments to succession, and the principles of 'asabah (agnatic heirs).

Importantly, the work extends beyond descriptive legal exposition by incorporating a question-and-answer format that addresses practical issues arising in inheritance distribution. It identifies five matters that must be prioritized before the estate is apportioned to heirs, redemption of pledged property, settlement of zakat and nazar (religious vows), fulfillment of obligations incurred from the moment of death until burial, repayment of debts, execution of bequests up to one-third of the estate, and finally, the distribution of the remainder among eligible heirs. In addition, Syeikh Tahir engaged with complex issues frequently debated in the application of fara'id. These include the rights of relatives known as *dhawī al-arhām* (uterine kin), the inheritance rights of heirs from a valid marriage, the status of a wife's entitlement following divorce by *talaq ba'in* and *talaq raj'i*, as well as questions concerning succession through *wala'* and the role of the *Baitulmal* in inheritance.

The second kitab, *Tatimmah Irshād al-Khā'id li 'Ilm al-Farā'id* was published in 1952 by al-Matba'ah al-Ahmadiyah in Singapore, represents a continuation of Syeikh Tahir's earlier treatise *Irshād al-Khā'id li 'Ilm al-*

Farā'id (1929). Measuring 19 x 13 cm with 68 pages, the work is written in Classical Malay with the incorporation of selected Arabic terminology, reflecting both accessibility to the Malay readership and fidelity to the technical language of Islamic law. This sequel expands on complex aspects of inheritance distribution, covering topics such as Asal Masalah (basic formula), 'Awl (proportional reduction), Tashīh al-Masā'il (correction of fractional shares), al-Radd (redistribution of surplus estate), al-Munāsakhāt (successive inheritance), and Khunthā Mushkil (legal treatment of intersex heirs). It also addresses exceptional cases, including inheritance of missing persons, children in utero, or heirs who died by drowning, fire, or burial under rubble. Further, the book examines legal issues surrounding wills in favor of non-heirs and concludes with practical guidance on distributing estates according to proportional shares from the Asl Masalah.

Notably, the work adopts a narrative style that avoids contrasting juristic opinions, a methodological choice aimed at preventing confusion among lay readers. To enhance clarity, Syeikh Tahir employed tables and introduced systematic computational methods such as tamāthul (equivalence), tadākhul (inclusion), tawāfuq (compatibility), and tabāyun (disparity) as tools to simplify complex inheritance calculations. For example, in the method of tamāthul, where the fractions (shares) of heirs have the same denominator or can easily be expressed in equivalent form, as below:

**Table 1:** Calculation for Tabayun and Tamāthul

The Method	Heirs	Share	The Calculation Methods		
Syeikh Tahir	wife	$\frac{1}{4}$	$1 \times 2$	2	2
	2 full brothers	$\frac{3}{4}$	$2 (3 \times 2)$	6	3
					3
Contemporary	wife	$\frac{1}{4}$	$1 \times 1$	1	1
	2 full brothers	$\frac{3}{4}$	$2 (3 \times 1)$	3	1.5
					1.5

**Source:** (Jasni & Zahari 2019)

However, on page 12 of Tatimah Irshād al-Khā'id li 'Ilm al-Farā'id, Syeikh Tahir identifies this method as an example of tabāyun. In principle, tabāyun applies when the fractional shares between two or more heirs have no common factor. In this case, however, the example actually reflects the characteristics of tamāthul, suggesting a shift or interchange in the terminology used. In addition, Syeikh Tahir's approach to deriving the aṣl al-mas'alah (the common denominator or base number) also reveals distinctive features.

His pedagogical method reflects a dual commitment to maintaining scholarly rigor while ensuring accessibility, even though in one instance he appears to have misidentified the method by name. Nonetheless, the computation itself remains correct and leads to an accurate distribution of shares, as the numerical process is logically sound. It is also noteworthy that the majority of Syeikh Tahir's writings on faraid were firmly grounded in the principles of the Shāfi'ī school of law..

## Contributions in Falak

Having said of his majoring in fiqh, the knowledge also led Syeikh Tahir Jalaluddin's to mastery in Islamic astronomy (falak). This branch of knowledge, though rarely pursued by Muslims, has long been regarded as one of the most essential sciences, serving as a critical tool for determining the beginning of Ramadan, marking the celebrations of 'Id al-Fiṭr and 'Id al-Aḍḥā, as well as establishing the correct qiblah orientation for prayer. His concern on falak, based on he found that many mosque mihrabs (semicircular recess in the wall of a mosque) were not aligned accurately with the direction of the qiblah (towards the Ka'bah in Mecca). For instance, during his appointment as a mosque qiblah inspector in Perak in 1900, he reported that numerous mosques across the Malay Peninsula were misaligned, including the mosque in Teluk Anson, Perak (Bachtar 1994; Zakariya 2006).

Apart from qiblah, Syeikh Tahir's method of calculation in determining the times of prayer, employed the concept of spherical trigonometry (*segitiga bola*). For Syeikh Tahir, the value of *faḍl ad-dā'ir* (hour angle) had to be established first in order to determine prayer times. This formula measures on the basis of three angles, the sun's declination, the latitude of the location, and the sun's altitude. His method of calculation was considered an achievement of its time, demonstrating a level of accuracy comparable to modern computations, as follows:

**Table 2:** Comparison of the Calculation of Selected Prayer Times

Selected Prayer Times				
	Asar	Magrib	Isya'	Subuh
Syeikh Tahir	3. 21. 04	5. 52. 08	7. 06. 24	7. 15. 04
Kontemporer	3. 21. 17.6	5. 52. 11.29	7. 06. 29.66	7. 15. 12.85

**Source:** (Siti Muslifah 2013)

In the knowledge, Syeikh Tahir also drew upon other disciplines to refine his calculations, such as the science of navigation, which enabled him to determine the geographical position of a location at a given time. He likewise utilized instruments considered advanced for his era, including the *siksatan* (sextant) and the chronometer. Both of these instruments were regarded as modern tools in the nineteenth century; the sextant, for example, functions to measure the altitude of celestial bodies above the horizon at their culmination (Siti Muslifah 2013).

Drawing on his expertise, Syeikh Tahir's earliest work, *Natijat al-Jaliliyyah* (The Jalaliyyah Result), which addressed the Islamic calendar and almanac, was published in 1925. He also published *Natijat al-Ummi li Ma'rifat al-Awqat al-Khamsah* (The result/work of an illiterate man in determining the times of the five daily prayers) in 1936 in which he provided guidelines for ordinary Muslims to understand the basic principles governing the determination of times for the five daily prayers. His proficiency in this discipline subsequently led to two further writings on the determination of prayer times and the orientation of the qiblah, namely *Waktu yang Lima* and *Hala Kiblat dengan Logaritma*. This text was first published in 1938 CE/1357 AH by al-Ahmadiyah Press in Singapore. Originally composed in Arabic, it was later translated by Syeikh Tahir himself into Malay, written in Jawi script (Siti Muslifah 2013).

The work embodies a mode of calculation that was remarkably advanced for its period, which explains why Syeikh Tahir is frequently acknowledged as the earliest scholar of astronomy in the Malay world to apply modern mathematical principles to religious practices. In *Pati Kiraan*, he provided a detailed treatment of the computation of the sun's altitude at the commencement of prayer times, as well as the calculation of the *Soekatan Masa* (equation of time) to determine accurate timings based on a location's longitude. This text stands as a significant contribution to the discipline of Islamic astronomy. Notably, Tahir was the first 'alim in Malaya to employ logarithmic methods in the calculation of the Islamic calendar, a skill he acquired through his studies in Makkah and Cairo (Siti Muslifah 2013).

Recent scholarships on his contributions to astronomy reflects a wide range of perspectives. This is largely because many contemporary *falak* institutions in the Malay World continue to rely on his methods for astronomical calculations, to the extent that the Penang *Falak Centre* has been named in his honor (Zainal 2016). His mastery also lead to the writing of book namely, *Astronomi Ilmu Falak: Sheikh Thahir Jalaluddin al-Minangkabawi* (1869–1956), provides detailed analysis of his methods and contributions (Nor Azam Mat Noor et al. 2016). Thus, Syeikh Tahir's legacy in the field of astronomy is indisputable. His ideas and writings remain influential, serving as authoritative references for both scholars and practitioners of *falak* to this day (Mohamad Amin 2012).

## FINDINGS AND DISCUSSIONS

The findings of this study underscore that Syeikh Tahir Jalaluddin's intellectual project was rooted in a distinctive synthesis of jurisprudence (fiqh), mathematics (faraid), and Islamic astronomy (falak), reflecting both his reformist impulses and his pioneering role in calculation-based fiqh. His writings consistently reveal an effort to realign Malay Muslim practices with authentic scriptural sources (dalil sahih) while introducing scientific tools to improve accuracy in legal rulings and ritual observance. A triangulated examination of his contributions across fiqh, faraid, and falak illustrates how he navigated between tradition and modernity, producing a body of work that was both locally relevant and globally informed.

In the realm of fiqh, Syeikh Tahir's critique of the two rak'ahs of Sunnah prayer before Friday congregational worship, articulated in *Kitab Ta'yid Tadhkirah*, demonstrates his insistence on textual authenticity over customary practice. His rejection of rituals such as tahlil and talqin, which lacked firm textual basis, reflects a broader Kaum Muda orientation that sought to strip Malay Islam of innovations introduced through custom and weak hadith (Hafiz 2005). This aligns him with reformist contemporaries such as Rashid Rida in Egypt, who similarly emphasized the centrality of Qur'an and Sunnah while rejecting unfounded accretions (Hafiz 2019; Zakariya 2017). Yet, unlike Rida, who focused primarily on theological reform and political critique, Syeikh Tahir localized reform within the Malay socio-religious context, challenging practices entrenched within communal life and assuming the fardu kifayah obligation of correcting society.

When triangulated with his contributions to faraid, the coherence of his methodology becomes clear. His works *Irshad al-Kha'id* (1929) and *Tatimmah Irshad al-Kha'id* (1952) not only systematized the law of inheritance but also introduced computational techniques comprising tamathul, tadakhul, tawāfuq, and tabāyun to simplify complex divisions. By presenting his ideas in Classical Malay with limited Arabic terminology, he deliberately made the science of inheritance accessible to the wider Malay audience while preserving scholarly rigor. The choice to avoid highlighting conflicting juristic opinions was also pedagogical, aimed at clarity for the lay public rather than academic contestation (Mohd Puaad & Ahmad Faisal 2017, 2023). In this regard, his approach resonates with Syed Sheikh al-Hadi, his reformist contemporary in Malaya, who likewise sought to democratize access to Islamic knowledge through Malay-language publications such as *al-Ikhwan* (Ibrahim 1994). However, where al-Hadi concentrated on social reform and education, Syeikh Tahir extended reform into the technical sciences of law and calculation, illustrating his unique positioning within the Kaum Muda reformist landscape.

His most striking innovation emerges in the field of falak, where his reliance on spherical trigonometry, logarithms, and navigational instruments such as the sextant and chronometer situates him within global scientific currents of the early twentieth century. Works like *Pati Kiraan*, *Waktu yang Lima* and *Hala Kiblat dengan Logaritma* (1938) show that he was not content with descriptive astronomy; instead, he introduced modern mathematical methods to religious calculations, making him the first Malay scholar to do so (Mohamad Amin 2012; Zainal 2016). This intellectual trajectory parallels the broader modernist movement led by Muhammad Abduh and Rashid Rida, who emphasized the reconciliation of Islam with modern science (Hafiz 2019). Yet, unlike Abduh and Rida, whose reformist discourses were framed at a civilizational level, Syeikh Tahir operationalized reform in highly technical fields, ensuring that Malay Muslims could pray, fast, and distribute inheritance with precision. His methods remain influential, as evidenced by the continued reliance of contemporary falak institutions on his calculations and the naming of the Penang Falak Centre in his honor (Nor Azam Mat Noor et al. 2016).

Through triangulation of his works in fiqh, faraid, and falak, Syeikh Tahir's contributions can be interpreted as part of a broader reformist paradigm that combined scriptural authenticity, scientific precision, and communal accessibility as can be seen in the table below:

**Table 3 :** Summary of Syeikh Tahir Excellency in Faraid and Falak

Field	Key Works	Distinctive Features	Excellence / Legacy
Faraid (Islamic Inheritance Law)	<i>Irshad al-Kha'id fi 'Ilm al-Faraid</i> (1929)	Combined descriptive exposition with Q&A format to address practical inheritance cases.	Simplified faraid for students and the lay public

	Tatimmah Irshad al-Kha'id li 'Ilm al-Faraid (1952)	<p>Tackled complex issues such as dhawī al-arhām, inheritance after divorce, wala', and the role of the Baitulmal</p> <p>Applied computational methods (tamāthul, tadākhul, tawāfuq, tabāyun) to simplify division of shares.</p>	<p>Preserving Shāfi'ī rigor.</p> <p>Created pedagogical tools (tables, examples) to ensure clarity.</p>
Falak (Islamic Astronomy)	<p>Natijat al-Jaliliyyah (1925)</p> <p>Natijat al-Ummi li Ma'rifat al-Awqat al-Khamsah (1936)</p> <p>Waktu yang Lima &amp; Hala Kiblat dengan Logaritma (1938)</p> <p>Pati Kiraan</p>	<p>Applied spherical trigonometry to determine prayer times</p> <p>Calculated using three critical angles: Sun's declination, latitude, and altitude.</p> <p>Corrected qiblah orientations, reporting misaligned mihrabs in Perak (1900).</p>	<p>Recognized as earliest Malay scholar to integrate modern mathematics into religious observance.</p> <p>Provided practical guidelines for lay Muslims to determine prayer times.</p> <p>Penang Falak Centre named in his honor</p>

His marginalization by the Kaum Tua reveals the social resistance to modernist interpretations in the Malay world, yet his writings endure as a testimony to a scholar who bridged classical Islamic sciences with modern mathematical rationality. When situated alongside figures like Rashid Rida in Cairo and Syed Sheikh al-Hadi in Malaya, Syeikh Tahir emerges as a reformist intellectual whose distinctive contribution lay in constructing a paradigm of calculation-based fiqh. This paradigm not only advanced the intellectual traditions of the Malay world but also aligned them with wider global movements of Islamic reform, thereby positioning Malay Islam within the broader currents of modernity.

## CONCLUSIONS

This study has shown that Syeikh Tahir Jalaluddin's contributions to calculation-based fiqh hold a distinguished position in the intellectual history of the Malay world. By triangulating his works in fiqh, faraid, and falak, it becomes evident that his intellectual project was anchored in two central commitments: a return to authentic scriptural evidence (dalil sahih) and the integration of rigorous scientific methods into religious practice. His reformist jurisprudential writings, such as Kitab Ta'yid Tadhkirah, reveal his strong critique of customary innovations unsupported by sound textual foundations, thereby positioning him within the discourse of the Kaum Muda reformist movement. His treatises on faraid, particularly Irshad al-Kha'id and Tatimmah Irshad al-Kha'id, illustrate a pedagogical strategy aimed at simplifying intricate inheritance calculations through systematic methods and accessible Malay prose. A key strength of his approach lies in his logical reasoning, which enabled him to solve complex cases of inheritance distribution, even if occasional minor errors in terminology occurred.

Most significantly, his pioneering works in falak, such as Pati Kiraan, Waktu yang Lima, and Hala Kiblat dengan Logaritma, highlight his mastery of spherical trigonometry, logarithms, and modern instruments, making him the earliest Malay scholar to embed advanced mathematical concepts into religious observances. Collectively, these contributions underscore the originality of Syeikh Tahir's paradigm of calculation-based fiqh, which combined fidelity to scriptural sources, logical reasoning, mathematical precision, and accessibility for the wider public.

His intellectual trajectory situates him alongside reformist contemporaries such as Rashid Rida and Syed Sheikh

al-Hadi, while also distinguishing him through his unique focus on the technical sciences of law and astronomy. Although his ideas often met resistance from traditionalist scholars, his writings continue to inform contemporary scholarship and practice, with modern falak institutions in Malaysia and beyond still relying on his methods. Ultimately, Syeikh Tahir Jalaluddin stands as a pivotal figure whose scholarship not only bridged classical Islamic knowledge and modern scientific rationality but also reaffirmed that knowledge must be rooted in original sources of shariah (hukm Allah). His integration of logic and calculation demonstrates that these sciences remain vital components of the Islamic intellectual tradition, inseparable from the broader civilizational pursuit of knowledge.

## REFERENCES

1. Abdul Malik, M. P. (2014). Pemikiran hukum Syeikh Muhammad Tahir Jalaluddin dalam Kitab Ta'yid Tadhkirah Muttabi' al-Sunnah fi al-rad 'ala al-qa'il bi sunniyah rak'atayn qabl al-Jum'ah (Master's thesis, University of Malaya). University of Malaya Students' Repository
2. Bachtiar, D. (1994). Riwayat hidup dan perjuangan Syeikh Tahir Jalaluddin Al-Azhari Al-Falaki. Kuala Lumpur: Asmah Publisher.
3. Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27–40. <https://doi.org/10.3316/QRJ0902027>
4. Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). Thousand Oaks, CA: Sage.
5. Fadhlullah, J. (2003). Pengaruh pemikiran Syed Jamaluddin al-Afghani dan Syeikh Muhammad Abduh terhadap Syeikh Tahir Jalaluddin. In A. Sohaimi (Ed.), *Syeikh Tahir Jalaluddin: Pemikir Islam* (pp. 35–36). Pulau Pinang: Universiti Sains Malaysia.
6. Hafiz, Z. (2005). Islamic reform in Malaya: The contribution of Shaykh Tahir Jalaluddin. *Intellectual Discourse*, 13(1), 49–72.
7. Hafiz, Z. (2006). The life and times of Shaykh Tahir Jalaluddin. *Sejarah: Journal of the Department of History*, 14(14), 89–116. <https://ejournal.um.edu.my/index.php/SEJARAH/article/view/9175/6488>
8. Hafiz, Z. (2017). Colonialism, society and reforms in Malaya: A comparative evaluation of Shaykh Tahir Jalaluddin and Syed Shaykh Ahmad Al-Hady. *Intellectual Discourse*, 25(Special Issue), 477–501. <http://journals.iium.edu.my/intdiscourse/index.php>
9. Hafiz, Z. (2019). Major trends in the historiography of Muslim reformism in pre-independent Malaysia. *Intellectual Discourse*, 27(2), 531–554. <https://journals.iium.edu.my/intdiscourse/index.php>
10. Ibrahim, A. (1994). *Islamic modernism in Malaya: The life and thought of Sayid Syeikh Al-Hadi*. Kuala Lumpur: Universiti Malaya.
11. Jasni Sulong, & Zahari Mahad Musa. (2019). *Faraaid A-Z*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
12. Mohamad Amin, A. (2012). *Sumbangan Syeikh Muhammad Tahir Jalaluddin al-Falaki terhadap perkembangan fiqh dan falak (Tesis Doktor Falsafah)*. Universiti Kebangsaan Malaysia.
13. Mohd Puaad, A., & Ahmad Faisal, A. (2017). Analisis penulisan Sheikh Tahir Jalaluddin dalam Kitab Ta'yid Tadhkirah Mutabbi' al-Sunnah. *Jurnal al-Tamaddun*, 12(1), 67–78. <https://mojes.um.edu.my>
14. Mohd Puaad, A., & Ahmad Faisal, A. (2021). Analisis beberapa pemikiran tajdid Muhammad Tahir Jalaluddin. *Jurnal al-Tamaddun*, 49(2), 1–36. <https://mojes.um.edu.my>
15. Mohd Puaad, A., & Ahmad Faisal, A. (2023). *Biografi dan metodologi penulisan: Syeikh Muhammad Tahir Jalaluddin*. Kuala Lumpur: Institut Pendidikan Guru Kampus Bahasa Antarabangsa (IPGKBA).
16. Mohd Puaad, A., & Rahimin Affandi, A. (2024). *Pemikiran hukum ulama Melayu progresif: Syeikh Muhammad Tahir Jalaluddin*. Kuala Lumpur: Institut Pendidikan Guru Kampus Bahasa Antarabangsa (IPGKBA).
17. Mukhtar, R. (1980). *Inventori surat-surat persendirian Sheikh Tahir Jalaluddin*. Kuala Lumpur: Arkib Negara Malaysia.
18. Mustajab, M. (2003). Sheikh Tahir Jalaluddin al-Falaki: Pelopor gerakan pembaharuan agama dan perubahan masyarakat. In A. Sohaimi (Ed.), *Sheikh Tahir Jalaluddin: Pemikir Islam* (p. 25). Pulau Pinang: Penerbit Universiti Sains Malaysia.
19. Siti Muslifah. (2013). Analisis pemikiran Syeikh Muhammad Tahir Jalaluddin al-Minangkabawi tentang penentuan waktu salat dalam Kitab Pati Kiraan dan akurasinya (Tesis Sarjana). Institut Agama

Islam Negeri (IAIN) Walisongo.

20. Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339.
21. SP10, Syeikh Tahir Jalaluddin Personal Letters. Kuala Lumpur: National Archives of Malaysia
22. Zainal, B. (2016). Pentahkikan naskhah falak Alam Melayu (pp. 4–8). Selangor: Jabatan Mufti Negeri Selangor.