Determination of Prayer Times Through Islamic Astronomy Applications: Repositioning Traditional Authority in the Digital Era

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Abstract:
> The determination of prayer times is an important aspect of Islamic religious practices, typically approached through two methods: the traditional one based on the observation of the sun's position and the modern method using mathematical technology. This study aims to

examine the shift in societal perspectives regarding prayer time determination based on Islamic Astronomy and the role of modern mathematical technology in influencing traditional authority. The research uses a qualitative approach with semi-structured interviews and document analysis. The study subjects consist of two groups: those who maintain traditional methods and those who adopt modern mathematical technology, with 40 purposively selected participants. The findings reveal that older generations tend to preserve traditional methods due to emotional and spiritual ties to religious heritage, while younger generations are more accepting of technology as a practical solution. Although technology facilitates the determination of prayer times, some people feel that its use diminishes the spiritual depth of the prayer experience. This study concludes that technology can serve as a supportive tool that enriches religious understanding without replacing the traditional values that exist.

Keywords: prayer time determination, Islamic astronomy, modern mathematical technology

A. Introduction

The determination of prayer times in Islam, such as for Salat, fasting, and Eid celebrations, has long been under the authority of scholars and religious authorities using the methods of *hisab* and *rukyat*. *Hisab* is an astronomical calculation passed down through generations, while *rukyat* relies on direct observation of the moon's crescent[1]. With the advancement of science, modern mathematical technology has increasingly been able to calculate the positions of celestial bodies with high precision. This raises the question of how relevant traditional methods are in the digital age. Despite the higher accuracy offered by technology, religious authorities still play a crucial role in establishing the criteria and standards used by Muslims to determine prayer times.

The main issue that arises is the gap between traditional and modern approaches to determining prayer times. In many Muslim countries, this difference in methods often becomes a source of debate, even leading to division, particularly in determining the start of the Islamic month[2]. *Rukyat* is frequently considered

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[1] Isyvina Unai Zahroya, "Respons Perukyat Metode Tradisional Dan Sains Dalam Keberhasilan Rukyat Al-Hilāl Ahmad Asyhar Shofwan" (Thesis, Universitas Islam Negeri Walisongo Semarang, 2022).

[2] Ahmad Muslih Haryanto, "Hisab Dan Rukyat Dalam Penentuan Awal Bulan Qamariyah Di Indonesia Perspektif Hadis," *Al-Mu'tabar* 3, no. 2 (2023): 45–60, https://doi.org/10.56874/jurnal%20ilmu%20hadis.v3i2.1553; Rahimin Rahimin, Muhammad

more in line with Islamic law because it is based on direct observation At the same time, modern *hisab*, although highly accurate, is still debated regarding its legitimacy in Islamic jurisprudence. This situation creates a dilemma: should Muslims continue to adhere to the traditional methods used for centuries, or should they adopt modern technology as the primary tool for determining prayer times?

In this regard, the researcher examines several articles to identify novelty and research gaps related to determining prayer times based on Islamic astronomy: does modern mathematical technology shift traditional authority? The researcher analyzes literature reviews from several journal articles using the VOS Viewer application to analyze existing publications on this topic and see how the connections between studies are linked in a matrix network.

Figure: 1 Bibliometric Analysis Visualization Results on the Determination of Prayer Times Based on Islamic Astronomy: Does Modern Mathematical Technology Shift Traditional Authority
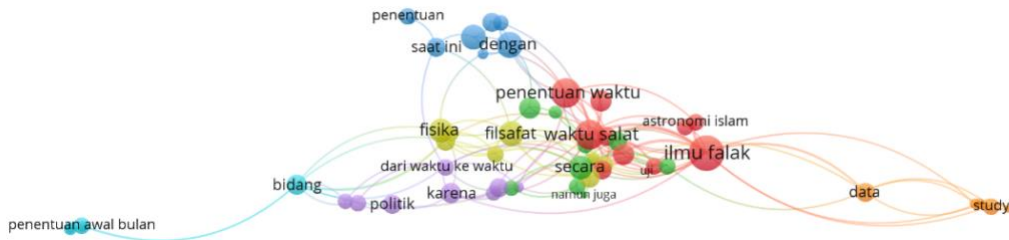
Through bibliometric analysis using the VOS Viewer application, the researcher examined articles from Google Scholar and Sinta-indexed publications from 2020 to 2025 regarding determining prayer times based on Islamic astronomy: does modern mathematical technology shift traditional authority? Using the Publish or Perish application, it was revealed that the Sinta-indexed articles visualized a bibliometric network to understand the extent of the development

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Mawardi Djalaluddin, and Siti Khumairah Fiqrillah, "Hisab Dan Rukyat Dalam Penentuan Awal Bulan Qamariyah," *Sibaliparriq: Jurnal Hukum Keluarga Dan Literasi Syariah* 1, no. 1 (2024): 32–41, https://doi.org/10.5281/sbp.v1i1.1279.

and trends regarding the topic of prayer time determination based on Islamic astronomy: does modern mathematical technology shift traditional authority. It can be seen that research on *"the determination of prayer times based on Islamic astronomy: does modern mathematical technology shift traditional authority?"* is still rarely found. Even from the network visualization, it appears that the determination of prayer times using modern mathematical technology and traditional methods are not closely related, or only a few are connected. This gap in the literature and the field study piqued the researcher's interest to delve deeper into the study of prayer time determination based on Islamic astronomy: does modern mathematical technology shift traditional authority.

This study aims to compare traditional methods with technology-based approaches in determining prayer times, as well as to analyze the strengths and weaknesses of each method. In addition, this research also explores the impact of modern mathematical technology developments on the determination of prayer times. The study further investigates the extent to which the Muslim community accepts the use of technology in this process. As a final outcome, this research is expected to provide recommendations for integrating conventional methods with modern technology to create a more accurate, efficient, and widely accepted prayer time determination system.

B. Literature Review

1. Traditional Methods for Determining Worship Times

In ancient times, determining prayer times, the start of fasting, holidays, and the direction of the Qibla were done using simple methods. Because then, technology was not as sophisticated as it is now. In the Safinah book by Sheikh Salim bin Sumair Al-Hadhrami, we can see with the help of sunlight to determine prayer times. In the "prayer times" article in the Safinah book, it is stated that there are five prayer times: 1) Midday prayer begins when the sun is directly above your head. For example, the tool used is a stick when using the traditional method. The stick stands up in the middle of the field to mark the beginning of midday. Then, in the Safinah book, it is explained that the stick's shadow exceeds its size at the beginning of midday. However, at the end of midday, the stick's shadow was the same size as the stick standing earlier. 2) The beginning of Asr time, for example, is the same as using the standing stick. The beginning of Asr time can be seen when the stick's shadow is the same size as the stick itself, but the shadow is slightly longer than the end of Dhuhur. The end of Asr time can be seen with the setting of the sun. 3) The beginning of Maghrib time can be seen with the sun setting,

and the end of Maghrib time is the appearance of a red sky, which is mentioned in the book of Safinah (*surup mega bereum*). 4) The beginning of Isha time can be seen with signs of the appearance of a red sky *(surup mega bereum),* and the end of Isha time is the appearance of dawn sodik (bright sky but not as bright as sunlight). 5) The beginning of Subuh time is the appearance of red sunlight (but the sun has not yet appeared), and the end of Subuh time is marked by the appearance of the sun.

That is the traditional way of determining prayer times in the book of Safinah by Sheikh Salim Bin Sumair Al-Hadhrami. Several conventional methods were used in ancient times and are still used today, for example in determining the start of the Ramadan fast, in the book of Safinah it is stated in the article "things that require fasting" that fasting in Ramadan is obligatory because one of five things is: 1) The month of Sha'ban is completed, which is 30 days starting from the rukyah of the new moon in the month of Sha'ban. Aisyah Rodhiallahu 'anha said, "Rasullullah sallallahu 'alaihi wa sallama was always more careful in the month of Sha'ban than in other months." This is a postulate that the 30-day month of Sha'ban starts from rukyah hilal, not reckoning. 2) Rukyah hilal (seeing the moon) is usually done by looking directly at the moon with the naked eye on the 30th night of the month of Sha'ban. The traditional method is done with one of the representatives of a fair person, whose testimony is to see the new moon at sunset. If the crescent moon is not visible or is covered by clouds and is overcast, the month of Sha'ban will be completed to 30 days. Likewise, the beginning of Shawwal is determined by looking at the new moon. If the new moon is not yet visible because it is cloudy and covered by clouds, then Ramadan is extended to 30 days. Signs that indicate the entry of the month of Ramadan include lighting lamps hanging from towers, hitting hammers (as is done by the minister of religion in Indonesia), and other traditions that indicate the law of rukyah hilal Ramadhan.

Traditional methods determine the direction of the Qibla, one of which is Istiwa A'zam. The Istiwa A'zam phenomenon occurs when the sun's position is directly above the Kaaba, which happens twice a year, every May 28 and July 16. At this moment, the sun's declination is parallel to the geographical latitude of the Kaaba, so that the shadows of perpendicular objects in various parts of the world will point directly to the Qibla. This event occurs because the sun's position is directly above the Kaaba, causing the shadows of all vertical objects to point in the right direction towards the Qibla. Here are the

steps to determine the direction of the Qibla from a location on a predetermined date and time: The first step, install a stick or upright object in the area that will be used as a reference to determine the direction of the Qibla. In the second step, ensure the stick is standing completely upright. You can use a tool such as a pendulum hung on a rope to ensure its uprightness. The third step, choose a location that is open and not blocked from sunlight, so that the shadows can be seen clearly. Because the sun is in the west at that time, the stick's shadow will fall to the east. Thus, the direction of the Qibla is indicated by the side of the shadow facing west[3].

Those are the traditional ways of determining worship, written in books, and often carried out by previous scholars. These conventional methods are believed to be more accurate in deciding prayer times, the beginning of Ramadan, and Eid, as well as determining the direction of the Qibla. However, as time passes, digital technology and the global world are increasingly sophisticated, and many tools can help make it easier and save time in determining worship times. However, many still use traditional methods because modern methods are still considered inaccurate when determining worship times.

2. Modern Mathematical Technology Methods in Determining Worship Times

According to experts, mathematics is the science of logic regarding the form, arrangement, quantity, and concepts related to each other in large numbers. It is divided into three main fields: algebra, analysis, and geometry[4]. It is also described as a pattern of thinking, a method of organizing, and a language of logical proof that uses carefully and clearly defined terms, represented with symbols and solid constructs. Johnson and Rising[5] state that mathematics is more symbolic language about ideas than sounds, emphasizing its abstract and precise nature. In the context of modern technological advancements, "mathematical technology" refers to the use of mathematical algorithms,

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[3] Dwi Putra Jaya, "Dinamika Penentuan Arah Kiblat," *Jurnal Ilmiah Mizani: Wacana Hukum, Ekonomi Dan Keagamaan* 4, no. 1 (2018): 63–76, https://doi.org/http://dx.doi.org/10.29300/mzn.v4i1.1011.

[4] Ibnu Imam Al Ayyubi et al., "The Influence of Islamic Religious Education (PAI) on Students' Mathematical Logical Thinking Skills in Junior High School," *International Journal of Education Management and Religion* 2, no. 1 (2025): 1–14, https://doi.org/10.71305/ijemr.v2i1.168.

[5] D A Johnson and G R Rising, *Guidelines for Teaching Mathematics* (Belmont: Wadsworth Publishing, 1972).

computational models, and digital tools to process data and solve problems[6]. These technologies leverage mathematical principles to provide accurate, real-time calculations that were once complex or time-consuming, such as determining worship times.

As time progresses, technology continues to develop, with digital technology making everything fast and sophisticated. It can be done anywhere, anytime, and in any situation. One of the increasingly sophisticated uses of technology is determining worship times with modern mathematical technology. There are several modern methods that are used, including:

a. Astronomy Application (Digital Astronomy), technological advances in astronomy have made it possible to calculate worship times more accurately. Digital astronomy-based applications utilize the latest astronomical data and mathematical algorithms to determine worship times precisely. Several astronomical software programs, including Stellarium, Accurate Times, and mobile prayer time applications (Muslim Pro, Islamicfinder, and Athan)[7], rely on these pre-calculated formulas to determine the prayer times, rather than engaging in the calculations themselves. This shift in how worship times are determined through digital astronomy applications highlights a broader change in authority. Traditionally, the determination of prayer times relied on scholars, local religious authorities, or community consensus using manual calculations or direct observation of celestial bodies. With the advent of digital tools, this authority is increasingly shifting to developers and software providers who control the algorithms and the data sources. While the public remains the user, the shift to algorithm-based calculations represents a subtle shift in the authority structure for determining prayer times. The Application of Calculation Algorithms is also used to calculate astronomical parameters such as solar declination,

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[6] Helmi Al Hafid Fauzi et al., "Work Stress Levels At Madrasah Tsanawiyah Arrukhshatul'ulum: The Challenges of Digitalization in Developing Islamic Educational Institutions," *Mudir : Jurnal Manajemen Pendidikan* 7, no. 1 (2025): 19–27, https://doi.org/10.55352/mudir.v7i1.1469.

[7] Mustofa Ahyar et al., "Penentuan Awal Waktu Subuh Menggunakan Sky Quality Meter Pada Variasi Deklinasi Matahari," in *Prosiding SNFA (Seminar Nasional Fisika Dan Aplikasinya)*, vol. 3, 2019, 184–89, https://doi.org/https://doi.org/10.20961/prosidingsnfa.v3i0.28542; Andy Muhammad Ruknanto Andy, Fatmawati, and Faisal Akib, "Komparasi Software Stellarium Dan Accurate Times Dalam Penentuan Waktu Salat Duhur," *HISABUNA: Jurnal Ilmu Falak* 4, no. 1 (June 30, 2023): 1–13, https://doi.org/10.24252/hisabuna.v4i1.36131.

transit time, and solar elevation angle. This data is then processed to produce prayer times per the user's geographical location[8].

Figure: 2 Digital Stellarium Application
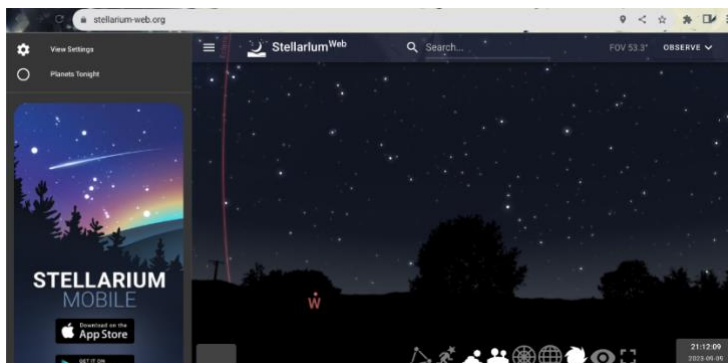
From the image above, we can see modern mathematical technology used to determine prayer times. One such technology is the Stellarium application, an open-source Stellarium or planetarium application that presents a real-time sky map. Stellarium helps observe the position of the sun, moon, and stars, making it easier to precisely determine prayer times and the direction of the Qibla.

Figure: 3 Accurate Times Application

One sophisticated digital technology is Accurate Times, a special application designed to calculate prayer times, imsak times, and the position of the crescent moon. Accurate Times utilizes global astronomical data and sophisticated algorithms to determine prayer times in various parts of the world.

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[8] Moch. Riza Fahmi, *KITAB AL-MIQAT Analisis Jadwal Salat KH.Abdurrani Mahmud Perspektif Astronomi*, ed. Syamsul Kurniawan (Pontianak: TOP Indonesia, 2016).

Figure: 4 Muslim Pro Application
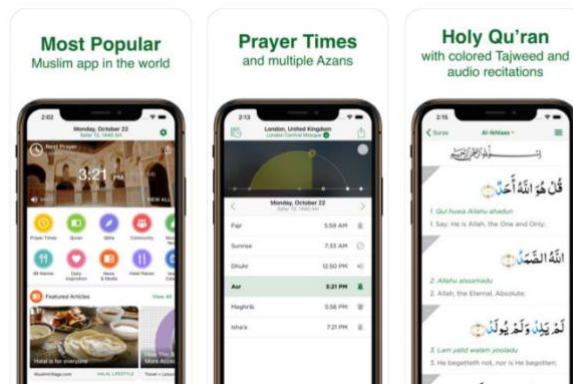
As digital technology becomes more sophisticated, there is much software available, one of which is the Muslim Pro application. This application provides prayer schedules that are adjusted to the user's location. It uses GPS technology and astronomical calculations to produce accurate schedules.

b. GPS (Global Positioning System) technology is a handy tool in determining prayer times because of its ability to measure geographic coordinates with high precision[9]. GPS plays an essential role in identifying the geographic position of a location, including latitude, longitude, and altitude above sea level[10]. This data is crucial because differences in geographic coordinates directly affect variations in sunrise and sunset times in various regions. With this accurate information, determining prayer times, imsak, breaking the fast, and even the direction of the Qibla can be done more precisely, without relying entirely on conventional methods. In addition, GPS also helps calculate critical times based on dynamic astronomical positions so that it can adjust time changes along with changing seasons and differences in time zones in various parts of the world. Examples of digital applications that can be used are Google Maps and Qibla Finder (Utilizing GPS to determine the direction of the Qibla with a high degree

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[9] Andy, Fatmawati, and Akib, "Komparasi Software Stellarium Dan Accurate Times Dalam Penentuan Waktu Salat Duhur."

[10] Ni Nyoman Supuwiningsih and Muhammad Rusli, *Sistem Informasi Geografis: Konsep Dasar & Implementasi* (Yogyakarta: Andi Offset, 2020).

of accuracy) and Muslim Assistant (An application that uses GPS to present prayer schedules that are adjusted to the user's location).

The application of modern mathematical technology in determining prayer times has provided convenience and increased accuracy for Muslims worldwide. From astronomical applications and GPS, all play an essential role in ensuring that prayer times can be carried out precisely according to Islamic law. Along with the continued development of technology, the method of determining prayer times will be more precise and easily accessible to various groups of people.

C. Research Methods

This study uses a qualitative approach to understand the phenomenon related to determining prayer times based on Islamic Astronomy and the role of modern mathematical technology in shifting traditional authority. A qualitative approach was chosen because it allows researchers to dig deeper into the research subjects' meaning, experiences, and views on the paradigm shift in determining prayer times[11]. The research subjects comprised two main groups: people who use traditional methods to determine prayer times and people who adopt modern mathematical technology. Researchers selected samples purposively to ensure variation in experience and understanding of the two methods. The research sample involved 20 people from each group, with different backgrounds from academics, religious practitioners, and the general public. Sample selection was carried out by considering factors such as age, education level, and knowledge of Islamic Astronomy.

The main instruments in this study were semi-structured interviews and document analysis. Interviews were conducted with experts in Islamic astronomy, religious practitioners, and individuals who actively use technology in determining prayer times. These interviews were designed to explore the views, experiences, and reasons for using the two methods in everyday life. In addition to interviews, researchers also conducted document analysis of literature that discusses determining prayer times based on tradition and modern technology, including books, scientific articles, and software used to calculate prayer times. Data were collected through in-depth interviews with participants selected according to predetermined criteria. These interviews were conducted

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[11] John W. Creswell and J. David Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th ed. (London: SAGE Publications, 2017).

face-to-face or online, depending on the availability and location of the participants.

In addition, researchers also collected secondary data through literature reviews on relevant topics. After the data was collected, the next step was to transcribe the interviews, which were then analyzed using thematic analysis techniques. Researchers identified key themes from the interviews and documents analyzed, such as traditional authority, the role of technology, and changes in public perceptions of traditional and modern methods. The analysis was done by reading the data in depth, categorizing information, and mapping the relationships between themes. The analysis results are presented in the form of descriptive narratives that include the main findings from the interviews and literature analyzed. Researchers will present the findings by emphasizing the shift in traditional authority in determining prayer times and how modern mathematical technology plays a role.

D. Findings

The results of the study showed a shift in people's perspectives on the two methods, which can be explained as follows:

1. Traditional Authority vs. Modern Technology

Describe how the data was analyzed in the study

Most participants who used traditional methods said they still believed more in the methods their parents or religious scholars taught regarding determining prayer times, which rely on manual calculations based on the sun's position. For example, in an interview with a religious figure, Ustadz Arifin (65 years old), he said:

> *"I believe that the traditional methods taught by our religious scholars since ancient times are very accurate. The position of the sun at certain times cannot be replaced by technology, although currently there are many applications that offer easier ways."*

However, some younger participants expressed their openness to using applications and technological devices to determine prayer times. This was seen in an interview with Siti Aisyah (28 years old), a young professional who uses a prayer time determination application, who said:

> *"I find applications like that very helpful, because the prayer times displayed always match those at the nearest mosque. I find it more*

> *practical, and I think this is proof that technology can be used to support worship."*

2. Public Perception of the Use of Technology in Determining Prayer Times

Most of the older participants showed distrust of the use of technology in determining prayer times. In an interview with Haji Umar (70 years old), a retiree who always used manual calculations, he explained:

> *"In the past, I never felt the need to use applications or other electronic devices. I believed in manual calculations, which were more in-depth and closer to the way the scholars did it in the past."*

However, some younger participants, such as an engineer Aditya (34 years old), expressed a different view. According to him:

> *"Technology provides convenience and accuracy in calculating prayer times. In addition, I also feel more practical because I don't have to calculate manually or worry about the prayer time being wrong."*

The results above showed that society is divided into two main views regarding the use of technology in determining prayer times. While some people still rely on traditional methods and believe in them as authentic religious teachings, others feel that technology provides a more efficient, practical solution without reducing the spiritual value of worship. On the other hand, religious experts state that technology can be a supporting tool that enriches worship practices, as long as it is used wisely.

E. Discussion

Based on the results of research conducted through interviews with various participants who use traditional and technological methods in determining prayer times, it was found that there is tension between the two approaches. On the one hand, some people maintain traditional authority that has been passed down from generation to generation. On the other hand, some people are more open to technological advances that can facilitate the calculation of prayer times.

Most participants who chose to continue using traditional methods in determining prayer times showed a strong emotional and spiritual attachment to the values taught by previous scholars. This can be understood as a form of respect for the

cultural heritage and traditions since ancient times[12]. Determining prayer times using calculations of the sun's position based on direct observation is more accurate. It is following religious teachings that cannot be simplified by technology. The statement[13] that the sun's position at certain times cannot be replaced by technology reflects the view that traditional methods are not only about punctuality, but also about the spiritual depth and religious interpretation accepted by the community.

This approach reminds us of the importance of tradition in maintaining the identity and continuity of worship practices in Muslim society. Given that determining prayer times has a powerful religious dimension, many people feel that traditional methods are a means to get closer to Allah by paying attention to the universe's movement that reflects His will[14]. Therefore, although technology offers convenience, attachment to traditional authorities remains the choice for most people.

Meanwhile, the interview results also show that technology has significantly made things easier for people, especially those busy with daily activities[15]. Using applications to determine prayer times based on modern astronomical calculations allows individuals to know prayer times accurately and practically.

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[12] Lauhatun Nashiha and Mahsun Mahsun, "Kajian Ilmu Falak Dan Astronomi Dalam Sudut Pandang Filsafat Ilmu," *Astroislamica: Journal of Islamic Astronomy* 3, no. 1 (2024): 29–50, https://doi.org/10.47766/astroislamica.v3i1.2645.

[13] Siti Mufarokah et al., "Pendekatan Astronomis Dalam Studi Islam," *Medina-Te : Jurnal Studi Islam* 18, no. 2 (2022): 76–91, https://doi.org/10.19109/medinate.v18i2.14479.

[14] Hasbiyallah Hasbiyallah and Tatang Muh Nasir, "Fostering Islamic Education Talents: Art Weeks for Junior High School Students," *AL-ISHLAH: Jurnal Pendidikan* 15, no. 4 (2023): 6102–11, https://doi.org/10.35445/alishlah.v15i4.1390; Pierre Fournié, "Rediscovering the Walisongo, Indonesia: A Potential New Destination for International Ilgrimage," *International Journal of Religious Tourism and Pilgrimage* 7, no. 4 (2019): 77–86, https://doi.org/10.21427/g00f-qd76; Aidil Akhyar et al., "Impact of Teacher Welfare on Improving the Quality of Islamic Religious Education," *Ta Dib : Jurnal Pendidikan Islam* 10, no. 1 (2021): 61–72, https://doi.org/10.29313/tjpi.v10i1.7583; Murharyana Murharyana et al., "The Effects of Islamic Religious Education Learning on Students' Motivation," *At-Tadzkir: Islamic Education Journal* 3, no. 1 (2024): 1–14, https://doi.org/10.59373/attadzkir.v3i1.44; Wasehudin Wasehudin and Imam Syafei, "Religious Moderation-Based Islamic Education Model by Nahdlatul Ulama at Islamic Boarding Schools in Lampung Province," *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah* 6, no. 1 (2021): 53–61, https://doi.org/10.24042/tadris.v6i1.8622.

[15] Nashiha and Mahsun, "Kajian Ilmu Falak Dan Astronomi Dalam Sudut Pandang Filsafat Ilmu."

For example, Qulub[16] who said that such applications help me feel more practical, shows that technology can increase efficiency in everyday life without sacrificing the punctuality of worship. This technology allows people, especially in big cities with busy activity schedules, to continue to carry out worship on time[17]. This also reflects the transformation of society's acceptance of technological advances as part of everyday life, including religion[18]. However, it should be noted that despite the convenience of technology, not all participants felt comfortable with this change. Some participants, such as Haji Umar, who preferred traditional methods, thought that the use of technology in worship reduced spiritual depth and distanced them from a more solemn, direct experience.

This indicates a gap between the two groups in how they understand and carry out worship. This study shows that the Muslim community, although divided in their views on using technology in worship, is still committed to religious values. This shift in views on traditional authority does not eliminate respect for cultural heritage and religious teachings. Instead, technology serves as a tool that can support and enrich the worship experience, as long as it is used with deep understanding and wisdom.

F. Concluding Remarks

This study shows a shift in people's perspectives in determining prayer times between those who maintain traditional methods and those who adopt modern mathematical technology. Older people tend to keep traditional methods because of their emotional and spiritual attachment to religious teachings passed down from generation to generation. For them, manual calculations based on the sun's position are considered more accurate and spiritually profound. In contrast, the younger generation shows acceptance of technological advances, where prayer time-determining applications are considered practical solutions that can make daily life easier without sacrificing the accuracy of prayer times.

However, although technology provides convenience, there is disagreement regarding its impact on spiritual depth in worship. Some people feel that using technology to determine prayer times reduces the direct experience, which is

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[16] Siti Tatmainul Qulub, "Integrasi Astronomi Dalam Ilmu Falak Di PTAI Dan Pondok Pesantren," *Al-Qanun: Jurnal Pemikiran Dan Pembaharuan Hukum Islam* 21, no. 2 (2018): 296–318, https://doi.org/10.15642/alqanun.2018.21.2.296-318.

[17] Sainee Tamphu et al., "Building Bridges to the Future of Learning: Exploring Artificial Intelligence Research Using R-Studio Assisted Bibliometrics," *Cogent Education* 11, no. 1 (2024), https://doi.org/10.1080/2331186X.2024.2417623.

[18] Nurhikmah Nurhikmah, "Character Education Islam From the Views of Imam Al-Ghazali," *Jurnal Al Burhan* 4, no. 1 (2024): 53–66, https://doi.org/10.58988/jab.v4i1.300.

more solemn and profound. On the other hand, a more moderate view sees technology as a tool that can enrich the worship experience without eliminating the spiritual essence at the heart of religious practice. Overall, this study concludes that technology should not be seen as a threat to traditional authority in determining prayer times, but rather as a supporting tool that can enrich Muslims' understanding of religious teachings. Therefore, it is crucial to consider using technology wisely and in a balanced way, to maintain existing traditional values without denying progress that can increase efficiency in religious life.

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