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Grounding Falak Science: Assistance in Measuring Qibla Direction in Mosques in Agam Regency

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ABSTRAK

Kegiatan pengabdian masyarakat ini dilakukan atas dasar pendamping karena masih adanya pro dan kontra terhadap arah kiblat Masjid di Tahfizhul Qur'an Syech Ahmad Chatib Minangkabawi di Balai Gurah Kabupaten Agam dan perlunya pengetahuan masyarakat tentang arah kiblat yang perlu disampaikan kepada masyarakat baik yang ada di Tahfizhul Qur'an Syech Ahmad Chatib Minangkabawi maupun masyarakat sekitar. Pelatihan pendampingan ini menggunakan media rashdul kiblat, theodolite dan kompas Kiblat dan dengan menggunakan metode diskusi, demonstrasi dan pendampingan yang dikemas dalam bentuk pelatihan langsung penggunaan alat pengukur arah kiblat. Pengabdian yang dikemas dalam bentuk pelatihan ini dibagi dalam 3 sesi yaitu Pemberian materi tentang Fiqih arah Kiblat, Problematika Arah Kiblat di Indonesia dan dilanjutkan dengan praktek penggunaan alat pengukur arah kiblat dengan theodolite dan Kompas kiblat. Peserta sebanyak 30 orang yang merupakan Imama Masjid dan santri Tahfizhul Qur'an Syech Ahmad Chatib Minangkabawi. Dalam kegiatan ini Imam masjid dilatih untuk memahami fiqih arah kiblat sebagai dasar mereka dalam menjawab problematika dimasyarakat tentang pentingnya menghadap ke kiblat dalam hal melaksanakan ibadah (Shalat). Selanjutnya Imam masjid kemudian dibekali dengan praktek penggunaan Alat theodolite dan kompas kiblat yang dikolaborasi dengan aplikasi arah kiblat.

Kata Kunci: Pendampingan, arah kiblat, pondok pesantren

ABSTRACT

Community service activities This community service activity was carried out on the basis of assistance because there are still pros and cons to the Qibla direction of the mosque at Syech Ahmad Chatib Islamic boarding school in Balai Gurah, Agam Regency and the need for community knowledge about Qibla direction that needs to be improved. Agam and the need for public knowledge about the direction of the Qibla that needs to be conveyed to the community both in the syech ahmad Chatib Islamic boarding school and the surrounding community. and the surrounding community. This mentoring training uses rashdul Qibla, theodolite and Qibla compass and by using discussion methods, demonstration and mentoring which is packaged in the form of hands-on training in the use of Qibla direction measuring device. Service that is packaged in the form of

this training divided into 3 sessions, namely Providing material on Fiqh of Qibla direction, Problematics of Qibla Direction in Indonesia and continued with the practice of using the Qibla direction measuring device with theodolite and Qibla compass. Participants as many as 30 people who are Mosque Imama syech ahmad Chatib and students of the pesantren ahmad Chatib. In this activity, mosque imams were trained to understand the fiqh of the direction of Qibla direction as their basis in answering problems in the community about the the importance of facing the Qibla in terms of performing worship (prayer). Furthermore, the Imam of the mosque is then equipped with the practice of using theodolite tools and qibla compasses. and Qibla compass collaborated with the Qibla direction application.

Keywords: Mentoring, Qibla direction, boarding school

INTRODUCTION

Qibla direction is a very important discussion, where with the fatwa of the Indonesian Ulema Council number 03 of 2010 and number 05 of 2010 regarding the inaccuracy of the Qibla direction of some mosques or mushalla in Indonesia using the satellite measurement method (Hendri, 2019). knowing the Qibla direction is mandatory for every Muslim, because in carrying out the prayer service must face the Qibla. This is as the word of Allah swt. surah Al-Baqarah verse 144:

قَدْ نَرَى تَقَلُّبَ وَجْهِكَ فِي السَّمَاءِ فَلَنُوَلِّيَنَّكَ قِبْلَةً تَرْضَاهَا فَوَلِّ وَجْهَكَ شَطْرَ الْمَسْجِدِ الْحَرَامِ
وَحَيْثُ مَا كُنْتُمْ فَوَلُّوا وُجُوهَكُمْ شَطْرَهُ وَإِنَّ الَّذِينَ أُوتُوا الْكِتَابَ لَيَعْلَمُونَ أَنَّهُ الْحَقُّ مِنْ رَبِّهِمْ وَمَا
اللَّهُ بِغَافِلٍ عَمَّا يَعْمَلُونَ

"Indeed, we (often) see your faces looking up to the sky, so indeed we will turn you to the Qiblah that you like. Turn your faces toward the Sacred Mosque, and wherever you are, turn your faces toward it; and indeed those (Jews and Christians) who were given the Book (the Torah and the Gospel) know that turning toward the Sacred Mosque is from their Lord; and Allah is not unmindful of what they do." (Sura al-Baqarah 2:144)

The need to straighten (recheck) the Qibla direction of mosques and mushala- mushala because of the reality in the community until now there are still many mosques whose Qibla direction is deviated. In fact, in the same area, there are differences in Qibla direction between one mosque and another, in addition to the perception of Qibla direction in the community so that it raises pros and cons, including among administrators and worshipers. This is for example the mosque at the Tahfizul Qu'ran Syech Ahmad Chatib Islamic boarding school. In the development of technology and science in the 4.0 era, it can make it easier for humans to know all the events that occur on Earth. One of them is with Google Earth software humans can find out all areas with various forms of buildings as well as longitude and latitude including longitude and latitude of the kakbah which is the Qibla of Muslims throughout the Earth.(Isnaini, 2015)

Most people think that the Qibla direction is in the West and this opinion is the result of many field practices that have been carried out. In fact, the west direction is not the Qibla direction, this is due to the indifference of the community and the lack of understanding of the determination of the Qibla direction both traditionally and modernly. Most Muslims tend to use or follow the Qibla direction that has been used by previous generations without taking measurements to recheck the accuracy of the Qibla direction. So to overcome such things, falak or related institutions in Indonesia are responsible for being able to help the community in determining the Qibla direction. And one of the modern tools that have met national standards for measuring Qibla direction is Theodolite.(Taman et al., 2024)

Mosque administrators as the assisted subjects are expected to be at the forefront of the expertise in measuring and calibrating Qibla direction. Thus, after the assistance is provided to the mosque administrators, the issue of Qibla direction will not cause a long and serious debate in the community. The target to be achieved is to provide special assistance to mosque administrators by doing several things: making observations, used for data collection of mosques by observing mosques to find out the condition and position of the mosque, whether the old mosque or the new mosque. then introducing technological advances by utilizing satellites used in two functions, namely determining the geographical north direction which will be compared with the compass and determining the Qibla direction whose accuracy is close to the measurement results with the shadow of the sun while the Qibla direction compass as a comparison.(ELIZAR et al., 2024)

The result of this action is to collect data on the accuracy of the mosque's Qibla direction. Third, conduct interviews with mosque administrators and key figures, namely religious and community leaders. Through simple comments or long explanations in interviews, it is hoped that the historical aspects and empirical realities of the mosque's Qibla direction can be revealed, both explicitly and implicitly.(Saputra et al., 2024)

Measurement and calibration of Qibla direction must involve mosque administrators. Because not all mosque administrators have the competence to measure and calibrate Qibla direction. Even when there is a debate in the community about Qibla direction, mosque administrators cannot provide satisfactory arguments based on their specialization in the field of astrology.

STEPS AND METHODS

This service was carried out by Lecturers of the Faculty of Sharia UIN Sjech M Djamil Djambek Bukittinggi with a total of 5 people.(Hendri & Efendi, 2021) The location for the implementation of community service activities is located at the Tahfizul Qur'an syech ahmad Chatib mosque, balai guruh, IV angkek sub-district, Agam Regency, to be precise on Monday, June 14, 2021. The methods used are all interrelated methods, starting from the discussion method with community leaders, the demonstration method and the mentoring method.(Hendri, 2019) In assisting this community using the P3 stages (Planning, Learning, and Assistance). the planning stage with socialization about fiqh facing tl;/

uhbrdqhe Qibla, the learning stage by conducting training in determining the Qibla direction using the Qibla Compass, Theodolite and Rasdhul Qibla and the third stage assisting in measuring the Qibla direction. Data collection techniques are carried out by observation, interviews and focus group discussions.

This service was carried out carried out by Lecturers of the Faculty of Sharia UIN Sjech M Djamil Djambek Bukittinggi with a total of 30 people consisting of 25 participants (students and mosque administrators), 2 resource persons and 3 assistants. The location of the implementation of community service activities is at the Tahfizul Qur'an Syech Ahmad Chatib mosque, balai Gurah, Nagari IV Angkek located at the Tahfizul Qur'an Syech Ahmad Chatib mosque, balai Gurah, Nagari IV Angkek District IV Angkek, Agam Regency, to be precise on Monday, June 14, 2021. The methods used are interrelated methods, starting from the discussion method with community leaders, the demonstration method and the demonstration method.(Hendri et al., 2019) with community leaders, demonstration methods and mentoring methods. In this community assistance using the P3 stages (Planning, Planning stage with socialization about fiqh facing Qibla, learning stage with demonstration, and mentoring). facing the Qibla, the learning stage by conducting training on determining the direction of the Qibla by using the Qibla Compass. direction by using the Qibla Compass, theodolite and Rasdhul Qibla and the third stage by assisting in measuring the direction of the Qibla. the third stage is to assist in measuring the Qibla direction. Data collection data collection was carried out using observation, interview and focus group discussion techniques focus group discussion. (Arifin et al., 2024)

The main informants in this service are randomly selected mosque administrators, while supporting informants are selected from local community and religious leaders and cottage leaders. Informants are seen as the main actors and decision makers in the whole process of this service.(Hendra Yulia Rahman, 2024) Data collection techniques were carried out by means of participant observation, in-depth interviews with both mosque administrators, religious leaders, and several community leaders who have concerns about the Qibla direction of the mosque, which aims to determine the need assessment and create programs that make community needs. For data analysis, an approach from Miles and Huberman's theory is used with an interactive model, namely data collection, data presentation, data reduction and conclusion drawing.(Alamul Yaqin & Muhammad Farid Azmi, 2023)

RESULTS AND DISCUSSIONS

A. Assistance in Measuring the Qibla Direction of The Mosque of The Islamic Boarding School and Tahfiz Syech Ahmad Chatib

Tahfizul Qur'an Syech Ahmad Chatib Islamic Boarding School located in Jorong Koto Tuo, Nagari Balai Gurah, Ampek Angkek District, Agam is one of the boarding schools that is in great demand.(Saipul Anwar & Iswantir M, 2023) in 2021 to 2024 this boarding school has + 5,000 satri as for the origin of this boarding school is taken from Ahmad Chatib Al

Minangkabawi taken from a great world scholar and has been the Grand Imam of the Grand Mosque. Ahmad Chatib himself was born in Koto Tuo, Nagari Balai Gurah, Ampek Angkek District. In addition to being a great global scholar, Ahmad Chatib was the teacher of KH Hasyim Azhari, the founder of Nadhalatul Ulama (NU) and KH Ahmad Dahlan, the founder of Muhammadiyah.

Tahfizul Qur'an Syech Ahmad Chatib al-Minangkabawi boarding school is located at jln. Raya Baso Lasi, Koto Tuo Balai Gurah Ampek Angkek Agam district. initially the mosque at the Syech Ahmad Chatib Islamic boarding school was a mushala but since the corona outbreak and restrictions on worship space during the pandemic based on PERDA no 6 of 2020.(Wajidi & Daipon, 2021)

The mosque at the Sheikh Ahmad Chatib Al Minangkabawi rahimahullah Islamic boarding school is named after the great Minangkabau scholar at the beginning of the 20th century who was the only Minang person to ever become the Grand Imam and Chatib at the Grand Mosque in Makkah Al Mukarramah.(Al-minangkabawi et al., 2024) Sheikh Ahmad Chatib had a major role in the regeneration of Minangkabau and Indonesian scholars in the past. In a biographical novel by Khairul Jasmi that was launched recently, Sheikh Ahmad Chatib Al Minangkabawi is dubbed as "Guru Para Ulama Indonesia".(Saipul Anwar & Iswantir M, 2023)

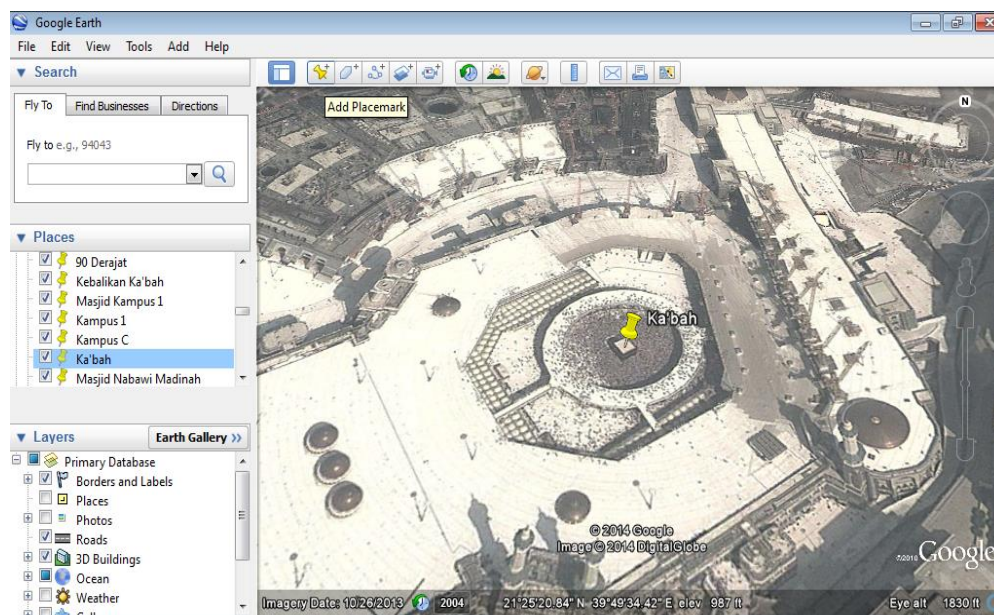
Efforts to assist the measurement of Qibla direction in the mosque of the Tahfizul Qur'an Syech Ahmad Chatib Minangkawabi Islamic boarding school with three stages, namely planning, learning and mentoring. First, the planning stage is socialization.(Hendri et al., 2019) At this stage, the author and the team approached the mosque administrators of the syech ahmad chatib boarding school continuously, such as the imam, ustadz, and equipment of the syech ahmad chatib boarding school. This approach was carried out intensively.(Saputra et al., 2024)



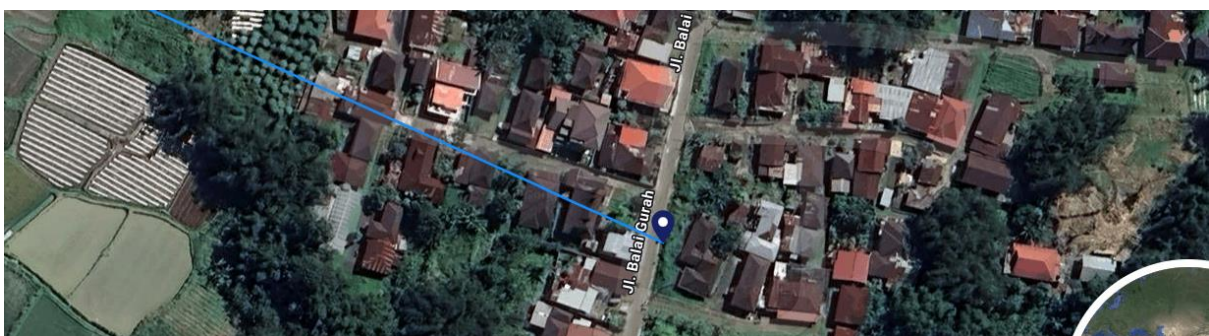
The pattern of assistance that was carried out for the first time in the management of the Tahfizul Qur'an Syech Ahmad Chatib Minangkabawi Islamic boarding school was by providing socialization. the socialization is

about general knowledge about the importance of observing (checking) the direction of the Qibla direction of the mosque / mushala prayer place and is socialized on an ongoing basis. the service team conducted socialization by collecting them directly.(Alamul Yaqin & Muhammad Farid Azmi, 2023) in the socialization activities about facing the Qibla by using tools during socialization by using the Qibla direction application to provide simulations clearly and in detail. After the initial stage of socialization, the researchers then observed and verified the Qibla direction using several tools such as the Qibla compass, theodolite to get the results of the building azimuth along with the obliquity of the Qibla direction in the mosque building.(Hardani, 2017)

Planning with the first step is satellite observation using google eart with the following observation results:(Hendra Yulia Rahman, 2024)

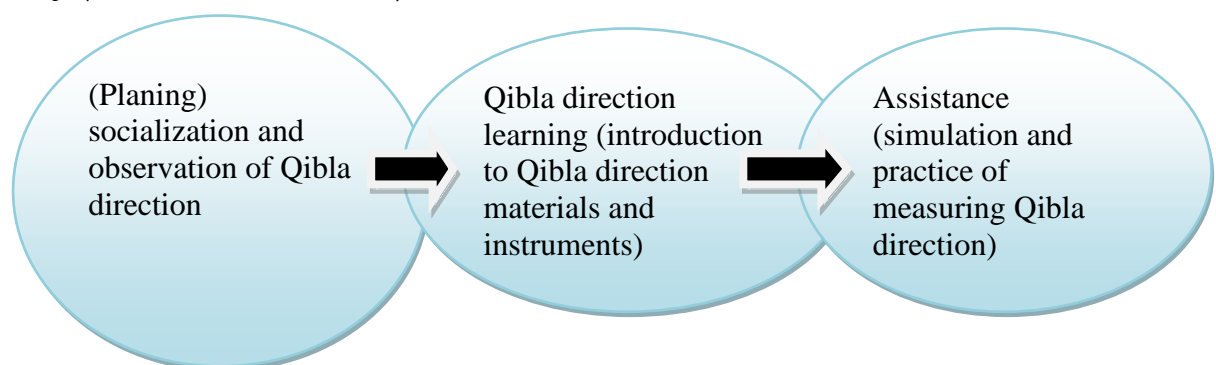


When viewed via satellite with the Easy Qiblat 3 In 1 Compass application, the mosque building at Syech Ahmad Islamic Boarding School is less precise in the Qibla direction.(Fahmi Fatwa RSH, Ramdan Fawzi, 2018) This is indicated by the blue line of Qibla direction towards the Kaaba not parallel to the roof at the top of the mosque. The mosque is located at latitude $100^{\circ} 19' 04''$ and longitude $100^{\circ} 23' 57''$. While the value of the Qibla azimuth is $295^{\circ} 10' 56''$.



After checking the satellite, the next stage is measurement and calibration assistance by means of the rashdul qibla and kimpas kibla methods. rasdhul kibla method utilizes the position of the sun and the shadow of the qibla which directly shows the direction of the qibla by involving service partners through mosque administrators. and also involves service partners through mosque administrators. The mosque administrators are important to provide a comprehensive understanding. Assistance in measuring and calibrating the qibla direction of the mosque that is used as a pilot project in this service activity is described used as a pilot project in this service activity is described as follows :(Saputra et al., 2024)

The results produced in this community service activity are to make the conflict of differences and doubts about the Qibla direction by the congregation of the Tahfizul Qur'an Syech Ahmad Chatib Minangkabawi Mosque can be resolved.(Taman et al., 2024) Because after giving material about Qibla direction and direct assistance to measure the Qibla direction of the Tahfizul Qur'an Syech Ahmad Chatib Minangkabawi mosque, the mosque congregation understands the difference in Qibla direction and the position of the right Qibla direction at the Tahfizul Qur'an Syech Ahmad Chatib Minangkabawi Mosque, Balai Gurah, IV Angkek sub-district, Agam Regency.(ELIZAR et al., 2024)



No	Output	Constraints	Remarks
1.	Limitations	-Limitations of the absence of all participants -Limited technological tools to measure Qibla direction	Solution needed
2	Contribution	The contribution of this activity is to help Muslims understand the correct Qibla direction. So that someone who wants to learn Islam is not only in one particular field, but as a whole. This activity also helps the congregation and management of the Syech Ahmad Chatib Mosque in facing the Qibla.	Support

CONCLUSIONS

Based on the results of preliminary observations using satellites on the Qibla direction of the Tahfizul Qur'an Syech Ahmad Chatib Minangkabawi Islamic Boarding School mosque, which has pros and cons, it can be concluded that the level of accuracy of the mosque's Qibla direction has a deviation of 00 3' 34" because the method of determining the Qibla direction of the mosque does not use the method of measuring the Qibla direction by following the development of measuring the Qibla direction with the latest technology. Along with the rapid development of modern technology, mosque administrators should be able to accept and pass on to the community that the Qibla direction of the mosque needs to be straightened because the correct Qibla direction of the mosque is the Qibla direction whose validity can be accounted for based on scientific principles and provides certainty for the obligation to face the Qibla in prayer time. then the service activity is carried out in 3 stages, namely planning, learning and mentoring of mosque administrators.

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