POLYTECHNIC MERLIMAU MELAKA

THE REVISED DIRECTION OF QIBLA FOR MOSQUES AT AREA SURROUNDING JASIN, MELAKA

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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION OF THE QIBLA DIRECTION

Qibla direction for prayer according to Qur'an continuously is provided based on the direction of consensus (ijma ') scholars. Ibn Qudamah *rahimahullah* said, facing the *Qibla* is the valid conditions of prayer, both in the compulsory prayer or prayers. Basis of is the word of *Allah Ta'ala*, *Surah* Al-Baqara verse 144 :

قَدْ نَرَىٰ 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

Meanings : So We (often) to watch your overlooking the to the sky, then so we will keep you to the *Qibla* which you like. Look elsewhere toward the Grand Mosque. And where was you are, look elsewhere towards it. And those (the Jews and the Christians) who granted Al book (the Torah and the Gospel) really know, that turned to the Grand Mosque that was true of his Lord; and God never delay from what they do. (Translation by Abdullah Muhammad Basmeih)

According to D.A. King (1995), Islam very conscious respect *qibla* i.e. facing towards the *Kaaba*. *Qibla* has interests in one's daily life in either Muslim prayers or other matters. According to him, there are few things more to tradition in Islam that needs to be continuously such as reading the Qur'an and the grave to be continuously.

The direction can be construed as direction of *Kaaba* in Medina for Muslims in your worship. The concept of facing *qibla* there are several law relating there to which have been

defined by Islamic law. For *Mazhab Syafie* there are three methods in relation *qibla* to the conditions valid continuously :

a) *Qibla* confident :

   For people who are in the *Masjidil Haram*, is obliged to face the *Kaaba* with confidence (see) or touch (for the blind) or by other means that can be ascertained with confidence.

b) *Qibla* Zhonni :
   For those who are away from the *Masjidil Haram* shall be facing *Kaaba* in *Zhonni* through a query. For example ask residents of *Mecca*.

c) *Qibla* Ijtihad :
   For those who are outside the Holy Land Mecca should be facing toward the Holy Land of Mecca with a view towards the *Kaaba*.

1.2 PROBLEM STATEMENT

Reports from the media related there are some mosques which do not follow the *Qibla* direction for the Jasin district makes us interested to review the direction of the *Qibla* for the Jasin. Through a number of discussions with officials of (Majlis Agama Islam Melaka) MAIM, we agree to check *qibla* for mosques in a number of areas, namely, in the hamlet of Merlimau, Sungai Rambai and Bemban where the MAIM has agreed to help us by removing the letters we need to carry out the revised this *qibla*.

Figure 1 Problem Statement

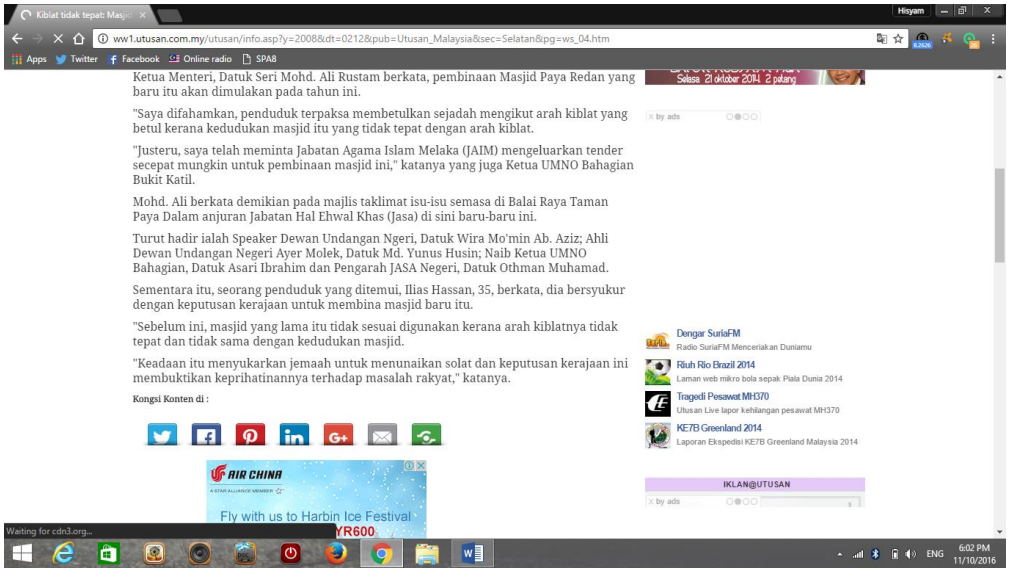

Figure 2 Problem Statement

1.3 PROBLEM SOLUTIONS

If there is a different mosque *Qibla* direction of *Qibla* true, then must be informed immediately to the *Majlis Agama Islam Melaka* (MAIM) to take action next.

Mosque misdirected direction *qibla* also should be notified to the Committee members of the mosque, then the process of correcting *qibla* will be discussed by the authorities and also the MAIM.

1.4 WORK OBJECTIVE

i. Review the *qibla* masjid for the Jasin district involving village in Merlimau, Sungai Rambai and Bemban.

ii. Inform and send a full report to the relevant results of the MAIM study conducted.

1.5 WORK SCOPE

i. Involving spaces in Jasin district namely villages Merlimau, Sungai Rambai and Bemban

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction to astronomy

Astronomy is a term derived from the English language, namely *Astronomy*, which is derived from the Greek word, which **astro** which means star or *bintang* and *nomy* from **nomos** word i.e. *law/culture* or regulation which means star. ' *law of the stars* '.

Astronomy is a branch of knowledge which involved objects in the heavens, such as stars, planet, comet or galactic phenomena and phenomena of nature which may arise outside the Earth's atmosphere. This knowledge is basically the study of the origin, movement, interactive and properties of celestial objects and the universe.

According to Albrecht, Bodo, Baschek, W.D. and Brewer, (2011), this in contrast to astrology astronomy where this knowledge is knowledge that attempts to predict the destiny of a person by following the movements of planets and stars. Astronomy is a branch of science to find and study the phenomenon of intermediation**.** Although the second star the same field, but they different in the use of the scientific method and basic sciences used.

Astronomy is one of the world's oldest knowledge as known from astronomical artifacts from pre-Islamic era history. For example, monuments from Egypt, Nubia or Stonehenge from Britainia.

Figure 2.1 Stonehenge at Wiltshire, England.

2.2 Early history of astronomy

According to historian in ancient society believe that the Earth is flat and is still where the entire sky spinning it at least once a day. Sami Verdict from India believe that the Earth supported him on twelve pillars of General and current evening sun will go through under the slit between the given column without about it.

2.3 Astronomy or *falak* knowledge in Islam

Falak is derived from the Arabic word which means divine body circulation route. It is a field which is equal to the science of astronomy. The word *falak* also comes from the Arabic word which have in common the word *Madar* where if in English referred to orbit that can be construed as spiral sky or celestial.

The encyclopedia of *Islam* anyway that the meaning of astronomy knowledge was the knowledge review about things the sky, sun, moon, stars, and planets. For the encyclopedia of Islamic law in turn explained that knowledge of astronomy is the study of knowledge about things in the sky, heavens, physically and out of position and all related. Knowledge of astronomy is generally reviewed about four things which is :

i. *Qibla* direction
ii. Prayer times
iii. Early Hijriyyah
iv. Solar and Lunar Eclipse

2.4 THE IMPORTANCE OF KNOWLEDGE ASTRONOMY

Used for worship needs such as :

i. *Solat* prescribing which determine prayer times and *Qibla* direction.
ii. Fasting, namely to ensure Hijri calendar time fast.
iii. *Zakat* which is to determine the migratory calendar (period of *zakat*)
iv. Hajj which is to determine the calendar to Hijri.

2.5 METHOD OF DETERMINATION OF QIBLA DIRECTION

Determination of *Qibla* direction through traditional methods :

i. Crossing of the Sun shadow method
The daily circulation of the Sun and the sky East to Western skies at every day, the Sun will cross a border lines with *Qibl*a from a place.

To calculate the angles of time the occurrence of this crossing, then *qibla* can be determined by observing the position of the shadow wood erected vertical at that time. Indication of time (clock) must be correct as determining the *Qibla* direction with this method.

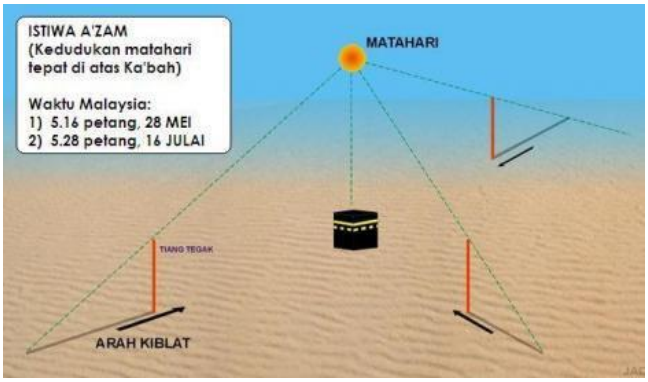

Figure 2.5 Method of Sun shadow crossing

ii. Sun *istiwa* (transit) to the *Kaaba* method

Sun *istiwa* is a phenomenon where the Sun is exactly top of the Zenit a place when crossing the Sun's Meridian place concerned. This means that *istiwa* occurred during which the Sun crosses the Meridian plane, namely the local Meridian readers Samawi.

In this cases, the Sun is exactly top of the *Kaaba* or the Zenit that the occurrence of only two times during a year in which the value of the *sudutsiwa* the Sun equal to the latitude of the *Kaaba*. This allows Muslims part the world determine qiblat accurately.

The sun top of the *Kaaba istiwa* occurs twice a year, on May 28, at 6.16 pm and July 16 at 6.28 pm (every year and in accordance with the Malaysian standard time)

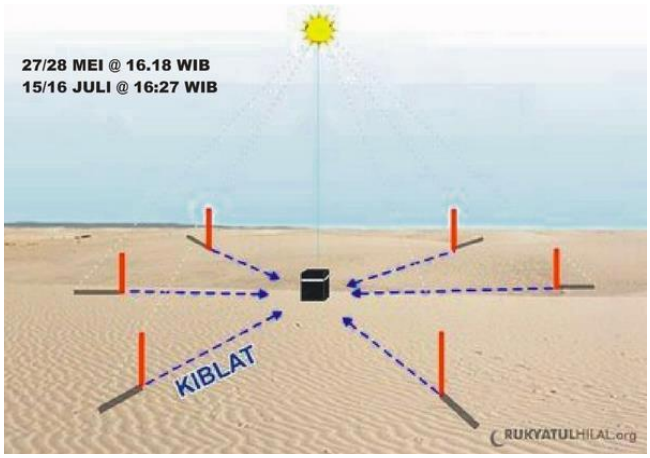

Figure 2.5.1 Sun *istiwa* top of the *Kaaba*

iii. Constellation stars method

The constellation of stars is the cluster stars forming a form of reflection in the night sky each have a purpose and direction of its own. The word comes from the Arabic term constellation namely *(burj)* (single), *(burūj)* (plural). Ancient human named the Constellations according to certain forms of reference to the myths, legends and animals.

The constellation can be used as a reference for practising *ijtihad* qiblat is the constellation *al-Babadur* (orion). A row of three star i.e. *Mintaka*, *Alnitak*, and *Anilam* when extended towards the West will show for the people *qibla* di Malaysia and countries in the region.

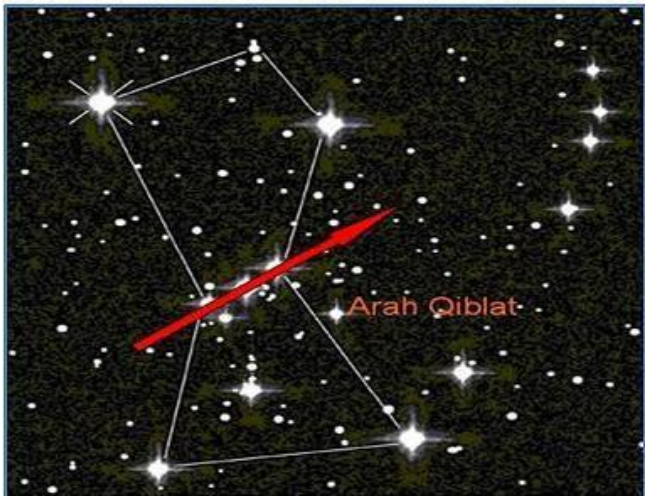

Figure 2.5.2 Constellation stars

Figure 2.5.3 Constellation stars

iv. Sunset method

In General, refers to the position of the sunsets for the purpose of determination of *Qibla* direction is not accurate. This is due to the direction of the sunset in Malaysia were changing from Azimuth 235° to 295°.

The direction of the sunset can be used if the difference in angle between the direction of the sunset with direction *qibla* has known. The estimated difference between the angle of *Qibla* direction with the sunset for use in Malaysia disclosed on average.

BULAN	ANGGARAN ARAH KIBLAT DARI TEMPAT MATAHARI TERBENAM
Januari	ke kanan 45°
Februari	ke kanan 40°
Mac	ke kanan 25°
April	ke kanan15°
Mei	ke kanan 5°
Jun	ke kiri 1°
Julai	ke kanan 1°
Ogos	ke kanan 5°
September	ke kanan 15°
Oktober	ke kanan 30°
November	ke kanan 40°
Disember	ke kanan 45°

Table 2.5 Estimated *qibla* from sunset

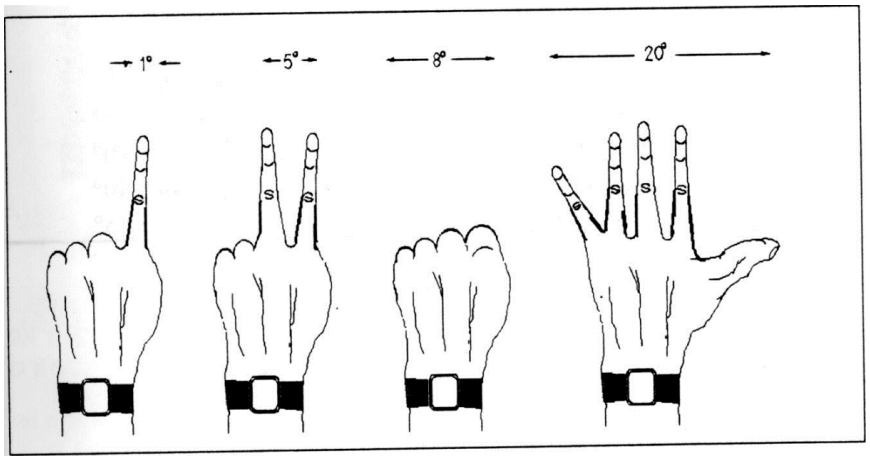

Figure 2.5.4 Guidance corner with fingers

Determination of the direction of *Qibla* through modern methods :

i. The concept of a spherical triangle with calculation and formula trigonometry.

Calculation is based on the concept of direction along the great circle of Earth *(gedang bumi).* It involves the mathematical modeling of a sphere that contains the geographical coordinates local and geographical coordinates of reference *(Kaaba).*

$$tg\ K = \frac{\sin(\lambda t - \lambda K)}{\cos \varphi t \cdot \tan \varphi K - \sin \varphi t \cdot \cos(\lambda t - \lambda K)}$$

K = sudut Arah Kiblat dari Utara ke Barat
φK = lintang Ka'bah (21° 25' LU)
λK = bujur Ka'bah (39° 50' BT)
φt = lintang Tempat / Kota
λt = bujur Tempat / Kota

Figure 2.5.5 Trigonometry formula determination *qibla*

ii. Prismatic compass

Qibla marking based on compass most practiced by Muslim community nowadays. Most of the direction indicated by the compass shows direction is towards the North.

The direction of magnetic north did not necessarily equal to the true North. The difference in the North this is called as angle beveled magnet. Among the problems that can arise while using the compass is the local gravitational attraction which stems from the existence of metal materials or an electric current around the compass such as use a cell phone.

We also use this method to use for carry out revision *qibla* for mosques in the area of Merlimau, Sungai Rambai and Bemban.

Figure 2.5.6 Prismatic compass

iii. Teodolite or total station usage

Teodolite is one of the tools of its kind are used by most of the surveyors and parties do work determination *qibla*. This tool is used to measure the reading corner horizontally and also vertically. They provide high readings for precision and accurate.

Figure 2.5.7 Total station for determine the direction of *qibla*

2.6 WAQF LAND

Waqf is separating the property, in particular its use to certain parties with a view simply because Allah s.w.t. In terms of the term Waqf was holding property and give good results for the cause of Allah s.w.t. In addition, separating a portion of property wealth in the form of land title and handed it forever be a Waqf.

A Waqf property are Waqf can be stationary or moving objects such as land, houses or money. Most of the Waqf property to the Government as a waqf as the cemetery as well as the construction of the mosque for the Muslims.

CHAPTER THREE

METHODOLOGY OF THE STUDY

3.1 Introduction

Certainly something surprising when a regular congregation of visiting mosque congregation found one day, suddenly *Qibla* used already changed. This situation is not something foreign, expecially involving the old mosque or *surau* built over 20 years ago. Mosque used should be adjusted according to actual i.e towards the *Kaabah, Makkah*.

3.2 Methodology of the Study

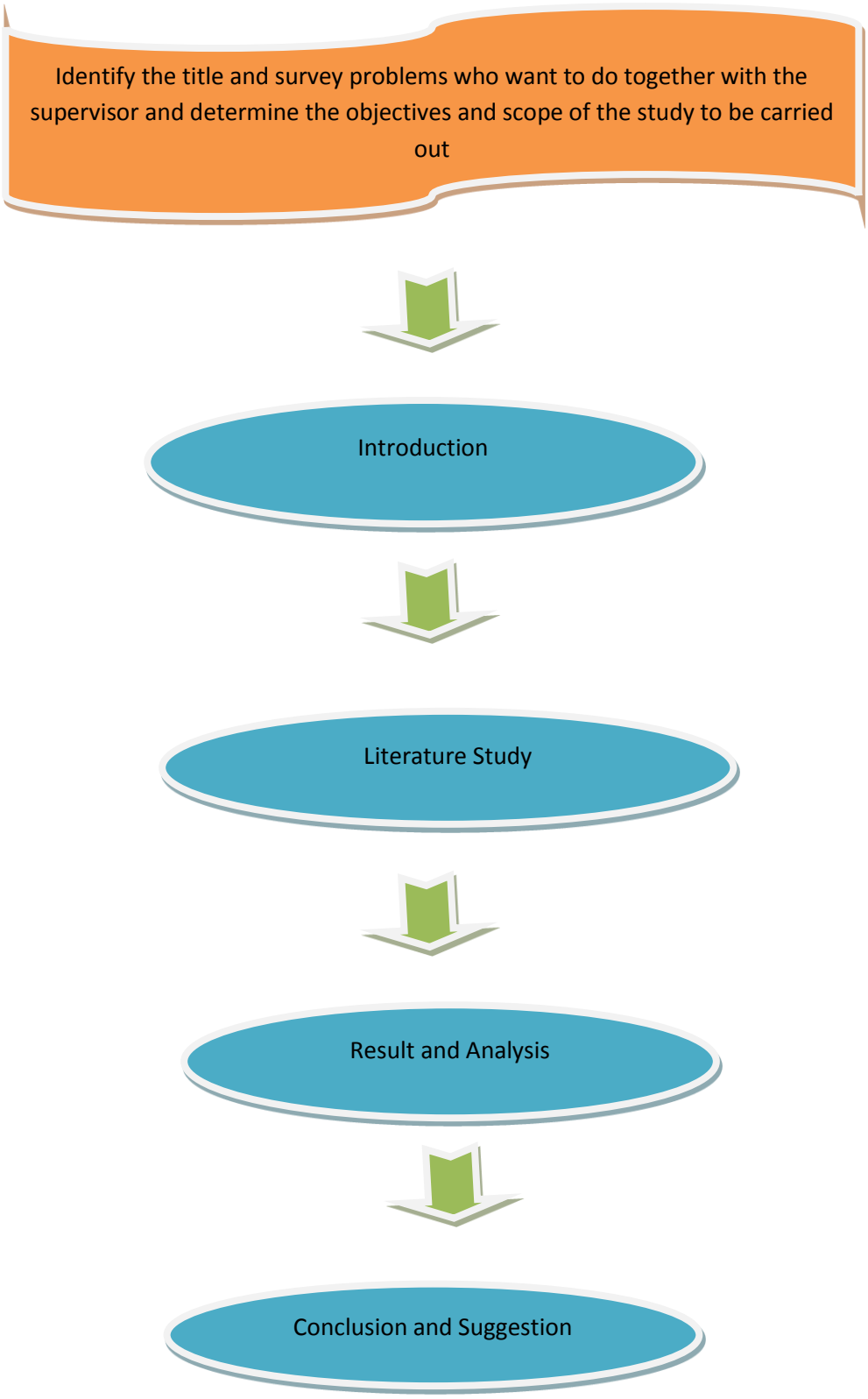

Diagram 3.2 Flow chart process work carried out

3.3 Planning Work

WEEK	ACTIVITY
Week 1 - Week 2	Preliminary discussion on research to be performed with supervisor
Week 3 - Week 4	The selection of title, problems, objectives and scope of work
Week 5 - Week 6	Obtain a letter of support and mosque address application from *Majlis Agama Islam Melaka* (MAIM)
Week 7 - Week 8	Complete the report work by 30%
Week 9 - Week 11	Complete the fieldwork
Week 12 – Week 14	Complete the report by 80%
Week 15	Prepare the final report and presentation work

Table 3.3 Prepare work plan

3.4 Work Activity

WEEK	ACTIVITY
W1 20.06.2016 - 24.06.2016	• Topical Study classes taught by Miss Zuraini for explanations for this subject. • Form a group and choose a supervisor. • Think of the title of the relevant study to be done.
W2 27.06.2016 - 01.07.2016	• Initial discussion about carrying out research to be performed with supervisor.
W3 04.07.2016 - 08.07.2016	**LEAVE SPECIAL FESTIVAL**
W4 18.07.2016 - 22.07.2016	• Do the selection of topics was proposed.
W5 25.07.2016 - 29.07.2016	• Sent a letter of support to the *Mufti Melaka* for a survey to be conducted • Sent a letter of support to get the addresses of mosques for *DUN Merlimau, Bemban* and *Sungai Rambai.*

W6 01.08.2016 - 05.082016	• Sent relevant papers survey to the *Majlis Agama Islam Melaka* (MAIM).
W7 – W9 08.08.2016 - 28.08.2016	• Start work to prepare work report by 50 %.
W10 – W11 29.08.2016 - 09.09.2016	• Doing the job in the fieldwork.
W12 12.09.2016 - 16.09.2016	**MID SEMESTER BREAK**
W13 26.09.2016 - 30.09.2016	• Complete the final report by 80%.
W14 03.10.2016 - 07.10.2016	• Complete the final report and presentation work.

Table 3.4 Activity that is run during 1 semester

3.5 Support Letter for Research by Polytechnic Merlimau Students

Get a letter of support relevant survey check by foreign *Qibla* mosque of MAIM (refer to appendix 1)

3.6 List of State Mosque Melaka for DUN Merlimau, Sungai Rambai and Bemban

List name of the mosque has been issued by the view to MAIM as author to ensure the works checks by foreign Qiblat mosque smoothly (refer to appendix 2)

3.7 Form to Borrow Equipment Survey

Form to apply for permission to borrow equipment surveys, a prismatic compass and leg three on the appointed date for the purpose of the survey (refer to appendix 3)

3.8 A Letter of Support from the MAIM

A letter from the MAIM were received in support of conducting a survey (refer to appendix 4)

3.9 Equipment that has been used

Equipment	Diagram
Tripod	
Prismatic Compass	

Table 3.5 Equipment has used

3.10 Work Procedures in the Field

1. The survey area is done upon arrival at the area of the mosque to determine suitable to run measurement.

2. Once the appropriate spaces are identified, put the tripod and turn on prismatic compass on mosque.

3. Adjust the bubble on the prismatic are placed on the horizontal compass.

4. The observations begin towards real *Qibla* position, then compare their bearing *qibla* observed with their real bearings.

3.11 Table Scale

No	Date	Time	Location
1	13/08/2016	09.00 a.m	Masjid Al Abrar, Chenderah
2	13/08/2016	10.30 a.m	Masjid Jamek Ar Rahim
3	13/08/2016	12.00 p.m	Masjid Al Junid, Chinchin
4	14/08/2016	09.00 a,m	Masjid Al Ghafur, Merlimau Pasir
5	14/08/2016	10.00 a.m	Masjid Al Abidin, Air Tawar
6	14/08/2016	12.00 p.m	Masjid As Solihin, Sebatu
7	20/08/2016	10.00 a.m	Masjid Al Mukminun, Seri Mendapat
8	20/08/2016	11.30 a.m	Masjid Al Abidin, Air TAwar
9	20/08/2016	02.00 p.m	Masjid Ar Riduan, Parit Penghulu
10	21/08/2016	9.30 a.m	Masjid Ar Rahman, Parit Gantong
11	21/08/2016	11.00 a.m	Masjid Ubaidullah, Jasin
12	21/08/2016	12.30 p.m	Masjid Al Hakem, Tehel
13	27/08/2016	10.00 a.m	Masjid Nurul Iman, Kg Ayer Panas
14	27/08/2016	12.00 p.m	Masjid Al Barakah, Kesang Luar

Table 3.6 Work Scale

CHAPTER FOUR

ANALYSIS AND RESULT

4.1 Introduction

Of a measurement that are author to do, the author found that there are multiple people to an area mosque in accurate and betraying area of *Qibla*. Data in the form of oral observations construed to facilitate understanding.

4.2 Observation Data
DUN MERLIMAU

1) Mousque name : Masjid Jamek Ar Rahim

<u>Coordinate location</u>

Latitude : N 2°08’23’’

Longitude : E 102°25’26’’

Actual *qibla* value : 292°49’55’’

<u>Difference azimuth location</u>

The azimuth of the building : 294°

Actual value of the azimuth direction : 292°

Difference : +2° (more 2 degree from actual value)

2) Mousque name : Masjid Al Ghaffur, Merlimau Pasir

Coordinate location

Latitude : N 2°08’52’’

Longitude : E 102°26’27’’

Actual *qibla* value : 292°49’55’’

Difference azimuth location

The azimuth of the building : 288°

Actual value of the azimuth direction : 292°

Difference : - 4° (less 4 degree from actual value)

3) Mousque name : Masjid Al Abrar ,Chenderah

Coordinate location

Latitude : N 2°17’53’’

Longitude : E 102°28’25’’

Actual *qibla* value : 292°49’55’’

Difference azimuth location

The azimuth of the building : 292°

Actual value of the azimuth direction : 292°

Difference : 0° (0 degree from actual value)

4) Mousque name : Masjid Al Junid , Chinchin

Coordinate location

Latitude : N 2°17’29’’

Longitude : E 102°29’01’’

Actual *qibla* value : 292°49’55’’

Difference azimuth location

The azimuth of the building : 293°

Actual value of the azimuth direction : 292°

Difference : +1° (more 1 degree from actual value)

DUN SUNGAI RAMBAI

5) Mousque name : Masjid Jamek As Solihin , Sebatu

<u>Coordinate location</u>

Latitude :N 2°07’25’’

Longitude: E 102°28’07’’

Actual qibla value: 292°49’55’’

<u>Difference azimuth location</u>

The azimuth of the building: 289°

Actual value of the azimuth direction :292°

Difference : - 3° (less 3 degree from actual value)

6) Mousque name: Masjid Al Abidin, Ayer Tawar

Coordinate location

Latitude :N 2°07’49’’

Longitude: E 102°26’55’’

Actual qibla value: 292°49’55’’

Difference azimuth location

The azimuth of the building: 293°

Actual value of the azimuth direction :292°

Difference : +1° (more 1 degree from actual value)

7) Mousque name: Masjid Al Yaqin, Batu Gajah

Coordinate location

Latitude :N 2°08’50’’

Longitude: E 102°27’39’’

Actual qibla value: 292°49’55’’

Difference azimuth location

The azimuth of the building: 292°

Actual value of the azimuth direction :292°

Difference : 0° (0 degree from actual value)

8) Mousque name: Masjid Al Mukminun, Seri Mendapat

Coordinate location

Latitude :N 2°13’16’’

Longitude: E 102°27’24’’

Actual qibla value: 292°49’55’’

Difference azimuth location

The azimuth of the building: 287°

Actual value of the azimuth direction :292°

Difference : -5° (less 5 degree from actual value)

9) Mousque name: Masjid Ar Rahman , Parit Gantung

Coordinate location

Latitude :N 2°08’46’’

Longitude: E 102°30’50’’

Actual qibla value: 292°49’55’’

Difference azimuth location

The azimuth of the building: 292°

Actual value of the azimuth direction :292°

Difference : 0° (0 degree from actual value)

10) Mousque name: Masjid Ar Riduan , Parit Penghulu

Coordinate location

Latitude :N 2°09’36’’

Longitude: E 102°30’16’’

Actual qibla value: 292°49’55’’

Difference azimuth location

The azimuth of the building: 294°

Actual value of the azimuth direction :292°

Difference : +2° (0 degree from actual value)

DUN BEMBAN

11) Mousque name: Masjid Nurul Iman , Ayer Panas

<u>Coordinate location</u>

Latitude :N 2°16’22’’

Longitude: E 102°22’00’’

Actual qibla value: 292°49’55’’

<u>Difference azimuth location</u>

The azimuth of the building: 290°

Actual value of the azimuth direction :292°

Difference : -2° (less 2 degree from actual value)

12) Mousque name: Masjid Jamek Ubaidullah, Jasin

Coordinate location

Latitude :N 2°18’32’’

Longitude: E 102°25’47’’

Actual qibla value: 292°49’55’’

Difference azimuth location

The azimuth of the building: 294°

Actual value of the azimuth direction :292°

Difference : +2° (more 2 degree from actual value)

13) Mousque name: Masjid Al Hakem, Tehel

Coordinate location

Latitude :N 2°14’29’’

Longitude: E 102°20’33’’

Actual qibla value: 292°49’55’’

Difference azimuth location

The azimuth of the building: 292°

Actual value of the azimuth direction :292°

Difference : 0° (0 degree from actual value)

14) Mousque name: Masjid Al Barakah, Kesang Luar

Coordinate location

Latitude :N 2°19’06’’

Longitude: E 102°24’10’’

Actual qibla value: 292°49’55’’

Difference azimuth location

The azimuth of the building: 290°

Actual value of the azimuth direction :292°

Difference : -2° (less 2 degree from actual value)

4.3 Data analysis

No.	Mosque name	Mosque bearing	Actual Qibla bearing	Bearing differences
DUN MERLIMAU				
1	Masjid Al Abrar, Chenderah	292°	292°49’55’’	0°
2	MAsjid Al Junid, Chinchin	293°	292°49’55’’	+1°
3	Masjid Jamek Ar Rahim, Merlimau	294°	292°49’55’’	+2°
4	Masjid Al Ghafur, Merlimau Pasir	288°	292°49’55’’	-4°
DUN SUNGAI RAMBAI				
1	Masjid As Solihin, Sebatu	289°	292°49’55’’	-3°
2	Masjid Al Abidin, Air TAwar	293°	292°49’55’’	+1°
3	Masjid Al Yaqin, Batu Gajah	292°	292°49’55’’	0°
4	Masjid Al Mukminun, Seri Mendapat	287°	292°49’55’’	-5°
5	Masjid Ar Rahman, Parit Gantung	292°	292°49’55’’	0°
6	Masjid Ar Riduan, Parit Penghulu	294°	292°49’55’’	+2°
DUN BEMBAN				
1	Masjid Nurul Iman, Kg Ayer Panas	290°	292°49’55’’	-2°
2	Masjid Jamek Ubaidullah, Jasin	294°	292°49’55’’	+2°
3	Masjid Al Hakem, Tehel	292°	292°49’55’’	0°
4	Masjid Al Barakah, Kesang Luar	290°	292°49’55’’	-2°

Table 4.1 Data Analysis

CHAPTER FIVE

CONCLUSIONS AND SUGGESTIONS

5.1 CONCLUSION

In conclusion, the main objective of this survey has been achieved at 15 mosques in the area surrounding the district of Jasin such as at Merlimau, Sungai Rambai and Bemban has reviewed all *qibla*. Next, we found that there are some mosques appointed is not quite right in the direction the direction of the real *qibla*. This is very much ails because it involves religious and legal practices prescribed by Islamic law. As a solution, we have inform the *Majlis Agama Islam Melaka* (MAIM) and the management of the mosque in respect of this matter. We cannot take any action such as making new *qibla* marks because the matter is under the jurisdiction of MAIM. The work of making a sign new *qibla* requires long periods of time and involve many parties.

5.2 SUGGESTIONS

Throughout the survey we conducted for final year project, *CG606 Topical Studies*, challenges we need to endure but we are grateful for the challenges coming we can solve with the assistance and guidance given by Sr. Razali bin Johari, namely as the supervisor of the subject of *Topical Studies* on this. In addition, we would like to give a few suggestions this survey. Among them are :

i. Hoped that this survey project could continue with the cooperation between the students and the MAIM for making measurements exactly to build the *qibla* marks identified not by actual *qibla*.

ii. Practical work for revision *qibla* masjid fit in the curriculum for the course of Astronomy. It is aimed at students skills in checking *qibla* at the mosque and also of the personality and spirituality Geomatics students.