

Muslim Built Forms in Perth: Fulfilling (or Not) Community Socio-cultural Needs

Abstract

Australia has a considerable Muslim population and Islam is one of the fastest growing religions in the West. Consequently, the demand for a variety of Muslim built forms in Australia is increasing and therefore, knowledge of Australian Muslims' way of life and built forms is vital and integral to studies of culture and built environment. Social inclusion and the strengthening of Australia's socio-cultural fabric also demands good intercultural and interfaith understanding.

There are a large number of Islamic organisations, schools and mosques in Australia however, only a very few of them provide socio-cultural and recreational services to the growing number of Australian Muslims. To date, there has been a lack of research on the types or variety of Muslim built forms in Australia.

This paper studies and analyses Australian Muslim built forms focussing on Western Australia. It aims to answer questions on whether Muslim organisations and their built forms in Perth fulfil their communities socio-cultural needs, and to what extent they help promote mutual understanding and harmony between Muslim and non-Muslim Australians.

Keywords

Islamic centres, Perth Mosques, West Australian Muslims, Islamic architecture, Socio-cultural needs.

Introduction

Australia today has a considerable Muslim population from a vast range of races, nationalities and cultures (Kabir 2004, 67), who believe that Islam is not only a religion, but also a complete way of life (Saheeh Int'l 1995, 5). Muslim communities have special needs and demands directed by their Islamic teachings and values which encompass homes, workplaces, mosques and recreational zones (Omar, M. 2000, iv).

Australian Muslims have established schools and mosques that serve their communities, which have been flourishing with the increase in the total Muslim presence in Australia (Yasmeen 2008, 6).

Despite the large number of Islamic organisations, schools and mosques in Australia, there are very few Islamic community centres that can provide socio-cultural and recreational services to the growing number of Australian Muslims.

This research paper aims to answer questions on the kind and nature of Muslims' obligations and demands, and to what extent Muslim built forms in Perth fulfil these religious obligations and socio-cultural needs.

To achieve this aim, the paper introduces Muslim communities in Australia, focussing on Western Australia, and provides an understanding of their past and present. It explores and analyses the contemporary nature of Muslim built forms.

Furthermore, it discusses and analyses Muslim organisations' services and their built forms in Perth through studying their functions and activities. This paper also highlights the importance of the Islamic centres in developing and improving Muslim activities.

Research Significance

This research is significant for many reasons: firstly, it introduces Muslim communities in Australia and identifies their socio-cultural needs, recreational demands and religious obligations, which would contribute to the academic research concerned with Muslims in the West. It also highlights the significance of Muslims and Islam to Australia, which would be useful for government departments, immigration agencies and some services providers.

Secondly, the research provides an analysis for Muslim built forms in Perth through studying their activities, forms and functions. This will fill a gap in the published literature about the Australian Muslim communities and their built forms.

Thirdly, this research lays the foundations to identify architectural concepts and design criteria, necessary for building a functional socio-cultural Islamic centre. This research forms part of my PhD thesis that aims to generate architectural schemes, proposals and guidelines that can be useful to architects and Muslim communities in the West.

Background

In order to identify Australian Muslims' socio-cultural needs, it is important to first

understand their background and briefly outline their journey in Australia. Moreover, it is vital to explore the challenges they have faced, which have urged them to establish their own mosques, Islamic organisations and buildings.

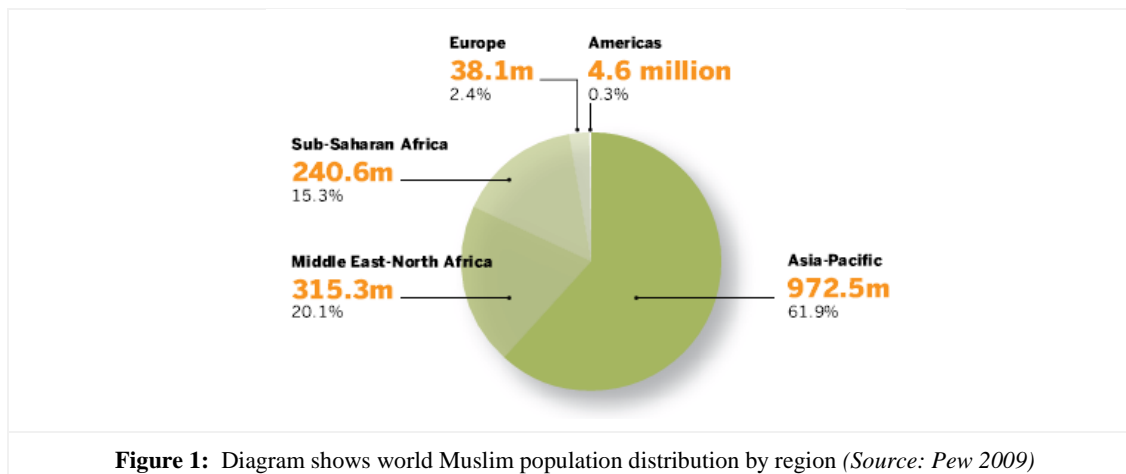
Both terms ‘Muslim Australians’ and ‘Australian Muslims’ refer equally to Australians who identify themselves as followers of Islam. All Muslims who live in Australia, including those with temporary resident status, comprise this group (Ismae-Listen 2004, 25). Islam is a major world religion with an estimated 1.65 billion followers worldwide (Kettani 2010, 52).

Significance of Islam and Muslims to Australia and the effects on its built forms

Australian Muslims have made a significant contribution to Australian society over the past 150 years. They have contributed to the economic and physical infrastructures of Australia (Reza 2007). Today, Islam and Muslims are becoming more significant to Australia on national and international levels.

On the national level, Islam is one of the fastest growing religions in Australia due to Muslims migrating to Australia and the growing rate of Australian-born Muslims, which has significant implications for cross-cultural awareness (Hassim and Cole-Adams 2010, 12). This fact, along with the increasing number of Muslim students receiving their education in Australian institutions, has increased the demand for Islamic facilities and built forms.

On the international level Australia is located in the Asia-Pacific region where about sixty two per cent of the world Muslim population live (according to Pew’s Report 2009, 6), and where Australia has significant economic and political interests.



In addition, the Indian subcontinent, China and other Asian nations are growing and their influence on the world is increasing. Indonesia, Australia's nearest neighbour, is the most populous Muslim nation in the world.

The abovementioned information reinforces the fact that being 'Asia literate' means being aware of Islam and Muslim cultures. Combined together with the mounting publicity, political, social and academic focus on Islam and Muslim cultures in Australia, and worldwide, this makes an awareness and appreciation of these issues all the more important (Hassim and Cole-Adams 2010, 1).

History of Muslims in Australia

The Macassan fishermen:

The history of Muslims in Western Australia dates back to the sixteenth century when Macassars (Indonesians) interacted with Aboriginal communities living in the northern parts of the continent. The interaction left an imprint on the state in the form of common words and expressions between the Muslim visitors and indigenous populations (Yasmeen 2008, 5).

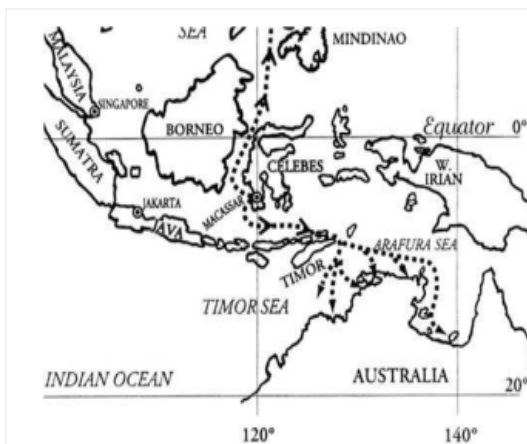


Figure 2: Map shows trade route used by Makassans to northern Australia
(Source: Cawte 1996, quoted in Balint 2007).



Figure 3: Painting showing Makassan fishermen, South Australian Museum (Source: Balint 2007).

Malay divers:

Malay divers were employed in the pearling grounds off Western Australia and the Northern Territory. By the eighteen seventies, Australian pearlers were actively recruiting Asian divers for the pearling industry, acknowledged as being of primary importance to

Australia's emerging economy. In 1875, it was estimated that there were 1,800 Malays working in Western Australian waters. They were mainly recruited from Koepang under an agreement with the Dutch colonial authorities (Matthews 1997, 2007)



Figure 4: Malay pearl divers, late 1800s. (Source: Deen 2007; the National Archives of Australia)

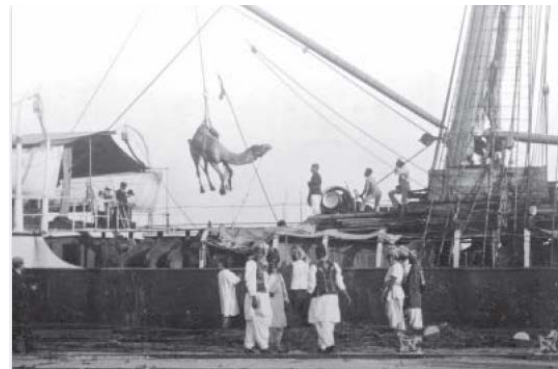


Figure 5: A camel being unloaded from a steamship at Port Augusta, South Australia, in 1920. (Source: the State Library of South Australia)

Afghan cameleers:

During the gold mining boom of the eighteen nineties, camel drivers (coming from various parts of Afghanistan and what is now Pakistan) worked at Coolgardie, Kalgoorlie and coastal port towns such as Albany, Fremantle, Geraldton, and Port Hedland. They lived in “Ghan” camps or towns and followed the Islamic faith. These Muslims started planning the Perth Mosque in William Street, Northbridge, in 1895. Its foundation stone was laid in 1905 and the mosque was opened in 1906 (Culture and Religion, ICWA).

Religion and culture:

The early cameleers and hawkers were practising Muslims, in spite of living in a non-Muslim society. For most of the year, they were solitary travellers lacking the companionship and powerful sense of community. There were no mosques for them to pray in and no special ‘Friday prayers’ with a Muslim priest, *Imam*, to lead the prayer and deliver a sermon. Usually, the camel men and hawkers performed their prayers five times daily out in the desert, bushland or countryside. The highlights of the year were the celebrations for *Eid ul-Fitr*, marking the end of Ramadan (the holy month of fasting), and *Eid ul-Adha*, two months later. On festival days there was no loneliness as they lounged around feasting and enjoying each other’s company. Further evidence of the strong desire by cameleers and hawkers to maintain an Islamic identity is revealed in their efforts to persuade the Australian Government to permit *Imams* and *Sheikhs* to enter the country to serve their religious needs (Deen 2007).



Figure 6: The mosque in Marree, South Australia, about 1884.

(Source: the State Library of South Australia)



Figure 7: Western Australia's first mosque was built by the Afghans in 1906.

(Source: Google maps; street view).

Building mosques and early signs of Islamic built forms:

According to Deen (2007), early Australian Muslims felt a great need to build their own mosques to fulfil their Islamic obligations. In the beginning, they set aside a special room in someone's house to serve as a prayer place. In the more remote areas like Marree, South Australia and Coolgardie, early Muslims built simple mud mosques (see figure 6).

In the late nineteenth and early twentieth century, Muslim community leaders in Adelaide, Perth and Brisbane spent great efforts to secure land and raise funds for the purpose of building permanent mosques. In 1895, Perth Muslim leaders approached the state government for a land grant in line with the grants given to churches and synagogues. When this approach failed, they relied on their own funds, inspired by the construction of the Adelaide Mosque in 1890.

In 1910, customs authorities around Australia responded to the enquiry of the Department of External Affairs with regarding the number of *Imams* and the number of permanent mosques around the county. At that time In Western Australia, beside the 'principal Mosque' in Perth (figure 7), there were mosques in Coolgardie, Mount Malcolm, Leonora, Bummers Creek, Mount Sir Samuel, and Mount Magnet. There were two resident *Imams* and about 25 Islamic preachers, *Sayeds*, who were all working men and conducted these services without any remuneration. In Sydney there were no permanent professional *Imams*, therefore a suitably educated local businessman was selected for this position. In Melbourne, there was no permanent mosque, only a room set aside for praying and religious teachings in a house in Fitzroy. There was also a detached room off Little Lonsdale Street, which was especially built for praying and holding Islamic ceremonies (Deen 2007).

The end of an era:

The camel era ended with the advance of railways, improved roads and motor transport. Some early cameleers returned to their 'home country' to die. Those who remained in Australia mostly clung to the margins of white society living humble and poor lives. They lived the rest of their lives quietly in Ghan towns and old city mosques, where they were looked after with great respect and received an Islamic burial by a younger Muslim generation. Their last years were spent in tiny rooms inside mosque courtyards. In the nineteen twenties the number of Afghans and Muslim migrants in general declined with the end of the camel transport industry and the restrictive effects of the White Australia immigration policy (Deen 2007).

Contemporary Muslims in Western Australia

The start of a new era:

After World War II, in the nineteen sixties and seventies the restrictive Australian immigration policy had eased, consequently, more Muslims started migrating to Australia. They comprised different ethnic groups, mainly Malays, Arabs, Turks, Yugoslavs, Indians, Pakistanis, Afghans, South Africans, Burmese and Bosnians (Cleland 2001, 26). The Perth Muslim Association (PMA) and the Islamic Council of Western Australia (ICWA) were formed in 1975 to coordinate the Islamic activities in Perth and the State. This was followed by the formation of more local Islamic associations and societies, which are generally affiliated with the ICWA. Each state has an Islamic council which jointly forms the Australian Federation of Islamic Councils (AFIC) as the national Islamic body based in Sydney, NSW (Culture and Religion, ICWA).

Muslims in Western Australia today:

According to the 2006 Census, there were 340,392 Muslims living in Australia comprising 1.71% of the total population. Western Australia had the third highest population of Muslim Australians, at 7.1% after New South Wales and Victoria. There were 24,200 Muslims living in Western Australia and the number has been growing since.

Yasmeen (2008, 6) explains that '*as in other Western liberal democracies, Muslims have gone through the process of establishing social structures, institutions and Islamic buildings that reflect their identity. Ethnic organisations with an Islamic background have also emerged that cater to the needs of the Muslim population*'.

In order to understand and analyse Perth Muslim built forms, it is important to first understand the basic Islamic beliefs, the motive power of Islamic architecture. Therefore, the following section will discuss Muslims' obligations, socio-cultural needs and demands, according to their Islamic teachings.

Islamic beliefs

Muslims believe in one God (Allah who is the one single God, who is considered to be the same God worshipped by the Jews and the Christians) who has sent prophets and messengers, from Adam (the first prophet) to Muhammad (the last prophet and final messenger). Muslims also believe that God provided revelations in the written scriptures, including the Torah and the Gospel, and that the Holy Qur'an is the final scripture from God as revealed to the Prophet Muhammad.

The five fundamental practices for Muslims

The Qur'an, together with the sayings and deeds of Prophet Muhammad, the '*hadith*', set out the five fundamental practices for Muslims:

- 1) The Testimony, a declaration of belief in Allah as the one and only God and Mohammed as his final messenger (*Shahada*).
- 2) Praying five times a day (*Salat*), which is compulsory only for every mature Muslim.
- 3) Fasting during the holy month of Ramadan (*Sawm*), which is compulsory only for every mature, fit and healthy Muslim.
- 4) Giving charity or alms (*Zakat*), which is compulsory only for wealthy Muslims, once a year, when their savings money reaches a certain amount.
- 5) Pilgrimage to Mecca (*Hajj*), which is compulsory only for every mature, wealthy and healthy Muslim; once a lifetime.

The effects of Islamic beliefs and the five pillars of Islam on Muslim built forms

Islamic beliefs and the five pillars of Islam have direct and indirect influences on Muslim built forms (Omar, M 2000, 3.15). For example, the five daily prayers or "*Salat*" have a great influence on Islamic architecture and urbanism because Muslim men are encouraged to perform the five daily prayers together in the Mosque. In Muslim societies, the mosque is considered as the centre of the neighbourhood and it needs to be accessible to

worshippers, as many other activities can be practiced in the mosque. Fasting, or “*Sawm*”, also impacts on Muslim built forms. An example is “*Mawaed ur-Rahman*”, which means inviting a big group of Muslims for free meals, to break their fast at sunset time, during the month of *Ramadan*. Mosques and Islamic centres provide spaces to fit a large number of guests, and are also used to organise many other public gatherings, such as celebrating the end of Ramadan “*Eidul-Fitr*”, one of the two biggest Muslim festivals.

In addition, charity “*Zakat*” is used, in some Muslim countries, to improve the urban environment of the needy and to provide reasonable shelter for homeless people.

At the centre of Islam, both geographically and spiritually, stands the *Ka’bah* in Mecca where Muslims are asked to fulfil their fifth pillar of Islam, the pilgrimage or “*Hajj*”. In Islamic architecture and mosque design the sanctuary, “*mihrab*”, is directed towards the *Ka’bah* in Mecca and towards it every Muslim turns to pray.

Muslims obligations and needs

Muslims have religious obligations to fulfil their commitment to the Almighty God. They also have educational obligations to learn and observe their faith.

In addition, Muslims have cultural needs to obtain links with their original cultures and to share with others (promoting multiculturalism), as well as, recreational needs to maintain a balance between their belief and modern lifestyle (body and soul). Finally, they also have social needs to keep in touch with family, friends and the wider community.

Diversity and integrity within the Muslim communities: the effect on their built forms

Australian Muslims come from ethnically and culturally diverse backgrounds. Such diversity stems primarily from the various local socio-cultural backgrounds within the Muslim world (Yasmeen 2008, 6). This diversity should not be confused with core Islamic teachings, which derived from the holy Qur’an and the traditions of prophet Muhammad.

In his speech at the opening ceremony for the Aga Khan Award for Architecture (AKAA 2010), the Aga Khan addressed the diversity issue. He said: ‘*In looking at the projects we [The Aga Khan Award for Architecture] have honoured, we also see enormous diversity. Diversity, in fact, is part of the essence of Islam. The unity of the Ummah [Muslim nation] does not imply sameness. Working in an Islamic context need not confine us to constraining models*’.

It may appear from the above quote that such diversity within the Muslim communities

may be associated with different needs that may be difficult to meet. Although Muslims' social needs may vary culturally, there is a possibility of deriving a set of general needs valid for all Muslim societies. This is because the basic Islamic responsibilities and obligations are eternal and must be fulfilled by all Muslims at all times (Rasdi 1998, 241).

This research paper focuses on Muslims' needs based on Islamic obligations or necessities because, in general terms, Islam is not only a religion; it is a complete way of life, in a balanced and moderate way (Omar, M. 2000, 3.1). Thus, to serve the purpose of this research paper, the study will focus on Islamic teachings and traditions 'in principle'. These are shared by all Muslims regardless of their sectarian backgrounds.

Some Muslim scholars claim that contemporary Muslim societies would be better served if the mosque, especially in urban areas, is designed or redesigned, if possible, as a community service and development centre or complex, equipped with: libraries, multi-purpose rooms, lecture halls, restaurants, kitchens, gymnasiums, childcare/crèche, guest-rooms, clinics/first aid, mini-markets and workshops (Rasdi 1998, Foreword).

Although Australia has a large number of Islamic organisations, schools and mosques, only a very few of them provide socio-cultural and recreational services to the growing number of Muslims. Consequently, the lack of Islamic centres creates a need for more socio-cultural and recreational facilities.

The following section will discuss some challenges that face contemporary Australian Muslim communities, which will highlight the need for the socio-cultural and recreational Islamic centres in Australia. It will also outline the role of the Islamic centres in community development and integration.

Challenges that face Australian Muslims today

Australian Muslim communities face some challenges, which drive their needs for socio-cultural Islamic centres. Such centres are believed to facilitate positive engagements between the Muslim and the non-Muslim communities and help to strengthen interaction, foster understanding and promote better relationships (MCRG 2006, 22).

Signs of Challenges

International terrorist attacks and the 'Cronulla riots' (in November 2005) have resulted in negative stereotype and a lot of attention placed on Arabs and Muslims. In addition, the Australian and Western media have also played a role in the generation of some social

tension affecting some Muslim communities (McGavin 2008, 6). Muslim women were often the specific focus of discrimination, with prejudice taking a range of forms from offensive remarks to physical violence (Ismae-Listen 2004, 47).

Whereas young Muslims face other kinds of challenges, they are influenced by a combination of mainstream Australian society, Islamic culture and their ethnic background. As a result, *'some young Muslims decide to turn away from their Islamic culture, while others may be living a "double life" in which they practice as a Muslim at home but not in the public realm'* (Omar, W. and Allen 1996, quoted in McGavin 2008, 6).

The need for socio-cultural and recreational Islamic centres

Some social and recreational activities in Australia are not always entirely inclusive, particularly for people from culturally and linguistically diverse groups such as Muslims. Physical, cultural, social, economic and religious barriers may limit Muslims, especially women, participating in social and recreational activities (McGavin 2008, 4). These limitations, or exclusion, of Muslims' participation highlights the need for Muslim community centres that cater for their socio-cultural and recreational needs while taking into consideration Muslims' religious obligations.

An Islamic centre's design tends to create an innovative social environment appropriate to the size of the community, which also reflects the character of the locale. In addition, it would provide variety of uses and flexibility allowing for future expansion to accommodate the rapid growth of the Muslim communities in the West (Kahera, Abdulmalik and Anz 2009, 24).

The role of the Islamic centres in the community development

The Muslim Community Reference Group (MCRG) has been formed and funded by the Australian Federal Government in 2005. The MCRG's report (2006, 22) recommends that a greater engagement between the Muslim and the non-Muslim community will help to strengthen interaction, foster understanding and promote better relationships. It emphasizes the importance of projects and initiatives flowing from the 'National Action Plan' and suggests that in order to 'build on social cohesion, harmony and security' the following action plan is needed [as a part of many other proposals]:

- Open days and other activities at "Islamic Centres",
- Promoting the process of understanding and integration between all Australians,

- Muslims participation in organised sports, with a particular emphasis on women,
- Emphasis on connectedness, interdependence, regard, commitment, love and empathy between all society groups,
- Community development workers to support Muslim communities,
- Learning from other communities [interaction and cross-cultural activities].

The abovementioned 'National Action Plan' highlights the important role of socio-cultural Islamic centres in promoting mutual understanding and harmony between all Australians, irrespective of faith or colour.

Some socio-cultural Islamic centres' designs are positive and welcoming to non-Muslims; an example for that is the 'Maqam Islamic Cultural Centre in London' founded by Yusuf Islam (aka British singer Cat Stevens). The main aim of Yusuf's centre is to present the modern face of British/Western Muslims. His architect, Robert O'Hara, claims that the 'bright, optimistic' design would challenge negative views about Islam. *'The idea is to present a modern view of British Muslims to show they're not all interested in pastiche onion domes,'* he explains that his client, Yusuf Islam, *'wants to present a more ecumenical view of the world and get rid of the awful image that Islam has had put upon it'*. The building features exhibitions of Islamic arts, crafts and drama, serve Middle Eastern food and drink, and will host concerts by singer Yusuf Islam and his band (Building Design 2007).

Islamic socio-cultural and recreational centres aim to promote better understanding throughout the general community by tackling issues concerning multiculturalism and integration, as well as, helping the youth to adapt to the Australian society. These centres also promote good citizens who can integrate, build bridges with the broader community and close the gap of understanding between Muslims and others (Moosa, GIYC Website).

An Islamic socio-cultural centre can play an important role in building and maintaining a cohesive, tolerant, religious, social, cultural and educational institution that serves the Muslims needs, as well as, the broader Australian community. For example, Canberra Islamic Centre facilitates religious, social and multicultural events that promote unity and harmony. In addition, the centre provides social gathering, Islamic culture seminars, youth forums, ladies social events, art and cultural exhibitions, sports and recreational events. The centre also organises open days with non-Muslims to encourage and promote interfaith dialogue (Canberra Islamic Centre's website).

The abovementioned examples demonstrate the importance of the Islamic centre and its role as a community centre that helps to promote and develop the Western Muslim community in all aspects of life.

The relationship between socio-cultural needs and the built environment

One of architecture's functions is to construct and reproduce social structures; this idea has deep implications, not only for architectural practice, but also on architectural research. Social knowledge is most often implicit and incorporated in the accepted behaviours and norms of a society (Penn 2008, 26).

Therefore, in order to derive an architectural program of a building, it is important to understand the needs of its users. The Islamic socio-cultural centre is designed mainly to serve the Muslim community thus, it is important to know what its needs and requirements are (Rasdi 1998, 245). Muslims' socio-cultural needs can be translated into architectural zones, spaces and forms that can be developed into design programs, which can be built as functional community cultural centres.

Muslim built forms in Australia

Australian Muslims have a wide range of organisations and built forms providing religious, educational and welfare services. In 2007, there were more than 100 mosques around Australia and over 50 *musallahs* (prayer rooms) which cater for Muslims' religious obligations and needs; and the numbers of Islamic buildings and users are increasing. There were also around 50 Islamic schools attended by 15,000-20,000 students (Mathews 2007).

There are many Islamic organisations operating in each state and territory, their aim is to provide appropriate welfare services to Australian Muslims. There are over 50 Muslim organisations in NSW alone. The majority of these associations are connected through state Islamic councils, many of which are represented at a national level by (AFIC), the Australian Federation of Islamic Councils (Ismae-Listen 2004, 28).

The next section on research methodology will demonstrate and explain the methods that will be employed to answer the research question and to achieve its objectives.

Research Methodology

In order to examine whether Muslim built forms in Perth fulfil, or not, community religious obligations and socio-cultural needs, it's important first to study, analyse and classify the current Muslim built forms in Perth, their locations and functions; focussing on the activities provided to the community.

The proposed methodology for this research is based on a mixed methods approach to analyse and evaluate existing Muslim built forms in Perth. It will also combine observation and descriptive methods in assessing facilities, functions, activities provided by Islamic buildings in Perth. The selected samples will focus on Perth metropolitan suburbs where eighty five percent of West Australian Muslims live and work. The research will also be of an interpretative nature. Proponents of this mode of research suggest that human science needs to be interpretive (Gallagher 1991, 5), particularly where the object is to investigate the complex layers of comprehension, meanings, beliefs and interaction of individuals within their own socio-urban setting (Erikson 1986, 123). Interpretation is the key process of evaluating and constructing a narrative from the collected and organised data concerning a complex social phenomenon (Groat and Wang 2002, 137). Therefore, in order to formulate the intended study, the methodology will provide observation and interpretation of all available Muslim organisations and their formal buildings in Perth.

Data Collection:

There are two major approaches to gathering information about a situation, person, problem or phenomenon. Sometimes, information required is already available and will only be extracted (Kumar 2005, 141). Therefore, relevant examples from Islamic organisations, electronic data and websites, academic research and governmental reports will be used to develop and design the study and research framework.

Data Sources

The study has sourced information and data from official and private Muslim organisations' publications and websites to compile the data and produce maps. The

Australian Islamic Council, the Islamic Council of Western Australia and other private Muslim community organisations and Networks play a key role in the provision of community facilities to Perth Muslim community. The provision of quantitative and qualitative analyses of data is an important aspect of being able to qualify the information generated from differing data sources.

Electronic data and websites:

Information and data have been sourced from: Aussie Muslims Network's website, Australian Federation of Islamic Councils' website (AFIC), Australian Islamic Mission's website (AIM), The Lebanese Muslim Association and Youth Centre's website.

Academic, government agencies and private publications:

Centre for Muslim States and Societies: University of Western Australia, Human Rights and Equal Opportunities Commission (HREOC), Muslim Community Reference Group (MCRG), Multicultural development for the youth affairs Network: Queensland, Amana magazine, Crescent Times Australia, The Islamic Council of Western Australia, The Muslim Community Services of Western Australia, The Muslim Woman Support Centre of Western Australia.

Research methods and data analysis:

Data and information collected will be analysed and cross-examined, to firstly study, analyse and classify Muslim built forms in Perth. Secondly, to study and classify the variety of activities and facilities provided by Muslim built forms, and then, examine to what extent they fulfil Muslims, socio-cultural and recreational needs in Perth, which will answer the research questions.

The proposed methodology will also examine and evaluate the variety of Islamic buildings in Perth. Trochim (2006) claims that anything that is qualitative can be assigned meaningful numerical values. These values can then be manipulated to help researchers to achieve greater insight into the meaning of the data and to help them examine specific hypotheses. Trochim (2006) suggests representing research data or information quantitatively as in the following table:

Object	Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Totals
1	1	1	0	1	0	3
2	1	0	1	0	0	2
3	1	1	0	1	0	3
4	0	1	0	1	0	2
5	0	1	0	1	1	3
6	1	1	0	0	1	3
7	0	0	1	1	1	3
8	0	1	0	1	0	2
9	0	0	1	0	1	2
10	0	0	0	1	1	2
Totals	4	6	3	7	5	

Figure 8: Simple quantitative coding table (*Source: Trochim 2006*).

The quantitative coding gives researchers additional useful information and makes it possible to perform analyses that could not be done with the qualitative coding (Trochim 2006).

Based on Trochim's (2006) simple quantitative coding table, I have developed a quantitative method and designed two excel work sheets (matrices), using the socio-cultural and recreational activities specified previously, to assess these buildings and to determine the range of activities expected to be provided and available to their users.

Each building will get a total score, from 0 to 10, based on the number of services it provides, its location and its availability. Data will be processed using the excel program and analysed. The results will be interpreted accordingly and then translated into graphs.

For the purpose of this research, the study will focus only on the provision of the facilities and the activities offered by Perth Muslim built forms, not the quality of services provided.

Limits of the Study

This study does not include information on the capacity of each facility, usable floor space for individual facility types and the capacity for provision of facilities.

It is beyond the scope of this study to include analysis or assessment of the quality of services provided by Perth Muslim built forms to the community.

Further to this, the research is limited by the availability of information and materials needed for all aspects of the analysis and assessment.

Finally, the evaluation has focused only on Muslim built forms and services in the Perth

Metropolitan area and surrounding areas where eighty five per cent, of all West Australian Muslims live and where most activities are run.

Study of Muslim built forms in Western Australia

Western Australia has the third highest population of Australian Muslims, at 7.1% (after New South Wales and Victoria). In 2006, there were 24,200 Muslims living in Western Australia (ABS 2006). They have gone through the process of establishing social structures and institutions that reflect their Islamic identity, they have also established schools and mosques that serve their communities (Yasmeen 2008, 6).

By studying available information and data concerning Muslim organisations and their variety of buildings, as well as through personal observation and interpretation, West Australian built forms can be classified into four groups, according to their locations and functions:

1. Urban mosques:

Urban mosques are usually located in the Perth metropolitan area and surrounds They serve as main mosques and provide some community services. There are about twelve urban mosques in Perth suburbs; the largest and oldest one is Perth City Mosque on William Street. There are five urban mosques in the northern suburbs; Beechboro Bosnian Mosque and Cultural-Recreational Centre, Mirrabooka Mosque (Noorul Islam Society), Nollamara St Mary Mosque, Padbury-Hepburn Heights' Mosque, and Maylands Mosque (Islamic Centre of WA).

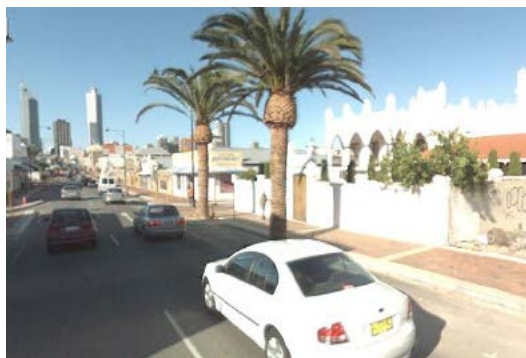


Figure 9: Perth Mosque main entrance (*Source: Google maps; street views*).



Figure 10: Perth Mosque from William Street and Robinson Avenue (*Source: Google map; street views*).



Figure 11: Beechboro Bosnian Mosque & Islamic Centre. (Source: Google maps; street view).



Figure 12: Beechboro Bosnian Mosque, layout. (Source: Google maps).



Figure 13: Nollamara St Mary Mosque (Source: Google maps; street view).



Figure 14: Mirrabooka Mosque, main entrance (Source: Aussie Muslims Network).

In the southern suburbs, there are six urban mosques; Cannington Mosque (Masjid Al-Sunnah & Daawah Association of WA), Gosnells Mosque and Islamic Centre, High Wycombe Madrasa Talimuddin, Queens Park - Canning Mosque (Turkish Islamic Association of WA), Rivervale Mosque (Islamic Council of WA), and finally Rockingham Mosque and Community Centre (source: Aussie Muslims Network, Perth).



Figure 15: Padbury Mosque layout (Source: Where is/WA, photo).

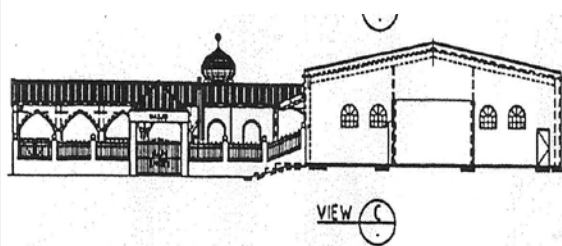


Figure 16: Cross section, Padbury Mosque (Source: Muslims Network).



Figure 17: Canning Mosque in Queens Park, Turkish Islamic Association (Source: Google maps; street view).



Figure 18: Rivervale Mosque and Islamic Council of WA (Source: Google maps; street view).



Figure 19: Rockingham Mosque and Community Centre (Source: Google maps; street view).



Figure 20: Rockingham Mosque Layout (Source: Google maps).

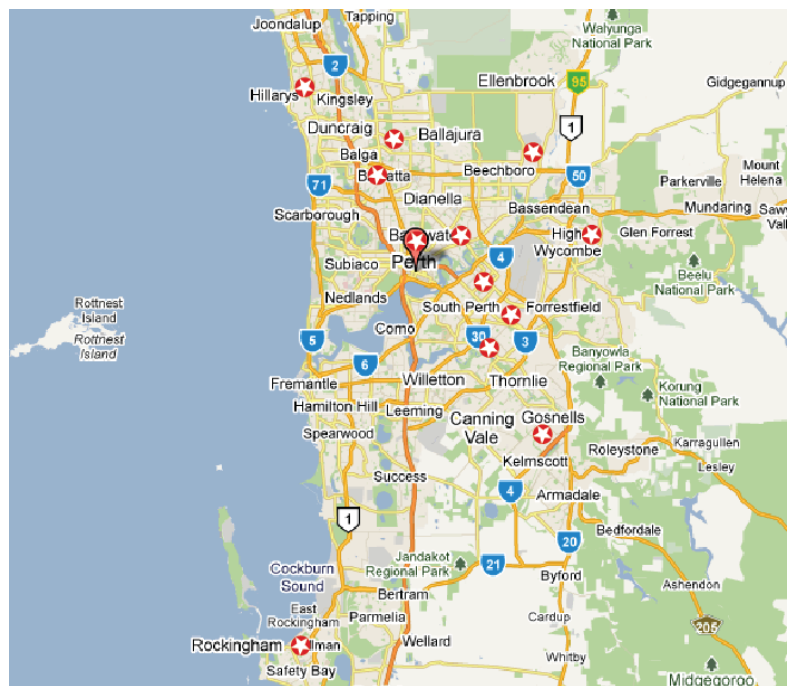


Figure 21: Urban mosques in Perth metropolitan suburbs marked by red stars (Source: Generated by the Author on Google map).

2. Musallahs - small mosques or prayer halls:

There are about ten musallahs in Perth, usually attached to a university to serve the students and other members of the Muslim community, such as; Curtin University Musallah, UWA Musallah, Edith Cowan University Musallah and Murdoch University Musallah.

Musallahs also can be attached to a building to serve small groups of people, usually Muslim employees and workers during the business hours. This includes Perth City Musallah in Trinity Arcade, Perth City West Musallah on Wellington Street, Cannington Musallah of Dawaah Association, Clarkson Musallah, Kenwick Musallah and Sothern River Musallah.



Figure 22: Curtin University Musallah, a mountable building (Source: CMSA website).



Figure 23: University of Western Australia's Musallah Layout (Source: UWAMSA website).



Figure 24: Interior view, Curtin University Musallah (Source: CMSA website).



Figure 25: Sports activities by Curtin Muslim Students Association (Source: CMSA website).

3. Islamic schools' mosques:

There are currently six Islamic schools in Perth metropolitan area (Yasmeen 2008, 25). Each Islamic school usually contains a mosque or prayer facility to serve Muslim students, employees and teachers; but also would be open to other Muslim community members during the day. There is only one school mosque in the northern suburbs at the Australian Islamic College on Dianella campus. There are five school mosques in the southern suburbs, they are: Bentley Mosque at Al-Hidayah Islamic School, Kewdale Mosque at The

Australian Islamic College on Kewdale campus, Ferndale Damla College Mosque, Langford Islamic College prayer facility, and finally Thornlie Mosque at The Australian Islamic College on Thornlie campus.

4. Regional mosques and musallahs:

There are five regional mosques in Western Australia; Albany Musallah and Islamic Centre, Geraldton Mosque and Islamic Association (430 km north of Perth), Katanning Mosque and Islamic Association (290 km south of Perth), Newman Mosque (1,800 km north of Perth), and Port Headland Mosque and Islamic Association in South Hedland (1,200 km north of Perth) (*Source: Aussie Muslims Network, Perth*).

A framework to evaluate Perth Muslim built forms

(In fulfilling community socio-cultural needs)

For the purpose of this research, Muslims' socio-cultural needs include all social and cultural needs for a modern community within Islamic framework/spirit that do not contradict Islamic teachings in principle. They also include the following:

- Social needs (a balance between Islamic principle obligations and modern Western lifestyle): Community gathering and networking; marriage and birth celebrations (*Aqiqah*); festive celebrations, Ramadan and other Islamic events gathering, halal food catering, crèche/childcare facilities; women, youth and seniors activities, family counselling, welfare and funeral facilities;
- Cultural needs: Islamic library and resource centre, art and cultural exhibitions, weekend and holidays Islamic classes, English/Arabic classes, interpreting and translation services, sports and recreation services, media representation, seminars and guest speakers, multicultural activities, open days with the wider non-Muslim community, interfaith dialogues;
- Spiritual needs (a balance between spiritual and materialistic lifestyle): collective prayers, learning Islamic practices.

Examples of the above mentioned Muslims' community activities can be found in the following national and international Islamic centres: Australian Islamic Centre in Melbourne, Canberra Islamic Centre, Global Islamic Youth Centre in Sydney, European Islamic Centre in Britain, Belfast Islamic Centre in Northern Ireland and Al Hidayah Islamic Cultural Centre in Canada.

Muslim built forms evaluation - Matrix 1 methods

Matrix 1 aims to evaluate Perth Muslim built forms, available activities and services provided. Data is processed using an excel program, analysed and interpreted accordingly; then translated into graphs.

Methods of Matrix 1:

Matrix 1 shows on the vertical indicator Perth metropolitan Muslim built forms and organisations. While its horizontal indicator specifies a range of religious, socio-cultural and recreational activities would be provided by each building or organisation.

The activities chosen for the evaluation are based on the range of services provided by existing urban mosques and Islamic centres in Australia and other western countries.

For evaluation, each activity will get a value of (1) if provided and (zero) if not provided. With regards to locations, a value from (-1) to (+1) will be given to each building; based on close proximity to Perth CBD (as a central location). For users' limitation, a value from -1 to zero will be given; where zero means no limitation and (-1) means services are available only to some users.

A building scores less than a total of 4, means "below average performance"; a building scores a total above 4 to 6 means "average performance"; score above 6 to 8 is "above average performance" and finally, score above 8 means "high performance".

Muslim Built Form (MBF)	Total Score	1 Location	2 Prayers	3 Religious Education	4 Social Gathering	5 Weddings	6 Funerals	7 Recreation & Sports	8 Open Days	9 Eid - Festive	10 Cross Cultural	11 Limitation for Users or space
P.H.MQ	6	0	1	1	1	1	1	0	0	1	0	0
M.MQ	5.25	0.25	1	1	1	0	1	0	0	1	0	0
B.DS.O	4.25	0.25	0	1	1	0	0	1	0	0	1	-1
B.B.MQ	7.25	0.25	1	1	1	1	1	1	0	1	0	0
N.SM.MQ	6.5	0.5	1	1	1	1	1	0	0	1	0	0
D.AIC.SMQ	8.5	0.5	1	1	1	0	1	1	1	1	1	-1
C.UWA.MS	8	1	1	1	1	0	0	1	1	1	1	-1
P.MQ	7	1	1	1	0	1	1	0	0	1	1	0
R.MQ	9	1	1	1	1	1	1	0	1	1	1	0
B.CU.MS	7.5	0.5	1	1	1	0	0	1	1	1	1	-1
B.AH.SMQ	8.5	0.5	1	1	1	0	1	1	1	1	1	-1
K.AIC.SMQ	8.5	0.5	1	1	1	0	1	1	1	1	1	-1
B.MWSC.O	5.5	0.5	0	1	1	0	0	1	1	0	1	-1
QP.C.MQ	6.25	0.25	1	1	1	1	1	0	0	1	0	0
FD.SMQ	8.25	0.25	1	1	1	0	1	1	1	1	1	-1
TH.AIC.SMQ	8	0	1	1	1	0	1	1	1	1	1	-1
L.SMQ	8	0	1	1	1	0	1	1	1	1	1	-1
RCK.MQ	6	-1	1	1	1	1	1	1	0	1	0	0

Figure 26: Matrix 1 (Source: the author).

Muslim built forms evaluation

Matrix (1) Evaluation and interpretation:

Applying the above mentioned method, the study finds that performance for combined activities (religious, socio-cultural and recreational services and activities) of all studied

Islamic buildings and organisations is summarised as the following:

- No case shows below average performs, which means all Perth build forms provide, at least, the basic community religious obligations,
- Five cases show average performance, which means these buildings provide Muslim community religious obligations beside some socio-cultural activities,
- Eight cases are performing above average, which means these buildings provide Muslim community religious obligations beside more socio-cultural and recreational activities,
- Five cases are high performing, which means these buildings provide most religious, socio-cultural and recreational services and activities and are closer to fulfilling Perth's Muslim community needs.

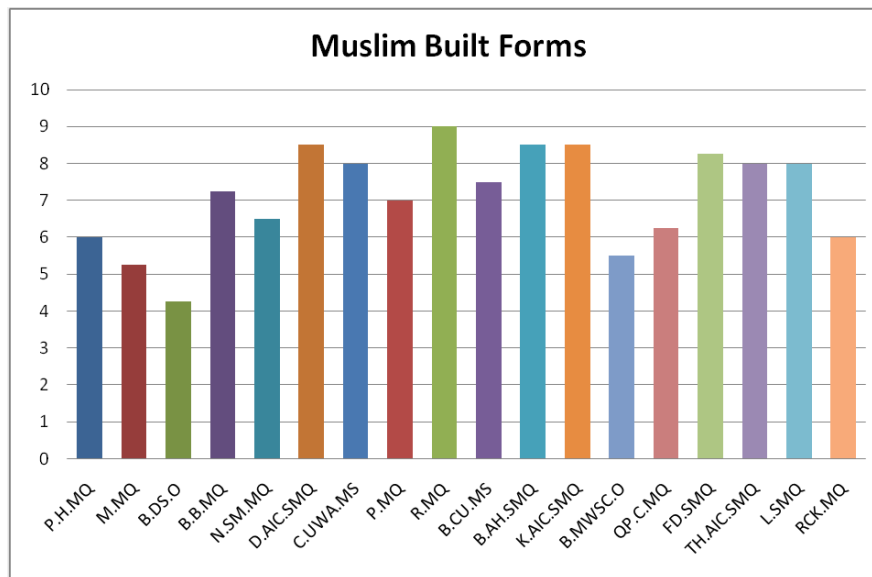


Figure 27: Perth Muslim built forms performance (*Source: the author*).

Activities analysis – “Matrix 2” methods

Matrix 2 aims to examine to what extent Muslim built forms fulfil community obligations and needs.

Methods of Matrix 2:

Matrix 2 shows on the vertical indicator the same diversified Perth metropolitan Muslim built forms and organisations as Matrix 1. Its horizontal indicator categorises all provided activities into three groups; religious, socio-cultural and recreational activities.

For evaluation, each group of activities will get a score based on availability to users, for example locations. However, user's limitation will not affect the overall performance.

Activities Groups		Religious activities			Total	%	Socio-cultural				Total	%	Recreational activities			Total	%	Limitations
Items	1	2	3	4			5	6	10	7			8	9	11			
Factors & Activities → Muslim Built Forms ↓	Location	Prayers	Religious Education	Social Gathering			Weddings	Funerals	Cross Cultural	Recreation & Sports			Open Days	Eid - Festive	Limitation for User or space			
1	P.H.MQ																	
2	M.MQ																	
3	B.D.S.O																	
4	B.B.MQ																	
5	N.SM.MQ																	
6	D.A.I.C.SMQ																	
7	C.U.W.A.MS																	
8	P.MQ																	
9	R.MQ																	
10	B.C.U.MS																	
11	B.A.H.SMQ																	
12	K.A.I.C.SMQ																	
13	B.M.W.S.C.O																	
14	Q.P.C.MQ																	
15	FD.SMQ																	
16	TH.A.I.C.SMQ																	
17	L.SMQ																	
18	RCK.MQ																	
	All Muslim Built Forms																	

Figure 28: Matrix 2 (*Source: the author*).

Matrix (2) Evaluation and interpretation:

This matrix aimed to analyse and evaluate all possible activities and services provided by Muslim built forms to examine to what extent they fulfil Perth Muslim community needs.

Applying the above mentioned method, the study finds that: religious activities form 22% of all activities needed, socio-cultural activities form 45% and recreational activities form only 33%.

Based on “matrix 2” classifications and analyses of the results find that the studied Muslim built forms in the Perth metropolitan area and surrounds show the following performance: religious activities fulfil or meet about 92% of its community needs, socio-cultural activities meet about 62% of its community needs and finally, recreational activities meet only about 60% of its community needs.

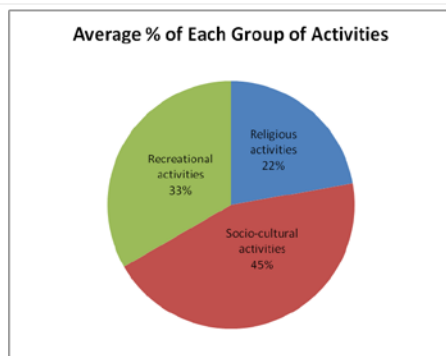


Figure 29: Percentage of each group of activities for all activities needed (*Source: the author*).

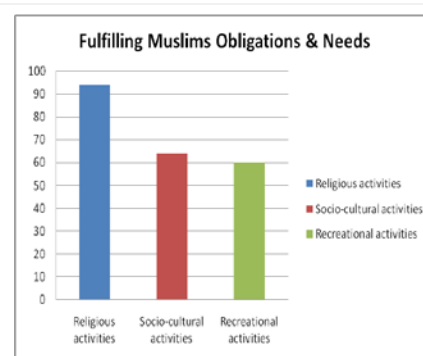


Figure 30: Diagram shows fulfilment of Muslims obligation and needs (*Source: the author*).

Furthermore, by comparing and interpreting the two diagrams displayed above (figures 29 and 30), the study finds that the religious activities, which forms only 22% of Perth

Muslims needs, are the most fulfilled activities; about 92%. The socio-cultural activities, which form 45% of Perth Muslims needs, are less fulfilled activities; about 62%. The recreational activities, which forms 33% of Perth Muslims needs, are the least fulfilled activities; about 60%.

Conclusion

This research paper aimed to answer questions on the kind and nature of Muslims' obligations and needs and to what extent Muslim built forms in Perth fulfil these religious obligations and socio-cultural needs. To achieve these aims, the paper has introduced Muslim communities in Australia, focussing on Western Australia, and briefly demonstrated their past and present.

The paper has also identified socio-cultural requirements, obligations and needs of Australian Muslim communities. The study has found that the Islamic centre model should provide the necessary programs that help to facilitate a variety of educational, socio-cultural, economic and spiritual activities, which fulfil Muslims' needs, as well as, building on social cohesion, harmony and security with the broader Australian community.

The research has produced a brief study of Muslim built forms in Western Australia. It has discussed the establishment of social structures and institutions that reflect West Australian Muslims' identity and the establishment of schools and mosques that serve their communities. The study has also generated a map that locates urban mosques and Islamic centres in Perth metropolitan areas and surrounds.

The research has found that West Australian built forms can be classified into four groups, according to their locations and functions. They are urban mosques, musallahs (small mosques or prayer halls), Islamic schools' mosque and finally regional mosques and musallahs.

The paper has examined whether Muslim built forms in Perth fulfil community obligations and needs. In answering the main research question, the paper has found that Muslim built forms in Perth fulfil most community religious and educational needs, but only fulfil limited socio-cultural and recreational needs.

By analysing and assessing Muslim organisations' services and their built forms in Perth through studying their functions and activities, the research has found a lack of socio-cultural and recreational services available to Perth Muslim communities.

The study has also found a lack of activities that can help to promote social cohesion and harmony with the broader Australian community. This includes organising ongoing

multicultural activities for all groups of the community, Muslims and non-Muslims alike.

Acknowledgments

I wish to thank two unnamed reviewers for some very useful critical feedback on the initial draft for this research paper. I am also grateful for valuable discussions and comments from my supervisors, Prof. John Stephens and A/Prof. Steve Basson.

References:

- AKAA. 2010. The Aga Khan Award for Architecture: speech by His Highness the Aga Khan at the Award Presentation Ceremony. Doha, Qatar. Accessed November 27, 2010 <http://www.akdn.org/Content/1033>
- Al Hidayah Islamic Cultural Centre Vancouver. Accessed October 12, 2009. <http://www.archnet.org/library/sites>
- Australian Bureau of Statistics (ABS). Australian Census 2006. Accessed October 15, 2009. <http://www.abs.gov.au/Ausstats/abs@.nsf/7d12b0f6763c78caca257061001cc588/6ef598989db79931ca257306000d52b4!OpenDocument>
- Australian Islamic Mission (AIM). Accessed May 05, 2011. <http://www.aim.org.au/aboutus.asp>
- Australian Federation of Islamic Councils website (AFIC). Accessed November 02, 2009. <http://www.afic.com.au>
- Aussie Muslims Network: Perth. Accessed January 15, 2010. <http://www.aussiemuslims.net>
- Balint, R. 2007. "The Macassan. Front door, back door: seascapes and the Australian psyche." In *KASAMA* Vol. 21 No. 3 / July-August-September 2007 / Solidarity Philippines Australia Network: University of New South Wales. Accessed December 14, 2010. <http://cpcabrisbane.org/Kasama/2007/V21n3/FrontDoorBackDoor.htm>
- Belfast Islamic Centre. Accessed October 30, 2009. <http://www.belfastislamiccentre.org.uk/NR>
- Building Design. 2007. *Planning has broken for Yusuf Islam's centre*. Accessed September 24, 2009. <http://www.bdonline.co.uk/story>
- Canberra Islamic Centre, ACT. Accessed November 02, 2009. <http://www.islam-australia.org/home>
- Cawte, J. 1996. *Healers of Arnhem Land*. Sydney: University of New South Wales Press.
- Cleland, B. 2001. "The History of Muslims in Australia." In Saeed, A. & Akbarzadeh, S., *Muslim Communities in Australia*. Sydney: University of New South Wales Press.
- Curtin Muslim Students Association (CMSA). Accessed October 15, 2009. <http://www.facebook.com/groups/23673294225/photos/>

- Deen, H. 2007. Muslim Journeys. *In Uncommon Lives*. Sherrat, T. and Kate Bagnall (eds.). The National Archives of Australia Website. Accessed March 15, 2010. <http://uncommonlives.naa.gov.au/muslim-journeys/records.aspx>
- Erickson, F. 1986. Qualitative methods in research on teaching. In M. Wittrock, ed., *Handbook of research on teaching*, 3rd ed., 119-161. New York: Macmillan.
- Gallagher, J. J. 1991. Uses of interpretive research in science education. In J. J. Gallagher (Ed.), *Interpretive research in science education*, 3-18. Manhattan, Kansas: National Association for Research in Science Teaching.
- Global Islamic Youth Centre (GIYC). Sydney. Accessed October 15, 2009 <http://www.giyc.com.au/html/project/>
- Google Maps. Accessed December 15, 2009. <http://maps.google.com.au/maps>
- Groat, L. and D. Wang. 2002. *Architectural Research Methods*. New York: John Wiley and Sons.
- Hassim, E and Cole-Adams, J. 2010. *Learning from One Another - Bringing Muslim Perspectives into Australian Schools*. National Centre of Excellence for Islamic Studies. University of Melbourne: Melbourne. Accessed November 23, 2010. <http://islammonitor.org/uploads/docs/LFOA.pdf>
- Islamic Council of Western Australia. Accessed October 15, 2009. <http://icwa.net.au/>
- Ismae- Listen 2004. *National consultation on eliminating prejudice against Arab and Muslim Australians*. Report: Human Rights and Equal Opportunity Commission, Australia. Accessed November 02, 2009. <http://www.hreoc.gov.au/racial%5Fdiscrimination/isma/report/>
- Kabir, N. K. 2004. *Muslims in Australia: Immigration, Race Relations and Cultural History*. London: Kegan Paul Ltd. [Address to the Sydney Institute on 14 March 2005.] [online]. Sydney Papers, v. 17, no. 2, Autumn 2005: 62-72. Accessed June 15, 2010. <http://search.informit.com.au.dbgw.lis.curtin.edu.au/fullText;dn=200509376;res=APAFT>
- Kahera, A., L. Abdulmalik and C. Anz. 2009. *Design Criteria for Mosques and Islamic Centres – Art, Architecture, and Worship*. Oxford: Architectural Press, Elsevier.
- Kettani, H. 2010. *2010 World Muslim Population. Proceedings of the 8th Hawaii International Conference on Arts and Humanities, Honolulu, Hawaii*. Accessed November 30, 2010. <http://www.pupr.edu/hkettani/papers/HICAH2010.pdf>

- Kumar, R. 2005. *Research Methodology: a step-by-step guide for beginners*. London: Thousand Oaks, California: SAGE.
- Matthews, Z. 1997. "Origins of Islam in Australia". In *SALAM Magazine*. Sydney: July-August. Accessed October 15, 2009. <http://www.famsy.com/salam/Origins.htm>
- , 2007. *Muslims in Australia*. Accessed May 2, 2011. <http://www.aim.org.au/articles.asp?article=63>
- McGavin, K. 2008. *Young Muslim Women's Participation in Sports and Recreation*. Queensland: Multicultural Development for the Youth Affairs Network Report. Accessed Nov 02, 2009. <http://www.yanq.org.au/images/stories/rprt%20-%20ymwpsr%20200807.pdf>
- Muslim Community Reference Group (MCRG). 2006. *Building On Social Cohesion, Harmony And Security: An Action Plan*. Canberra: Department of Immigration and Citizenship. Accessed November 02, 2009. http://www.immi.gov.au/living-in-australia/a-multicultural-australia/mcrg_report.pdf
- Omar, M. 2000. "Translation of Islamic Culture into Arabian Architecture". Master's diss., Perth: School of Architecture, Construction and Planning. Perth: Curtin University of Technology.
- Omar, W. and K. Allen. 1996. *The Muslims in Australia*. Canberra: Australian Government Publishing Service.
- Penn, A. 2008. "Architectural Research". In *Advanced Research Methods in the Built Environment*, eds. A. Knight and L. Ruddock, 14-27. UK: Wiley-Blackwell.
- Pew. 2009. *Mapping the Global Muslim Population: A Report on the Size and Distribution of the World's Muslim Population*. Pew Research Center's Forum on Religion and Public Life. Washington D.C.
- Rasdi, M. T. 1998. *The Mosque as a Community Development Centre: Program and Architectural Design Guidelines for Contemporary Muslim Societies*. Kuala Lumpur: Universiti Teknologi Malaysia.
- Reza, F. 2007. *Sharing Our Achievements: Symposiums on Australian Muslims [online]*. Perth: University of Western Australia. Accessed March 15, 2011. http://www.uws.edu.au/equity_diversity/equity_and_diversity/tools_and_resources/conference_documents/sharing_our_achievements_symposiums_on_australian_muslims
- Saheeh International. 1995. *Introducing Islam*. Jeddah: Abul- Qasim publishing house.

State Library of South Australia. Accessed October 15, 2010

<http://images.slsa.sa.gov.au/mpcimg/>

Trochim, W. 2006. "The Qualitative-Quantitative Debate". In *Research Methods Knowledge Base. Web Centre for Social Research Methods [online]*. Accessed April 25, 2011. <http://www.socialresearchmethods.net/kb/qualdeb.php>

University of Western Australia Muslim Students Association (UWAMSA). Accessed October 15, 2009. <http://www.uwamsa.org/contactus.html>

Whereis website. Accessed April 30, 2011. <http://www.whereis.com/wa/#session=MTI4>

Yasmeen, S. 2008. *Understanding Muslim Identities: From Perceived Relative Exclusion to Inclusion*. Centre for Muslim States and Societies. Perth: University of Western Australia. Accessed March 02, 2010.
http://www.cmss.uwa.edu.au/cmss_publications?f=266453