Abstract

Madrasa plays an important role as a center of education, where it is a source of knowledge for the surrounding community since the Islamic golden ages till the present context. This is because the madrasa is viewed by many as an Islamic symbol that cultivate values of fraternity and solidarity among the umma which foster true spirit of Islam (35). Nevertheless, the utilitarian function and existence of the traditional madrasa as a communal center began to change when transformation occurred to the civilized society. This happened due to factors like modernization and Western influence in the context of education (24). The traditional madrasa which had served as a communal development center in the past, currently disengaged from communal life, and its function in modern times began to change only to serve as a center for propagating Islamic education instead of becoming a communal hub (45, 43). Furthermore, the current madrasa setting is built in isolation from the surrounding community with lavish architectural style and grand-scale appearances.

The objective of this paper therefore, is to explain how the design indicators such as location and placement, size and scale, facade and structure, access and circulation as well as hierarchy and spatial function contributed to the development of madrasa as a sustainable communal center. The establishment of these referential design guidelines are of benefit to future designers, builders, developer and related authority to build a better sustainable communal type of madrasa in the future.

Keywords: traditional madrasa; sustainable communal development center, Reformist Islamic groups

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Islamic Reformist group in Malaysia like the Jemaah Tabligh and PAS. This is because the Islamic Reformist groups are well known Islamic intellectuals that have revived the Islamic understanding to be in line with progress namely in the field of science and technology based on the Quran and Hadith, as well as showing significant efforts on new Islamic ideas like Islah (reform) and tajdid (renewal). Each Islamic cause championed by them are proven to be characteristically community based (2, 18).

The chosen madrasas are based in the East Coast states of Malaysia, which are the states of Kelantan and Terengganu. These two states were selected because they are the birth place of many ulama whom involved in the spread of Islamic teachings as well as the main center that serves as the propagation of Islamic Reformist movement. Other than that, these two states dominantly indicate the highest number of madrasas compared to other states in the region and all of them were managed by these two Islamic Reformist groups (5). Furthermore, these Islamic Reformist group still continue to preserve their concern on communal values relating to Islamic learning and education. Based on field studies, there are more than 10 traditional madrasas governed by PAS and Jemaah Tabligh located in Terengganu and Kelantan, but only two were chosen. These 2 madrasas are Madrasah Quran Kubang Bujuk (KB) in Terengganu and the Madrasah Al-Rahmaniah (AR) in Kelantan. Madrasas under the governance of Jemaah Tabligh (KB) more emphasis on Islamic education, proselytization and Islamic da’wah within its own community, while PAS-governed madrasas (AR) is more open to the public and did not shy away from political issues whilst focusing on the propagation of Islamic education and discourse to the general society. To understand this, the literature review section is divided into three sections. The first section will describe in detail on the characteristic and typology of madrasa in Malaysia. The second section focuses on communal values and its representation through architecture and the third section elucidates on the Reformist Islamic ideology and communal values that they propagate. All sections will be explained in turn.

2 Literature Review

2.1 Definition of Madrasa

In Arabic language, the word madrasa derived from the word “Diroshah”, which means “to study” (38). In this sense, madrasa is commonly perceived by many as a place to learn the Quran and Hadith. Madrasa henceforth, is defined as an Islamic educational institution to provide religious education, as well as fulfilling other functions relating to communal activities (38). Since madrasa functioned as a center to propagate the Islamic knowledge, it is often considered to be in par with modern Islamic institution that gave birth to fardu ain’ lessons in these places. This second phase of zoning encompasses of students’ accommodations that are built surrounding the core area for easy access and monitoring purposes. Phase three of zoning comprises of classrooms as well as supporting facilities that are built adjacent to the students’ accommodations. This third zoning area which bounded the entire madrasa site compound, is known as the communal interaction zone. This zone not only serves the need of madrasa students but also functioned as communal space to handle public activities. In addition, it is a tradition for all traditional madrasa to have a supplementary space in a form of large open courtyard that is usually located beside the mosque or head teacher’s home. This large open space usually meant for holding communal events and gatherings for the surrounding community to interact and socialize with the madrasah occupants (7). Generally, the traditional madrasah layout has unique features and is built for the purpose of strengthening ukhwah and consolidate strong bond with the locals to form a knowledgable Islamic society. In brief, the traditional madrasa plays an important role as a catalyst that preserve Islamic cultural heritage and propagate deeply-rooted values as well as portraying the true Islamic identity. In order to understand the role of the traditional madrasa as a center of communal development and its architectural features in Malaysia, the following section will firstly discuss on the influence reformed Islamic group in inspires the evolution of traditional madrasa design followed by factors that influences traditional madrasa design as a communal center.

2.2 The function and features of traditional madrasa

Traditional –based madrasa possesses unique functions and building features. This is because the traditional madrasa design plan is usually determined by the location of the teacher’s home and the mosque (6). In other words, the madrasa’s area layout is demarcated by the placement of the mosque or surau which is located in the centre of the overall madrasa planning opposite the home of the head teacher. The students’ accommodations are placed surrounding the teacher’s home in small huts within walking distance to each other. This is important because the teachers can easily monitor the progress of the students as the teaching and learning of Islamic knowledge occurs continuously throughout the day till night time. Furthermore, the daily activities and movement of the students can be monitored and administered under the care of the head teacher and ulama at all times (14). In general, the design planning of the traditional-based madrasa can be identified in three zoning phases to promote the communal relationship aspects between ulama and students as well as students with the surrounding community (13). This is vital to make the traditional madrasah as an effective centre for teaching and learning Islamic education as well as fostering the spirit of sharing Islamic knowledge with others in open manner (6, 33).

The first phase of zoning involves the placement of the mosque, surau or the ulama’s home that act as the heart or central core of the entire planning structure. The students typically perform their Quranic memorization or recitation and fardu ain’ lessons in these places. The second phase of zoning encompasses of students’ accommodations that are built surrounding the core area for easy access and monitoring purposes. The third phase of zoning comprises of classrooms as well as supporting facilities that are built adjacent to the students’ accommodations. This third zoning area which bounded the entire madrasa site compound, is known as the communal interaction zone. This zone not only serves the need of madrasa students but also functioned as communal to handle public activities. In addition, it is a tradition for all traditional madrasa to have a supplementary space in a form of large open courtyard that is usually located beside the mosque or head teacher’s home. This large open space usually meant for holding communal events and gatherings for the surrounding community to interact and socialize with the madrasah occupants (7). Generally, the traditional madrasah layout has unique features and is built for the purpose of strengthening ukhwah and consolidate strong bond with the locals to form a knowledgable Islamic society. In brief, the traditional madrasa plays an important role as a catalyst that preserve Islamic cultural heritage and propagate deeply-rooted values as well as portraying the true Islamic identity. In order to understand the role of the traditional madrasa as a center of communal development and its architectural features in Malaysia, the following section will firstly discuss on the influence reformed Islamic group in inspires the evolution of traditional madrasa design followed by factors that influences traditional madrasa design as a communal center.
Islamist Reformist ideology and its movement is chosen to be discussed among to the other two due to its dominant contribution and influence to the societal development in Malaysia embracing social, political and economic aspects (31). The Reformist Islamist ideology is unique as its movement carries the mission of Islah or Tajdid in her struggle. The term Tajdid basically means reform and the perpetrator is called Mujaddid. The term Islah means change. These two terms have the same meaning of reforming Islam by giving a new breath according to the suitability of knowledge and technology based on the teachings of the Quran and Sunnah (23). Basically, the Reformist movement and ideology in Malaysia is divided into three generations of Islamic community which are the Traditional Reformers (1900s), Neo-reformism; Radicals (1960s), and Neo reformism: Intellectuals (1970s) (37). The Traditional Reformist focuses more on religious issues that include tauhid, fiqh and tasawuf, but due to mood and time change, promote the rebirth of Neoreformist Islamic genres that later focused on much broader humanities issues relating to politic, social, educational, economic and others (37). In Malaysia the NeoReformist Islamist thinkers are pioneered by the PAS, ABIM and Tabligh groups. In this sense, the Neo Reformist Islamic group had greatly changed the perception of Malaysian society about the understanding of Islam and relates it with daily life comprising of politics, economy and social culture in more intellectual manner (25). This will be comprehensively explained in turn below.

According to scholars, Reformist Islamic thought has propagated the ethical revolution and Islah in contemporary Islamic political thinking (25, 47). This is because the Reformist Islamic movements are not only based on the teaching of Quran and the Sunnah but also make full use of all the fundamental values as guidance in political practice. Among these fundamental values are justice, trust, freedom, human dignity, peace, welfare, national unity and diversity to be achieved in the development of more stable political administrative policies either in small or large organizations. This Reformist Islamist groups hold on to three approaches in the practice of politics and administration (25). First, refer to the basic Islamic teachings based on the Qur'an and the hadith. Second, attempt to replace the autocratic system of government with a more democratic system of governance based on Islamic principles and the third, to initiate Pan-Islam, namely unity between all Muslims ummah. In this case, they emphasize on the solidarity of the ummah in social life practice.

Second is the economic aspect. Islamic Reformist groups also contribute to the development of country’s economic growth by encouraging the foundation or regulation that compiles an economic plan appropriate to the societal needs in accordance with the principles of syariah (40, 44). It is important to establish an economic goal for a prosperous society based on a balanced values and ethical justice. In this case, the Reformist Islamic advocates economic system that contains the basic principles of ideal economic law, which is based on the principles of worship (al-tauhid), equality (al-musawat), freedom (althurrayat), justice (al-adl) help (al-ta'awun) and tolerance / obligation (al-tasamuh) (44). In this sense, it can be seen that the cultivation of pure values and the communal principles are also applied by the Muslim Reformers (5). It is important to shun any form of monopolistic practice, exploitation and discrimination and the neglect of economic rights and obligations between individuals and groups (5). This is imperative not to create a huge economic gap between society to avoid disparity and discontentment. Third, is from the social aspect. The Reformist Islamic group contributes to the formation of a positive social life (21). This is because they promote modernity in social life but strongly upholds beliefs and rules in accordance to the Quranic and Hadith teachings. In fact, they viewed that religion and societies have mutual influence with each other and determined by the same values (20). In other words, both religion and sociality embraces similar value systems and act as symbols of communal life. Fourth, is contribution towards the aspect of educational development. The reformist Islamic group promotes the young Islamic generation to look into the present and see the future. It is important to create a high standard of living based on reason and knowledge and free from taklid in matters of belief (26). Hence, it can promote progressive mindset among Muslims in achieving worldly life and hereafter. Thus, from individual and societal aspect, the Reformist Islamic thought benefits both life and provide education in the world and in hereafter as it propagates trust and knowledge of God and man. They uphold that Islamic education is the key towards reformation in establishing an Islamic educational paradigm that emphasizes on more open-minded Islam society (26).

In summary, the Reformist Islamic thought contributes greatly to the establishment of an Islamic society based on the humanistic values that contributes to communal living. Their proactive approach encourages continuous development, improvement, correcting, and perfecting something by transforming life towards the better. Thus, the Islamic Reformist thoughts are positively viewed as an attempt to build and shape societal lives in a better direction based on sustainable social values. Based on the above explanation, it is clearly shown that Islamic Reformist thinking is important as it contributes greatly to the development of the Muslim community. This can be seen primarily in the development of Islamic education to create an Islamic society with virtuous values. To understand the role of the Reformist Islam and their efforts in fostering social values as well as how the Reformis Islam promotes madrasah education as a symbol of social values development, the next section will clarify this matter in detail.

2.4 Factors that influences traditional madrasa design as a communal centre

The evolution of the traditional madrasa in the Malaysian context is greatly influenced by the ideology of the Islamist reformist group as well as regional factors. Traditional madrasas are typically built according to the political struggle and the propagation of Islamic ideology of the Islamist group. Since the Islamist ideology aims to promote new Islamic thinking through education process, madrasa becomes the main centre to promote their thinking and moral values to society. Nevertheless, this section will describe on the influence of climatic context, economic constraints and the needs of the users and surrounding community rather than the influence of ideology propagate by Islamic reformist as it had been explained in section 2.3.

First is from the climatic aspect. The traditional madrasa is built to meet the climatic requirements. In this sense, the design harmonizes with the existing topographic conditions and equipped with natural ventilation for users’ thermal comfort. Most of traditional madrasa devoid the use of mechanical ventilation by having many large and wide openings punctured through the wall façade similar to that of the Malay village houses (6).

Second, the traditional madrasa design is also influenced by economic factors. Even though the development of the traditional madrasa is personally sponsored, the madrasa design has a moderate architecture, using local construction materials with functional aesthetics and spaces built according to suit to the users’ function and needs.
Third, the traditional madrasa building design is also influenced by community factors that is closely related to the social aspect, where the madrasa is designed to fulfill the various local community needs, gender and age group (28). This can be seen in its spatial planning organization which demarcates the separation of space between genders - man and woman to respect privacy, boundary line indicated by buffer elements in form of walkways and passageways that separate the students’ accommodation and teacher’s house as well as the main learning zone with the surrounding community and the placement of the mosque in the central axis of the madrasa planning as a focal point to allow interaction between madrasah user and the surrounding community (6). Referring to this, it clearly indicates that the traditional madrasah as a religious institution in terms of its functional design aspects able to functioned as a center of communal development, propagate communal values and showed good example as an Islamic communal building. Nevertheless, to date there had been no study done yet to describe either on traditional madrasa design by the Islamist Reformist group as a communal centre nor to represent the value of community through its architectural representation namely in the context of Malaysia. Many current literatures on madrasa mostly focuses on the documentation of madrasah historical background in general according to district or region; documentation on madrasah architectural style and formmaking; documentation on madrasah curriculum and teaching processes as well as the rehabilitation and conservation of old historical madrasa in the Muslim world. Henceforth, this study is vital and to understand this matter in depth, the next section will first discuss about definition, types and characteristics that shapes a community, second on the characteristics of communal architecture – to establish the research indicators to analyse the madrasa as case study followed by discussion on how architecture can symbolizes communal values through its buildings elements. This is important as it will help to support the study to elucidate how the traditional madrasa design may convey communal values through the representation of its building elements and architectural features.

2.5 Definition, Types and Characteristics that Shapes a Community

According to scholars, community is a group of people with diverse background living together in an area, province or country whom conducts various activities cooperatively in an organized manner with an awareness to elevate quality of life (46). Community in general can be divided into two main types which are community of place and community of practice. Community of place is defined as a group of people who shared the same living and leisure place. By utilizing the same place, they tend to be bounded by same usage of facilities and committed in conducting similar activities. Hence, this resulted to a wider social experience and promote unity among intergenerational age groups within one place. Second, is the community of practice that can be defined as a group of people who shares similar profession and education level within the same working or learning environment. A community of practice may expand naturally by working or performing same activity together in one area. In other words, the community may undergo the same process of sharing information and experience between one another and have the same opportunities for personal and professional development. A community of practice exists within the physical limits of communal space like the work environment and learning institution. Based on the above, these two community types will be chosen as indicators to support the discussion to describe on the contextual environment of the traditional madrasa that applies both approaches as a place for communal development. Before delving into this matter, it is beneficial to understand that towards the development of a muslim community there are 7 phases that shaped it involving the individual and family, dur or neighborhood, mahalla or karah, city and metropolis level.

First, is from the individual and family level. Both level much involved domestic life in which they much determine, initiate and influence the scale of space, form and function within their own living territory.

Second, is the mahalla or (kariah) level which comprises of more than one or two dur’s to form a much wider community. Mahallah is much associated with the identity of local community that exist within the settlement area. The identity of the mahallah is more prominent compared to dur because of their association to the physicality and localities of that area or region. The function of mahallah is important to create social network for promoting cooperation and tolerance through public activities like 'gotong royong' or mutual aid, customary events or festivities.

Fourth, is at city level which is formed by several karah that exist across a larger boundary. Community at city context requires full range of amenities in a larger geographical area. These communal facilities must be functional and widely accessible and available for all like municipal services, trade center, transportation hubs, highway networks and others. The amalgamation of one or two more city will then expand to form a metropolis in much larger and developed territory that embrace a higher level of functionality and purposes involving bigger involvement of societal needs to accommodate extensive activities like agriculture, industrial and tradings.

From the understanding of communal characteristics and its phases, next section will explain on the related features and importance of communal architecture. This description is important for the benefit of the study to form the indicators for analyzing the selected case studies as it elucidates how architectural features can serve the needs and requirements of the community.

2.6 Communal Architecture, its features and importance

According to Western scholars, communal architecture is defined as support facilities that is constructed based on the requirements and needs of community for societal advancement to support nation’s development (12, 29). For that matter, communal architecture should feature permeable location, easy to reach and within minimum distances for public easy access. In this sense, communal architecture should
adhere to the needs of the local social culture and compatible with the identity of the place embracing local values and customs. In regard to this, the designer or architect is required to conduct a study according to the local requirements and appropriateness. This also include designing the required facilities according to location based on the priority needs of the community involving its environmental surrounding, function and sustainability. The design therefore should evoke communal experience and emotion allowing the society to be associated with the constructed built form and spatial organization. In other words, communal architecture represents an architectural space and form where community activities are conducted collectively. In conjunction with this, there are three preferential approaches outlined by scholars in producing design for communal architecture (11, 12). The first, is to build amenities according to the needs of the community, either in terms of restoration or new structures. Second, is to respect the local requirements where the communal buildings are located so that the users will appreciate both the restoration work and the new construction. And third, sharing the responsibility with the communal members in making decisions and managing the community projects together.

From the Islamic scholar perspective, the preparation for communal architecture should emphasis on the issue of moderation. In this sense, wastage is prohibited in all aspect of worldly life including the preparation of the built environment as Islam urges its followers to practice moderation in all matters. This is because in all of our conduct it should not be in excess to avoid prideful and arrogant feelings in our actions (22). In example, Ibn Abbas states that during his rule, Caliphate Umar al-Khattab advised his governors not to build tall buildings, same goes to other companions (6). Therefore, the preparation of communal architecture from the perspective of Islam emphasis on functional space construction and appreciates the needs of society irrespective of religion, gender, and race so that it can be utilized by all layers of society to avoid wastage. In addition, communal architecture also need to have its own identity or ownership to create feelings of accountability within the community to maintain and preserve its true function. Hence, from the Islamic viewpoint, communal architecture should emphasize the value of respect towards the environment in order to sustain the relationship between mankind and his Creator, among mankind, and mankind with other living creatures (Habluminallah-Habluminannas-Hablumininal’alam) (9).

Based on scholarly views from Western and Islamic perspectives, it can be summarized that communal architecture should be able to function well in fulfilling the local needs, be moderate and without wastage, be respectful to the environment by evoking a sense of local and contemporary disposition, as well as appreciates the local community needs in order to instill sense of accountability (10). In brief, communal architecture encompasses all basic amenities that is needed in community life embracing the context of educational institutions, religious building, commercial and trade, industrial as well as residential categories (34, 39, 49). For the benefit of this study, the aspect of educational institution will be emphasis as according to many scholars it is the main source that interrelated and influenced the creation of communal values for a well developed society. To understand how the architectural elements representing the educational institutions type like madrasa symbolizes the development of communal values in society, the next section will elaborate this matter in detail.

2.7 Architectural Elements as an Interpretation of Communal Values

Scholars have asserted that architecture can be read and understood as a form of text based on a structured method (27, 41). This structured approach is used as architecture can be understood to be as a form of symbol or sign that is the basis for conveying meaning the same as oral or written form. This occurs because architecture is a form of symbol or sign that has its own meaning in which it contains grammar and syntax (15, 16, 27, 30). Signs can be interpreted as something that stands for something that is interpreted in various forms such as architecture to convey a particular meaning. The use of signs is important in social life because it is capable of describing the behavior, feelings, thinking, action and understanding of society. Signs can only work when there exists a two-way communication system between users by way of the signifier and signified concept. This two-way communication is important to trigger meaning or give purpose to the use of signs, and in this regard sign is represented by architecture. Because architecture can be understood as a form of analogue syntax and grammar, it can also be understood as a code that can communicate and convey the message of the building's builder or patron, as well as a social and cultural expression to the user (15, 16). This code consists of the physical manifestation of form and space of the architecture, including a more detailed specification such as ornamentation, use of color and so forth that can be read, convey meaning and identified for interpretation by the user in code form. This code can then be treated explicitly, on the surface and implicitly to provide meaning to the user. This occurs due to the dynamic quality of a design, space and elements that are related is able to convey meaning into a form of non-verbal code that allows communication between users to occur directly and indirectly (15, 16, 17, 30). Based on this, both architectural elements encompassing form making and spatial organization encompassing size and scale, location and placement, facade and structure, access and circulation as well as hierarchy and spatial arrangement will be studied as it is important in conveying a specific meaning to symbolize the community values contained in the madrasa building as a case study. To understand this, the next section will describe the research method used for analyzing the chosen traditional madrasa as case study as well as build an understanding in deciphering the function of madrasa architecture as a center of community.

3 Methodology

This study makes use of multiple case study as a research strategy to derive detailed findings through comparison. The multiple case study is important as it enables case study to be analysed in various contexts and time as well as to build a more persuasive theory based on empirical evidence. In general, the use of multiple case study will provide comprehensive answer to the problem understudied. For data gathering methods, this study uses direct observation and literature review as it enables generation of new ideas and provide an opportunity for researchers to present their views and validate the proof of findings. While conducting the process of observation and interview, 5 design indicators that related to communal architecture like size and scale, location and placement, facade and structure, access and circulation as well as hierarchy and spatial arrangement are adopted. Findings from each indicator are analyzed using relevant theories, which includes Shata layering theory for studying facade and structure; scale and size (Gestalt theory); hierarchy and spatial arrangement (syntax theory) as well as Fed Shed theory for analyzing location and placement. To interpret built form as a symbol to convey message to user and observe the relationship and the representation of communal value through building elements,
3.1 Structuralism paradigm

Structuralism, according to scholars, is defined as a critique and view on the use of language as a system of signs through the use of signifier and signified (mental concepts) that is arbitrary. Structuralism intended to look at the structure of a particular language as a system that is built in an ordered and structured manner to find the underlying meaning in the particular language. One of the main principles of structuralism is the attempting to understand from the structure formed by society (language, class or gender). The use of structuralism as a paradigm in social sciences studies is appropriate because when a system of culture is processed like a language system, it can convey a clear meaning and understanding in terms of the influence and background that forms the instance of the system of culture. According to scholars, this system of culture is not only limited to understanding the aspects of sociology, psychology or economy, but can also be applied to understand the architectural aspects. In other words, structuralism can form a framework to organize any study relating to a system of culture systematically to unravel the resultant and perception of a meaning. In general, structuralism paradigm is appropriate as it focuses on the search for meaning on matters related to the socio-culture of a society where the origin is unknown. Structuralism not only searches for meaning on the surface of a subject or object, but it also is committed to find the hidden and apparent meaning behind the subject or object. Hence, structuralism paradigm is suitable to be used in this study because it is able to provide meaning about something that requires to be known in a structured way based on syntagmatic and paradigmatic elements. This is important to analyze the madrasa buildings owned by the Islamist Reformist group and to determine whether or not the communal values are depicted and presented through the architectural elements of traditional madrasa designed by the Islamist reformist group. This is also followed by explanation on how these communal values are depicted through the madrasa architectural elements to symbolize it as a communal development centre. Thus the semiotic method is used to support the structuralism research paradigm because of its ability to determine and justify meaning behind cultural object like built form. In this case, the semiotic method is applied in this study to find meaning, relating to the communal values embedded in the madrasa building design by the Islamic Reformists group.

3.2 Semiotic methodology as research approach

Semiotics originated from a Greek word meaning ‘sign’. ‘Sign’ is defined as a social basis to represent a thing. Semiotics also studies the system of signs in human life. The history of semiotics began with two figures, namely Ferdinand de Saussure (1857-1913) and Charles Sander Peirce (1839-1914). This study however justifies that the semiotic theory proposed by Pierce is not suitable and appropriate with the requirements of the study. This is because Pierce’s ideas on semiotic theory asserted on interpretation of signs are supposed to be known in a structured way based on syntagmatic and paradigmatic elements. This study however justifies that the semiotic method is a better approach to support the structuralism research paradigm because of its ability to determine and justify meaning behind cultural object like built form. In this case, the semiotic method is applied in this study to find meaning, relating to the communal values embedded in the madrasa building design by the Islamic Reformists group.
requirement of this study based on the 3 reasons outlined in the next section.

3.3 Madrasa as a Sign – Ferdinand Saussure
First, it is more suitable because the dyadic semiotic theory by Saussure defined sign as a system of signifier (Sr) as a reference to signified (Sd). Signified is also a mental concept to assist in understanding signs better. This mental concept is the intention of someone to produce something and also is a product of a model from a consistent and constant cultural concept. Second, an important mental concept for signs by Saussure is the relationship between signifier and signified which is characteristically ‘pattern matching’. In this sense the recipient of a sign of an object X needs to give meaning Y in a structure that depends on the fixed convention agreeable to a certain culture. Saussure emphasizes on the arbitrariness of sign. For example, there are formal conventions that is agreed upon in a communal culture which is a madrasa refers to a religious building and not an entertainment center. Third, the method to understand the definition of meaning is more consistent if using an organized coding method through paradigmatic and syntagmatic relationship. Paradigmatic is defined as a set of signs where all of its member is from the same category. It is a set of signs from where someone can choose to use. Syntagmatic then is what creates the set of signs that is chosen. Even though the ideas of Saussure's semiotic theory are viewed as appropriate for this study, nevertheless there are limitations to his theory. Saussure described in detail about the experience of a constant culture when confront with an understanding of a sign. This is because the Saussure sign model emphasizes more on denotation than connotation. Due to this limitation, the work of Roland Barthes is referenced as he had expanded the semiotic theory to a wider context. Barthes outlined the link that holds signifier (Sr), signified (Sd) and mental concept is also dependent on fixed social and cultural conventions. Barthes added methods to understand signs based on the codes of signification which is denotation, connotation and myths. This enabled an individual to experience the same signs and communicate using one method that is easily accepted by all.

<table>
<thead>
<tr>
<th>Sign (anything that conveys meaning)</th>
<th>Signifier (things that give meaning – word/image)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Signified (mental concept) (value that is depicted by someone)</td>
</tr>
</tbody>
</table>

3.4 Madrasa as an Interacting Sign – Roland Barthes
Socio-semiotics is an articulation of material culture context in daily life in which each meaning is the result of the code being articulated. In this regard, the systems of signification (the relationship between signifier and signified) is a multilevel structure that does not have denotative signs, but also the connotative signs which are determined by the society’s culture towards the sign. The connotative sign order would be able to expand leading towards the third order of meaning, which is myth that hypothesizes the entire ideology in one constant meaning or image. In this sense, the myths help us to perceive what is meant by the cultural experience. The end result from Barthes’ theory is most appropriate for this study because the aim of the study is to read and interpret value concepts within the madrasa as signs that are tied to a cultural context. In this matter, the interacting meaning that is proposed by Barthes is relevant to this study, as he explains in detail how the signs function through the order of signification and in the signification process, there are interactions that occur constantly between signs and one’s experience according to the position and cultural situation that they experienced. Hence, the interpretation of meanings can be obtained. To understand how socio-semiotics is applied to analyze the architectural context, Gottdiener’s work will be referenced.

3.5 Relationship between Socio-semiotics and material culture - Gottdiener
To explain how socio-semiotics succeeded in understanding the built environment's concept, Gottdiener’s two distinct structural principles are used. These two principles are content and expression. The paradigmatic axis makes reference to the built form content, while the syntagmatic axis makes reference to the expression of the built form. To understand the madrasa as a sign that represents and convey messages of community values, a social and semiotic framework model that is utilized by Gottdiener will be used. The framework that is proposed by Gottdiener is the result of ideas that is expanded by him from Barthes's semiotic theory that involves 3 aspects, which are denotation, connotation and myths (refer to Table 3).

To summarize and understand the Gottdiener model, the study on paradigmatic methods by community values is the content that is interpreted into the madrasa design and syntagmatic is the expression which is the madrasa design elements that consists of size and scale, location and placement, facade and structure, access and circulation as well as hierarchy and spatial arrangement.

| Table 4: Reading of sign system |  |
In brief, the madrasa as a sign can be understood based on the semiotic theory and socio-semiotic theoretical framework model for use by the researcher in the following section.

### Table 2: Gottdiener’s theory on Socio semiotics

<table>
<thead>
<tr>
<th>Shopping Malls (sign)</th>
<th>Content</th>
<th>Paradigmatic (built form content)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expression</td>
<td></td>
<td>Syntagmatic (expression of built form)</td>
</tr>
</tbody>
</table>

### Table 3: Socio-semiotic by Gottdiener

<table>
<thead>
<tr>
<th>Sign reading method (sign)</th>
<th>Signifier</th>
<th>Content (Paradigmatic)</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Signified</td>
<td>Expression (Syntagmatic)</td>
<td>Form</td>
</tr>
<tr>
<td></td>
<td>Signification</td>
<td></td>
<td>Substance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Form</td>
</tr>
</tbody>
</table>

3.6 Identifying Variables for Studying the Madrasa Architecture as a Sign that Symbolizes Communal Values

Variables are important in finding meaning behind the Islamic Reformists’ madrasa building elements to look for the hidden influence of community values behind its built form. Based on the semiotic theoretical framework model, to understand a built form as a sign requires understanding and deciphering in terms of expression, namely the syntagmatic elements and content which is the paradigmatic elements as variables. To find variables in terms of syntagmatic elements (expression), the researchers have outlined that there are 5 main Islamic community values that can influence the design of a madrasa, as a successful communal development and Islamic education center. The five indicators on Islamic community values were obtained based on scientific study justifications using the coding method. These five community values are transparency, decency, tawadhu’ (modesty), gratitude and obligation that will be used as indicators to prove that there are communal values influence on the Islamic Reformists madrasa building design that was chosen as the case study. To find variables in terms of content or paradigmatic elements, the researchers had obtained that when architectural design elements are supported by design theory that is related to the needs of the community, the findings established four main elements related to building design to depict communal architecture in the making of its built form. These are location and placement, size and scale, facade and structure. In terms of architectural space, the findings are similar as the above, but involves four main elements to depict communal architecture which are function and hierarchy, spatial arrangement, spatial element configuration, access and circulation as well as openings within building space.

In short, the content variables consist of the following:

- **a)** Form making = location and placement, facade and structure, scale and size
- **b)** Space making = access and circulation, hierarchy, spatial arrangement and utilitarian function.

Since this study intends to fulfill the objectives and justify on the influence of communal values on the madrasa architectural design in terms of building’s space and form making to establish it as a successful community development center, each indicator from the paradigmatic element will be matched with the syntagmatic element to understand the madrasa as a sign or symbol of communal building. This justification and matching method is conducted based on previous scientific research that involved communal values in architecture, communal values in educational architecture and communal values in madrasa architecture found in the global context. Based on the Figure 3 above and Table 5 below, the researchers have built a theoretical model frame that is utilized in studying the influence of communal values influence on the traditional madrasa design as an Islamic educational and communal development center.

<table>
<thead>
<tr>
<th>Syntagmatic (expression)</th>
<th>Paradigmatic (content)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transparency</td>
<td>Location and placement</td>
</tr>
<tr>
<td>Decency</td>
<td>Spatial arrangement and hierarchy</td>
</tr>
<tr>
<td>Tawadhu’ (modesty)</td>
<td>Scale and size</td>
</tr>
<tr>
<td>Gratitude</td>
<td>Access and circulation</td>
</tr>
<tr>
<td>Obligation</td>
<td>Façade and structure</td>
</tr>
</tbody>
</table>
Table 5: Understanding the madrasa building as a ‘sign’

<table>
<thead>
<tr>
<th>Sign - Madrasa architecture as a symbol of communal education and development center</th>
<th>Content (paradigmatic)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(5 main community values)</td>
</tr>
<tr>
<td></td>
<td>- Transparency</td>
</tr>
<tr>
<td></td>
<td>- Decency</td>
</tr>
<tr>
<td></td>
<td>- Tawadhu’ (modesty)</td>
</tr>
<tr>
<td></td>
<td>- Gratitude</td>
</tr>
<tr>
<td></td>
<td>- Obligation</td>
</tr>
</tbody>
</table>

Expression (syntagmatic)
(8 architectural elements-encompassing form making and space making)
4 Case Study

The two chosen case studies are Madrasah Al-Rahmaniah (A1) (Figure 6) dan Madrasah Quran Kubang Bujuk (A2) (Figure 7). The construction background of both madrasas will be explained subsequently. Madrasa (A1) is one of the oldest traditional madrasas in Kelantan. It is built on a 6-acre plot of land owned by Tuan Guru Haji Abdul Rahman bin Che Wan after finishing his religious studies in Mecca in 1931. The madrasa is strategically located near the outskirts of town, about 4 km away from the Pasir Mas township and 16 km away from the center of Kota Bharu city. Madrasah (A2) is located about 10 km away from the center of Kuala Terengganu city towards the Kuala Berang town. This madrasa was established by a local philanthropist named Allayarham Haji Muda bin Haji Deraman in the month of November 1982. The madrasa was later registered as a Quran and Fard Ain school under the state religious department of Terengganu in 1983.

4 Results

Findings indicated that there are five similar characteristics and four different features that can be observed in these two madrasas. These findings are explained in Table 6.

5 Discussion

Based on the above findings, it is clear that both traditional madrasas functioned as a unique communal development center and it is depicted on the appearance of the architectural design with its own approach. The study found that there are communal values embedded in both Madrasah Al-Rahmaniah and Madrasah Quran Kubang Bujuk owned and managed by the Islamic Reformists. The development of madrasah is influenced by 5 communal values namely transparency, obligation, decency, modesty, and gratitude represented through the five madrasah elements like location and placement, scale and size, facade and structure, access and circulation and hierarchy of space arrangement. In brief, Madrasah Al-Rahmaniah features communal architecture with a local community characteristic that has the appearance of a traditional ‘pondok’ religious school, in which the involved community are dominated by the surrounding villagers. In this regard, the architectural language that is used by madrasa Al-Rahmaniah is more open as it has multiple space that is easily accessed by the public. The building functions are multipurpose, easy to approach and, located to the nearby village settlement. The design appearance of Madrasah Al-Rahmaniah is due to the ideology and philosophy of its patron, whom belongs to the PAS group. This is because they place importance on the value of transparency and the acceptance of muslims or non-muslims in supporting and working together with PAS to gain mutual understanding within one alliance. The method of delivery and spreading of Islamic teaching adopted by PAS is more open and heartfelt to the general public to entice more people to join the movement. Besides championing the integrity of Islam. This aligned with PAS’s principles that is transparent in providing and sharing Islamic knowledge as well as exposing Islam openly to the general public. PAS makes the fostering and education programs of Islamic knowledge as one of its strategy to uphold the tenets of Islam within the surrounding community by attracting the interest of non-muslims to join them. The architectural approach of Madrasah Quran Kubang Bujuk, on the other hand, is more of a community practice type, that has the appearance of an institutionalized religious school. The Madrasah Quran Kubang Bujuk showcases the communal approach that emphasizes the madrasa’s own users rather than give importance to outside users. In general, as an education institution it serves a much better educational facilities and
appearance. The madrasa's planning configuration is more orderly. The spaces are connected by corridorways from the learning classes to other spaces.

This creates sense of surveillance and security between the madrasa’s inhabitants because every movement can be observed by anyone that is within the madrasa's environment. The spatial movement within the madrasa branches out but directed to the surau that acts as a gathering place to control the space movement. The appearance of Madrasah Quran Kubang Bujuk is due to the ideology and philosophy of its patron who belongs to the Tabligh group. This is because they emphasize orderliness. According to Ina’mul Hasan, the implementation of this order is related to the process of Islah and tajdid of each individual. This is important not only to establish the da’wah (proselytization) or Islamic learning but also to improve oneself individually. Hence, the orderliness that is implemented is related closely to the etiquette that needs to be adhered to during the process of learning. According to Maulana Ilyaas orderliness is important to avoid from imbalance in society and cause misunderstanding among people. The value of order should be applied methods applied whether in learning, khuruj, mesyuwarah and da’wah. The reason for this implementation is according to Islamic ruling and principles, that set priorities in what is compulsory first followed by the others.

Things that are compulsory needs to be executed first. Architecture therefore is viewed as a symbol that can control and deter immoral behavior of the user if the environment setting is within a disciplined environment. Hence a good architectural design contributes in guiding people to have virtuous behaviour according to the principles of the Quran and Hadith.

6 Conclusion
In overall, both madrasas are proven to be a successful model which not only acts as a communal development center, but also functions as a place for teaching and learning of Islam. This is achieved through its design approach and representation that are embedded with Islamic communal values. Hence, these two madrasahs proven to be capable in translating and cultivating communal values through its design form and space making as architecture is also viewed as the primary medium in delivering the messages of Islam to the community. Based on these findings and discussions, a well-established framework embracing the characteristics of communal values relating to the Reformist Islamic madrasah therefore, is represented in this
paper. This framework can become as a guideline for future scholars, designers, policy makers, and authorities in establishing a better madrasah architecture in the future which embraces communal values towards the development of sustainable community.

Table 6: Differences and similarities of architectural characteristics for both madrasa design elements

<table>
<thead>
<tr>
<th>Architectural elements (form and space making)</th>
<th>Al-Rahmaniah madrasa (A1) religious school concept with traditional 'pondok' characteristics</th>
<th>Quran Kubang Bujuk madrasa (A2) Institutionalized religious school concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location and placement</td>
<td>Strategic location but clustered around villagers within a short distance between the madrasa and neighboring inhabitants without any fencing or barriers, walking distance of within 5 minutes of walking</td>
<td>Location are less systematic with its location that is quite rural with the surroundings of paddy fields, far from public/community and surrounded by a 2 meter fence.</td>
</tr>
<tr>
<td>Community activities</td>
<td>Community activities are more open like public lectures, dakwah activities, 'gotong-royong', and conduct selling and buying events every Friday with the locals.</td>
<td>Focuses only on the student communal needs – on teaching and learning</td>
</tr>
<tr>
<td>Scale and size</td>
<td>A height of 2 floor levels, the buildings are scattered and preserve the existing built form since its early construction. Building scale is more consistent and harmonize with the surrounding community as it blends in with the existing village houses.</td>
<td>A height of 4 floor levels, more prominent where the buildings are in easily distinguished from far. The scale of the building appears to dominate the surrounding community.</td>
</tr>
<tr>
<td>Facade and structure</td>
<td>The facade does not have a specific identity. Mixed building structures namely made of wood and brick construction. Much adapts the typical Malay kampong home appearance.</td>
<td>Facade adopt Indian-like elements. Khat typography writings, geometrical decorations (arch) dan muqarnas. Use concrete and bricks structures. Architectural features similar to Public school buildings</td>
</tr>
<tr>
<td>Access and circulation</td>
<td>Did not have any fencing. Lack of security. Limit socializing between men and women to protect aurat and privacy. Provide different walkways for each gender to each provided buildings</td>
<td>Building is fenced and closed to outsider or visitors. Has much better security for students.</td>
</tr>
<tr>
<td>Spatial arrangement and hierarchy</td>
<td>More relaxed and free, there are many wide open areas</td>
<td>Spaces has similar floor areas, portray restricted movement even though it is well arranged.</td>
</tr>
</tbody>
</table>
### Table 7: Madrasa design elements that can be used as reference

<table>
<thead>
<tr>
<th>Ideology of Islamist Reformist</th>
<th>Architectural Elements</th>
<th>Communal Values</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishing a religious atmosphere through the madrasa practice to emulate similar setting like the madrasas during the time of Prophet Muhammad SAW</td>
<td>Location and placement, Access and circulation</td>
<td>Transparency</td>
<td>The madrasa should be located in a settlement area, situated on a busy street or at a crowded avenue. Madrasa needs to be clearly viewed in terms of its location and easily accessible by residents. The establishment of this madrasa will provide meaning of existence to the Muslim community in the area as it will influence the non-Muslims and Muslims to approach the madrasa. This will provide a religious atmosphere and to strengthen the bond between the madrasa and the surrounding community. The closer the madrasa and its presence to the community, it will become part of the societal life. The madrasa does not require any fencing and access gates should be accessible by all. This openness can be implemented either by the absence of doors or by having a transparent designed madrasa to allow the public to view the activities in the madrasa. With maximum visibility will indirectly invites the public in and devoid feeling of remoteness or isolated.</td>
</tr>
<tr>
<td>Implementing specific etiquettes on a continuous basis during preaching for the sake of Islah the cause of Tajdid based on the Sunnah and the Quran teachings.</td>
<td>Scale and size</td>
<td>Tawadhu’ (modesty)</td>
<td>The madrasa should be in domestic scale, practical and not only emphasis on aesthetical values. Madrasa that is modest and functional in design will easily be accepted by the society as a place for teaching and learning. Moderate madrasah design is demanded to fulfill the needs of the society at all levels.</td>
</tr>
<tr>
<td>Implementing the value of ikram- honor (sincere in following) the Muslim faith. during the implementation of da’wah (to establish solidarity and fraternity relations between man and society in a congregation)</td>
<td>Facade and structure</td>
<td>Obligation gratitude</td>
<td>Integration in architecture involves building materials, building structures and facades as a whole. It is necessary to construct the madrasa accordance to the culture and acceptance of the local community. An outstanding built form that not harmonize with the surrounding will shows an opposite value. By having architectural style that integrates with the surrounding using local and acceptable materials and structure will strengthen the community acceptance with the madrasa.</td>
</tr>
<tr>
<td></td>
<td>Spatial arrangement and hierarchy</td>
<td>Decency</td>
<td>The madrasa spaces should be orderly organized according to the teaching and learning function. By having orderly spatial arrangement will invite people in a religious atmosphere that promote spiritual development and allow community to obtain proper Islamic knowledge and improve oneself individually</td>
</tr>
</tbody>
</table>

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