



PLANNING FOR THE SMART MOSQUE AS ISLAMIC LEARNING RESOURCES CENTER

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Abstract

The purpose of this research to describe, to analyze, and to develop, the so-called “smart mosque” as a development model for the planning of an integrated Islamic education classroom. The approach of this research is quantitative with survey techniques. Respondents of this survey to all teachers PAI in 31 of senior islamic high school in Grobogan, Jawa Tengah Indonesia. The taking of data with quationer. The Data are analyzed with descriptive analysis. The finding this research of Islamic learning planning at 31 Islamic senior high schools shows 83.9% of them need mosque as laboratory and learning sources. The planning design effectiveness is carried out with practitioner and expert validation with focus group discussion (FGD) pattern and products test on design subject. There are three models for the planning of Islamic education classroom which developed in this study are (1) center model (center of learning resource and center of religious affection), (2) area model; the area of Qur’an Hadits, Fiqh, Aqidah Akhlaq, and Islamic history), (3) corner model; restroom, locker rooms, stairs, purity/ berwudlu, worship (separate sons and daughters).

Keywords: Plan, Islamic Learning resources Center, Smart Mosque

Abstrak

Riset ini dilakukan untuk mendeskripsikan, menganalisis, dan mengembangkan konsep “Smart Mosque” sebagai sebuah model pengembangan ruang pembelajaran agama Islam yang integratif. Pendekatan yang digunakan dalam riset ini adalah kuantitatif dengan teknik Survei. Adapun respondennya adalah seluruh guru PAI dari 31 Madrasah Aliyah (MA) di Kabupaten Grobogan, Jawa Tengah. Melalui distribusi kuesioner data yang diperoleh dianalisis secara deskriptif, menunjukkan bahwa 83.9% perencanaan pembelajaran agama Islam di 31 MA yang ada di

Grobogan membutuhkan masjid sebagai laboratorium dan sumber pembelajaran. Agar proses perencanaan ini berjalan efektif, maka disertakan pula praktisi dan ahli melalui proses FGD and testing sebagai bentuk validasi data. Hasilnya ada tiga model perencanaan ruang pembelajaran agama yang dikembangkan dalam studi ini: (1) model terpusat (pusat sumber daya pembelajaran and pusat keberagamaan), (2) model area (kajian), yaitu area Qur'an Hadis, Fiqh, Aqidah, Akhlak, dan Sejarah Islam, (3) model corner, seperti kamar mandi, loker, kursi, tangga, tempat wudhu, dan tempat ibadah.

Kata Kunci: perencanaan, Islamic Learning resources Center, Smart Masjid

Introduction

The study on mosque, for the last decade, has been developed gradually in learning practice and the scientific study of Islamic Religion Education at the *madrasah* or school even at the university. It has central issue and several expectations to create holistic Islamic Center Study in the 21st century. The mosque is unavoidable due to: (i) theological study, the Prophet Muhammad PBUH purpose to build mosque was increasing piety with the education of faith, aqidah, and morals,¹ Q.S. At-Taubah 9 ayat 108:

لَا تَقُمْ فِيهِ أَبَدًا لَمَسْجِدٍ أُسِّسَ عَلَى التَّقْوَىٰ مِنْ أَوَّلِ يَوْمٍ أَحَقُّ أَنْ تَقُومَ فِيهِ
فِيهِ رِجَالٌ يُحِبُّونَ أَنْ يَتَطَهَّرُوا وَاللَّهُ يُحِبُّ الْمُطَهَّرِينَ

It is the antithesis to Muslim disadvantage of Dhirar mosque built by hypocrite people (Q.S. At-Taubah 9: 107);

وَالَّذِينَ اتَّخَذُوا مَسْجِدًا ضِرَارًا وَكُفْرًا وَتَفْرِيقًا بَيْنَ الْمُؤْمِنِينَ
وَإِرْصَادًا لِمَنْ حَارَبَ اللَّهَ وَرَسُولَهُ مِنْ قَبْلُ وَلَيَحْلِفُنَّ إِنْ أَرَدْنَا إِلَّا الْحُسْنَىٰ
وَاللَّهُ يَشْهَدُ إِنَّهُمْ لَكَاذِبُونَ

(ii) history-sociology study shows the mosque had become Islamic society most important institution.² Since the prophet Muhammad PBUH migrated and Islam Golden Era mosque had become Islamic boarding school and Islamic universities embryos as one of its factors.³ Several mosques in Cairo have functions as Islamic schools or *madrasah* even hospital.⁴ It has produced popular and world acknowledged Muslim intellectuals in various fields; (iii)

¹ Qomar Mujamil, *Menggagas Pendidikan Islam* (Jakarta: Remaja Rosdakarya 2014).

² Nurcholish Madjid, *Kaki Langit Peradaban Islam* (Jakarta: Paramadina 2009),

³ Qomar Mujamil, *Menggagas Pendidikan Islam* (Jakarta: Remaja Rosdakarya, 2011),

⁴ Budge, E.A. Wallis, *Budge's Egypt: A Classic 19th-Century Travel Guide*. (Courier Dover Publications, 2013), p. 123–128.

Smart mosque is the 21st century Islamic Study Center and integrated education benchmarks is the important factor for the students to enhance efficiency and effectiveness of Islamic Religious Education.

The mosque gradual developments are: (i) Mosque means place to worship. the word *masjid* derives from word *sajada* means bow, submit in Arabic. The word *masjid* (m-s-g-d) meand “holy pillar” or “worship place”(Hillenbrand). The word was found in inscription from 5th Century BCE. In English *masjid* is known as mosque. This word is popular and widely used. Modern mosque is the center of Muslim activities. If has several facilities such as clinic, library, and exercise facility; (ii) Therefore there are not any guidance of Islamic Study center model with mosque design plan directly from government (Religious Affair Department) or manager or stakeholder of (*madrasah*) school for teacher’s guidance to plan the source of Islamic Religious Education; and creating comfortable and interesting condition for the students in avoiding learning boredom.

Even though the mosque is developing quantitatively all over the world, there are lack of comprehensive Islamic Study Center’s facilities guidance and planning model. It needs mosque facilities plan to be more efficient and returning mosque’s existence and function to its function at Islamic Golden Era. the functions were place for Muslim’s worship; collecting and offering services of classroom and seminar room.⁵

Smart mosque is the model with potential to answer the need of 21st Century Islamic Education Center’s design plan in creating effective and efficient learning with: (i) involving several stakeholder responsibility, (ii) Accepted by the Western and East Context (modernist and traditionalist). The zone models are: (learning source center), (ii) religious affection center for students and the people around school (*madrasah*) environment. The description inclines to two models (KCCSR & Turker). (The Solution is Starting to Show or Filling the Gap, Namely Offers Model at Religious Middle Model) (The solution or gap filling is starting to show with model offering at model diversity).

There are two important basic considerations to plan mosque building. Several literatures mention two functions of mosque; (i) the center of *mahdzah* worship (worshipping Allah SWT), and (ii) the center of *ghoiru mahdzah* worship (activities such as social-religious, education, health politics, and others).⁶ It will

⁵ (Analoui et al., F. and Samour A. (2012). *Strategic management: the case of NGOs in Palestine*. Management Research Review, Vol. 35, No.6, 2012, p. 473-489

⁶ Ghorbannejad, Parisa. & Jalilzadeh Mohammadi, “Location Pattern of Mosque According

be ideal to merge these two functions into one integrated learning room design with two zone models; (1) the zone of religious affection learning center/ worshipping center, (2) the zone of learning source center or multipurpose (classroom, laboratory, and library) base on smart class. The reasons are (i) Both have similar strategies, namely integrated and comprehensive learning complementing each with the aspect of cognitive, psychomotor, and affective for the students in one mosque's environment to learn *kaffah* (comprehensive) Islamic teaching, in expectation of more efficient and effective Islamic religious education, (ii) Providing strong foundation to understand, practice, and familiarize Islamic teaching in one integrated classroom with available software and hardware smart mosque device; (iii) Reducing conventional learning system dominated with cognitive aspect and centered on teacher therefore the similarity of replication in the form of worshipping practices and balanced student familiarization to gain Islamic teaching with high potential contribution for the students. D model laboratory is impossible. The mosque existence from the plan: (1) device or facilities, (2) management, (3) design management.

The purpose of this research is evaluating *madrasah*/ school in Indonesia, the country with biggest Muslim population in Indonesia to adopt the design of Islamic education center for smart mosque: (i) creating the design of smart mosque model as Islamic Education Center; (ii) the Religious Minister regulation or decision no. 211 2011 on the standard of Islamic religious education at school without clear description of mosque as Islamic Study Center; (iii) The non-existent of regulation or guidance model to guide the operational standard decision or operational guidance in managing efficient and effective smart mosque. The multifunction concepts of smart mosque model are: (1) learning source center (classroom, laboratory, library) base on smart classroom; (2) worshipping center (religious affection learning) with built up classroom model design, it could be used for the activities such as indoors hajj *manasik*, meeting/ seminar, reception, movie watching as described in future mosque of silicon valley.inikah.com. (It is stated the purpose explicitly, namely combination model for Indonesia and the reasons).

This research in Indonesian context will provide contribution for the Islamic religion practitioners or teachers in applying smart mosque design at *madrasah* or school holding Islamic education: (i) smart mosque has been applied gradually at advanced *madrasah* or school based on Islamic Religion

to Verses, Hadithes, and Prophet's Sira", *International Journal of Culture and History*, Vol. 1. No. 2, 2014.

Education laboratory; (ii) Researches on the design plan of smart mosque as comprehensive Islamic Study Center, more or less, is rarer than mosque study on human resources, financing, learning model as well as multifunction mosque at Western countries, mosque institution at Middle East or Islamic countries in Islamic golden era. the mosque is focusing its function for balanced and comprehensive *mahdzah* and *ghairu mahdzah* worshipping means, however these mosques are only existed in Western countries and America with different versions and forms.

The smart mosque design is related to Islamic scholar's statement there are distortion difference of mosque's function in Islamic Golden Era and post golden era, the mosque in post golden era has fewer functions. The functions are limited as *mahdzah* worship activity, more specific the mosque has become place to pray because holy place has affect the Muslim "achievement" and holy people setback. The article offers the model to restore the smart mosque vital multifunction roles namely as Islamic education center in the form of implementation guidance in the mosque room design plan needed in the 21st century (IQ, EQ, and SQ) to establish *insan kamil*. The school (*madrasah*) in this matter is assumed will affect smart mosque application.

Regarding to the function of the smart mosque in the school or *madrasah*, it's very interesting to reveal whether the smart mosque is a representation of ecological and technological or only a form of means of Islamic Education Center. Although it was found that the smart mosque in Indonesia has a foundation in the Islamic education standard. The research aims to propose a common standard for implementing the arrangement of the smart mosque as an Islamic Studies Center in the school or *madrasah* particularly in many regions in Indonesia and generally in the other part of the Islamic Education world.

Methodology

The design of the research is descriptive method with qualitative approach. The subjects are Principal, Islamic Education teacher, committee and students of *Madrasah Aliyah* in Grobogan Central Java. The main instrument of data collection is the researcher himself or referred to as a human instrument. Three techniques to collect the data are: (1) interview, (2) observation, and (3) documentation. Examination of the validity of data uses triangulation by utilizing the use of resource and theory. The analysis used in this study is interactive model

data analysis,⁷ the analysis is carried out through three flow activities that are interrelated with one another. The three flow activities are (1) data reduction, (2) data model / data display, and (3) conclusion or verification.

Result and Discussion

The result of needs analysis on development of the planning model of Islamic studies center at *Madrasah Aliyah* Grobogan, conducted by the researcher through a questionnaire, found the following description as the observation data of the researcher and the questionnaire filled by the teacher of of *Madrasah Aliyah*.

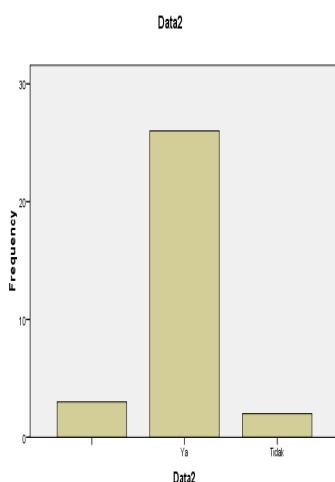


Image 1; the needs of special class such as mosques,
Source; Data Research (Processed 2015)

From the 4.10 image can be concluded that the needs of the special classes such as mosques or *mushola* the respondents in this study 3 people didn't answer (blank) (9.7%), 26 people answered Yes (83.9%) and 2 people answered No (6.5%). Thus, the respondents in this study are mostly in need of special classes such as mosques that can be used as a laboratory and Islamic Education learning resources for more optimal learning from the elements of cognitive, affective and psychomotor as much as 83.9%.

Based on the result of the research and the needs analysis of Islamic education learning means at *Madrasah Aliyah* Grobogan, the researcher compiled

⁷ Miles dan Huberman A., *Qualitative Data Analysis : A Sourcebook of New Methods* (California : Sage,1984), p. 21-23

a guideline on planning the smart mosque in the Islamic Studies Center, class of Islamic education - *madrasah* mosque based as a reference in arranging Islamic education grade for the more effective and efficient learning process, in order that the students are motivated and eager to learn in the comfortable and dynamic classroom atmosphere.

The design concept of the smart mosques planning model consists of two (2) main models, namely (i) Center model of integrated learning resource center include; classroom, laboratory and based smart class library. (ii) Center model for religious affections center. The building of this smart mosque consists of two (2) floors with the center shaped. The first floor is used for the central learning resource center (PSB). The second floor is used for the central religious affection center (PAR).

Table 1. the Needs Analysis of the Smart Mosque Room and Equipments

The Needs Analysis of Means and Design/The Room <i>Madrasah</i> Mosque Design		
Zone Model / Corner	Model area	Center Model
Learning Resource Center Zone	<i>Qur'an-Hadist</i> Area	Indoor Center
Religious Affection Central Zone	<i>Fiqih</i> Area	Outdoor Center
<i>Aqidah Akhlak</i> Area		
	<i>Sejarah Kebudayaan Islam</i> Area	

Model of integrated centers of learning resource center include; classroom, laboratory and smart class based library can be described in term of lay out below:



Image 2 Model Design Center of the Learning Resource Center

The description of the image 2 the model design center of learning resources

No	Types	Needs Description
	Learning Resources Center	Consists of four areas; Qur'an Hadis, Akidah Akhlak, Fiqih, Sejarah Kebudayaan Islam.
	Integrated	The function of classroom, indoor laboratory, library
1	Indoors	Can be used as a multipurpose room when each area is opened sideways the main wall
	Inner Wall	Made of strong and ecological partitions, practically designed for room that can be opened and closed as needed.
	Door	Made of ecological material
	Window	Ecological
	Cupboard / Shelves	Strong, stable, and secure. Adequate size stores the whole props. Closed and lockable. Utilizing the cupboard in the classroom.
	Board	Ecological
	Multimedia Equipment	Comprises 1 set of computer (CPU, monitor, printer), TV, radio tape, player VCD/DVD, and LCD projector. And internet facility, hotspot and online network.
	Bulletin Board	For the students' creation and information / announcement for the school community.
	Finger spot/ finger print	Record keeping of the students who do worship dhuhur and dhuha.
No	Types	Needs Analysis
	ICT-based Islamic Education Learning CD	In accordance with the subject in
	Props	In accordane with the subject per area
	Inventory book	Each class

Cleaning tools	One package of each class
Charity Box	Each area
Mailboxes / suggestions	Each area/center
Clock	Each Class
Cleaning tools	One package of each class
Curtain	Each class
Carpet	Strong material, no easily soiled
2 Outdoors	
Main Wall	Made of loster combination materials
Stairs	Separate Male and Female Zones
Shelves/ students/ teacher locker	Separate Male and Female Zones
Toilet	Separate Male and Female Zones
Public IT Access	Separate Male and Female Zones
Green school	On the sidelines of the outside area and the front yard, the back and the side of the mosque

KMA source number 211 in 2011 (treated by the researcher)

In the integrated Islamic education classroom basically contains of architectural materials that can be dismantled/ paired (bulkhead/ partition). The smart mosque has multipurpose learning classroom that can be used flexibly by the students to learn and the community around the *madrasah*.

a. Smart mosque as the learning resources center of the Islamic education function as:

- 1) Support the Islamic education learning process in improving the faith through giving, cultivation, progression, knowledge, appreciation, practice, habituation and the students experience of Islam to become Muslim who continue increasing the faith and piety to Allah SWT;
- 2) Provide the props and laboratory to complete the method and strategy of strengthening faith, good character habituation and worship quality.
- 3) Provide skills and training for the Islamic education teacher by using the media of communication technology (ICT).

Some key elements of the Learning Resource Center (Center Learning Commons) are

1. Flexibility: As a technology-oriented facility, they need to change as the students' pattern used in alteration.
2. Critical wireless access but embedded internet connection is also important for the students to access large files (i.e. multimedia) or offer an alternative to wireless at peak times.
3. Seamless working environment for the students to access, manage and produce information, all on the same workstation.
4. The room is configured to be used by small group of students: the larger computer workstation, comfortable seating areas to encourage informal meeting, cafe, and group study room.
5. Broad range of services offered in one location including references, technology, tutoring, writing center, instructional technology for faculty.

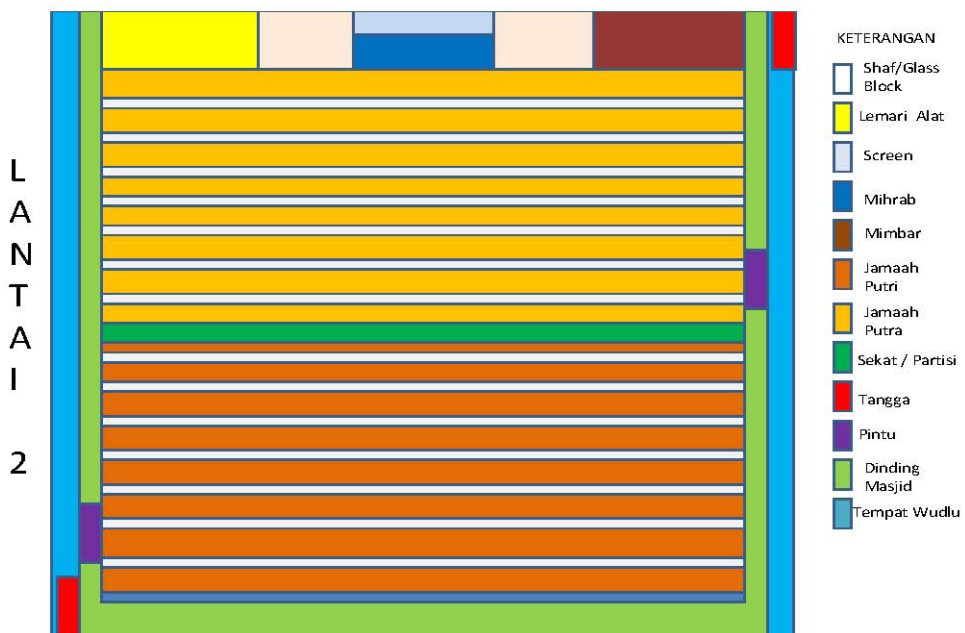


Image 3 The Room Design Of The Religious Affection Learning Center

Worship center model or Religious Affection Center for the students. This model includes a prayer room separated by semi permanent barrier or knock down/built up model among male and female worshipper. This room can be used as a means of habituation and raising awareness especially of practicing

mahdzah worship and relevant *ghairu mahdzah* practices and maintained the holiness of the mosque in syar'i

The *madrasah* mosque becomes the learning center for it. First, the role of the mosque is helping to keep the interior of *madrasah* cool. Second, the mosque is used for teaching and learning activities. The mosque is the soul of the *madrasah*. In the Prophet Muhammad PBUH era and classic Islamic education system, the teacher, the students will sit in front of their teacher known as *sorogan* and *bandongan* system, in the multipurpose room at the mosque. Third, at the *madrasah*, there are many study activities (area) at the indoors or outdoors; in the corridor, or around the mosque. All integrated on the mosque in the middle. As a result the Islamic center is materialized.

Applying the learning model of the affection –based Islamic education through affection-based religious education, the students will not only be given the cognitive subject materials, but also touching the students' affection than can increase new awareness which is expected to grow within the students through the affection-based religious education is good manner, the students' personality and skills in practicing their own dogma in the social life. In the religious education also includes character education. However, the teaching that needed to be improved, not only memorizing, but also touching the values practiced in the different aspects of life.

That if the FM approach can be better implemented in the mosque, it will help to improve the function of the mosque nowadays and raise prosperous mosque such an environment during the golden era of the Prophet Muhammad PBUH.⁸ The study may provide comprehension regarding to the use of the *hadits* as one of the main approaches and consideration framework in gaining modern mosque designing in Malaysia for the present and future.⁹ SHRM can improve the poerformance of the mosque is better to be a benchmark particularly for other mosques in Malaysia and also in the world. In addition, the better organized mosque will lead to the improvent of the perfomance and develop further.¹⁰ The relationship between strategic management and management system, kaizen

⁸ Sapri, Maimunah, "Potential of Facilities Management in Uplifting Mosque Management Functions", *Proceeding of the International Conference on Masjid, Zakat and Waqf* (IMAF 2014).

⁹ Utaberta, Othman, "Analysis Of Problems In Designing Hadith Mosque Modern In Malaysia", *Journal of Islamic Architecture*, Vol. 1, No.3, 2011.

¹⁰ Abd Hamid, et all, "A Proposed Model For Strategic Human Resource Management (SHRM) And Mosque Performance", *International Journal of Management, Information Technology and Engineering*", Vol. 1, No. 3, 2013, p. 5-14.

mosque management, the mosque needs to have a better management and improve continuously.¹¹

The problems concerning to the management of the mosque resources. This paper is constructed to introduce the design concept of the mosque based on the smart building principles that is a smart building technology to be applied in the design of the mosque.¹² The significant differences are the students' achievement among the traditional learning method and smart teaching method in the class. Smart classroom learning helps to develop the cognitive dimensions, and additional materials provided to students.¹³

Conclusion

Planning study of Islamic study has been described and performed by practitioner/ Islamic education teacher in *madrasah*. It also creates several propositions, that is, if an Islamic study has been conducted using static and monotonous conventional patterns. The planning of the learning means takes permanent classroom, media or very limited, conventional, and less creativity learning resources. The applied conventional patterns will make the students easily to get bored, the inconvenience of learning, and uninteresting learning which affect to the students' quality and achievement.

The research finding confirms that not all of the excellent theories of the Learning Resources Center (PSB) can be universally applied on the smart mosque. Some of the principles adjusted or applied differently in the context of the mosque in the school or *madrasah* in accordance with the needs analysis of the learning means and the concept design of Indonesia. This study has limitations in generalizing the data because it is focused on construction planning of the Islamic study center. That is arrangement of the smart mosque informant design in the context of lay out which is limited to the Islamic education learning that consist of *Qur'an Hadis, Fiqih, Akidah Akhlak, dan Sejarah Kebudayaan Islam*. The result cannot be extrapolated to other contexts and it depends on the

¹¹ Jaafari allia, et all., "Relationship between strategic management(sm) and kaizen management (kms) in mosque management", *International Journal of Management, Information Technology and Engineering*, Vol. 1, No. 3, 2013, p. 15-20

¹² Abdul Mannan, Khalid Aulia Fikriarini Muchlis, "Penerapan Teknologi Smart Building pada perancangan Smart masjid" *Journal of Islamic Architecture* Vol. 2, No.2, 2013, p. 78

¹³ Balamurugan and Pazhanavilu, "Effect of Smart classroom learning environment in tamil grammar", *International Journal of Social Science & Interdisciplinary Research*, Vol. 3, No. 7, 2014, P. 68-76

availability of facilities, planning analysis of the room needs and design as well as the cooperation of stakeholder of the *madrasah* (school).

In order to obtain the good significant result, the theory of the smart mosque can be applied in the different context of the school/ *madrasah* in Indonesia, for future research, quantitative method, such as experiment and survey research can be conducted to determine the relationship between stakeholder of the *madrasah* (school) with the government and private organizations as a regulator and fund providers.

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