Study on Landscape Arrangement of the Radjasyah Islamic Boarding School and Outbound Area in Medan

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Abstract

The increasing number of people interested in Islamic boarding schools has led to a growing demand for learning environments based on religion and science. Therefore, the development of Islamic boarding schools must be organized as early as possible and balanced with careful site planning so that there is no imbalance between the need for religious knowledge and scientific knowledge. Rajasyah Islamic Boarding School has a lot of potential in educational activities because it has a strategic site that is close to nature, where students not only learn religious knowledge but also scientific knowledge. Irregularities in the planning of development have resulted in irregularities in construction and inappropriate use of space. The main area of development that must be controlled is the main education zone, which is the main face of the Islamic boarding school that accommodates all educational activities of the Islamic boarding school community, both educators and students. This is a problem that must be solved. One alternative solution to this problem is to create an area that can accommodate all activities at the Islamic boarding school so that there is integration between the owner and the users. The Rajasyah Islamic boarding school in Medan Tuntungan is a potential and strategic area. The spatial planning study points to an area consisting of different functions, so it is necessary to carry out an efficient and effective reorganization of each building and area so that it can become an aspiration or point of interest for the surrounding environment.

***Keywords**:* Landscaping, Islamic Boarding School Area, Outbound Activities, Education Area

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Introduction

Medan Tuntungan Subdistrict is the subdistrict with the highest number of urban villages in Medan City, namely nine urban villages. Medan Tuntungan Subdistrict has an area of approximately 21.58 km^2. Of the nine villages in the Medan Tuntungan subdistrict, Simpang Selayang village has the largest area, namely 5.12 km^2, while Sidomulyo village has the smallest area, namely 0.87 km2. The Medan Tuntungan subdistrict is geographically located directly adjacent to the Medan Selayang subdistrict to the north and Deli Serdang Regency to the south, west, and east. The population of Medan Tuntungan Subdistrict in 2011 was 104,793 people, with the largest population in Mangga Village, namely 45,933 people. The smallest population was in Lau Cih Village, namely 1,988 people. The population of Medan Tuntungan Subdistrict, totaling 104,793 people, consisted of 52,255 men and 52,538 women. Based on age groups, the population in Medan Tuntungan Subdistrict was relatively higher in the productive age group. Most residents of Medan Tuntungan Subdistrict worked as private employees, followed by civil servants, farmers, and traders [1]

Literature Review

2.1 Area Planning

Area planning is the process of integrated spatial management in a region, including the Rajasyah Islamic boarding school area, through social, economic, and physical environmental interventions [2]. This approach aims to improve social life, encourage economic activity, and maintain environmental quality and sustainability, in line with the principles of sustainable development that emphasize the balance between social, economic, and environmental aspects.

Types of spatial planning include residential, tourism, industrial, strategic, and agropolitan areas [3][4]. Its success requires integration between physical planning, social strengthening, and community economic development.

The basic principles of spatial planning include objectives, scope, and development requirements. The goal is to improve social, economic, and environmental quality; the scope includes social systems, community economics, and environmental management; while the requirements include the suitability of regional resources, user potential, and support for environmental quality such as green spaces, clean water, and environmentally friendly transportation [5].

2.2 Pesantren as a center of education

Pesantren are Islamic educational institutions that have historically developed as institutions for religious guidance and character building. The term pesantren comes from the word santri with the prefix pe- and the suffix -an, which means a place for santri, while the term pondok comes from Arabic, which means a simple dwelling or dormitory. The two terms are often used together as pondok pesantren and have the same purpose, although they emphasize different functions, namely residential and educational [6].

Pesantren have fundamental elements that characterize them, namely kiai, santri, mosques, dormitories, and the teaching of classical texts. These elements are reaffirmed in contemporary research, which states that the availability of these elements is the main distinguishing feature of pesantren compared to other educational institutions, as well as their enduring cultural and religious identity [7]. Recent studies also show that mosques and lodgings still function as centers for character building and scriptural learning, despite significant transformations in educational management patterns.

In general, pesantren can be classified into three main categories. First, Salafiyah Pesantren, which maintains the tradition of teaching classical Islamic texts as the core of education and

still uses classical methods. Second, Khalafiyah Islamic boarding schools, which combine a religious education curriculum with general subjects and the use of a modern classical system. Third, Combined Islamic boarding schools, which are institutions that integrate the Salaf and Khalaf educational models, enabling them to combine traditional learning with a modern approach. Several recent studies also refer to this pattern as hybrid Islamic boarding schools, which are a form of Islamic boarding school that has transformed in line with the digital era and the needs of the times [8].

The diversity of forms and elements of pesantren shows that pesantren have unique structures, functions, and educational approaches, making them one of the educational institutions that play a strategic role in the socio-religious development of society in Indonesia.

Research Methodology 3.1 Research Approach

This study uses a descriptive-qualitative approach with a rationalistic exploratory nature. This approach is used to explore information about the condition of the site and buildings at the Rajasyah Islamic Boarding School in Medan in depth without strictly limiting the variables at the beginning of the study. Primary data was obtained through field observations, documentation, and interviews, while secondary data was collected through relevant literature studies.

3.2 Research Location and Time

The research was conducted at the Rajasyah Islamic Boarding School, Medan Tuntungan District, Medan City. The research was conducted over a period of 1(one) month, namely in November 2025.

3.3 Research Stages

The research process was carried out in three main stages, namely:

a. Area Data Collection
   This included identifying the types and functions of the area, the area size, users, and other physical conditions as supporting data for the research.
b. Examination of Existing Conditions
   Field observations were conducted to assess the actual conditions of the area, including circulation issues, parking space requirements, and irregularities in the landscape pattern.
c. Formulation of the Layout Concept
   The analysis was conducted by considering the potential of the area as a basis for formulating recommendations for the layout of the site and buildings in order to create harmony, comfort, and balance for user activities.

3.4 Variable Operational Parameters

The parameters observed in this study include:

a. Site (physical conditions, outdoor space patterns, circulation, vegetation, utilities)
b. Buildings (function, orientation, mass layout, physical conditions)

3.5 Population and Sample

The research population consists of all site and building elements in the Rajasyah Islamic Boarding School area. Samples were taken purposively based on locations relevant to the research problem. Field measurements and observations were carried out to obtain factual data as a basis for design.

3.6 Data Collection Techniques

The data collection techniques used include:

a. Interviews
   Conducted with relevant parties to obtain information about the activities, needs, and perceptions of residents regarding the area.

b. Field Observation
   Direct observation of existing conditions to examine circulation patterns, outdoor space conditions, and other physical elements.
c. Documentation
   Includes taking photos, sketches, and visual notes as evidence and supporting data for analysis.

3.7 Data Analysis Techniques

Data analysis is carried out following the stages of qualitative research, namely:

a. Data Reduction – Selecting, focusing, and simplifying field data into essential information.
b. Data Presentation – Organizing data in narrative, tabular, or visual form to facilitate understanding.
c. Drawing Conclusions – Producing concise, clear, and meaningful findings as a basis for layout recommendations

3.8 Type and Scope of Research

The type of research is qualitative with a descriptive-survey method, which aims to obtain empirical facts related to the conditions of the area and provide a factual description of the design of educational facilities. The scope of the research includes a study of building design and site planning in the Rajasyah Islamic Boarding School area in Medan.

Results

The discussion is a collection of data obtained from the field in the form of direct observation, interviews, and questionnaires. The following subchapter describes the discussion of various aspects that form the basis of the research results.

General Open Space Patterns are the basic forms of landscapes outside buildings that can be used by the public and provide opportunities for various activities. From an ecological perspective, these open spaces serve to refresh the air, absorb rainwater, control flooding, maintain certain ecosystems, and soften the architecture of buildings.

Considering the location of the Radjasyah Islamic Boarding School, the discussion focuses on the arrangement of the environmental landscape, which is also related to the selection of design elements, how a landscape design allows spaces to be created from a combination of natural elements and man-made structures, with the following planning assumptions:

a. Developing a design concept that refers to the aspects of buildings and landscapes by prioritizing human aspects, which essentially provide a positive image of the Radjasyah Islamic Boarding School environment.
b. Creating environmental balance and harmony, which in principle is an effort to create harmony, balance of function, and intensity of landscape space use. This is done while still showcasing the architectural buildings and landscapes in the planning area.
c. The open space pattern of the planning site is located between the building masses as a binding space for these building masses. The planning study leads to the formation of an area consisting of different functions The planning location is bordered by:

- North: Bordered by a highway.
- East: Bordered by a highway.
- South: Bordered by vacant land.
- West: Bordered by the Deli River.



Figure 1. Map of the Radjasyah Islamic Boarding School Area

4.1 Condition of Radjasyah Islamic Boarding School

Condition of the existing girls' classroom building Figure 2. As can be seen from the shape of the building, it is not neatly arranged. This is because during the construction period, no planning was carried out before building. Therefore, in terms of shape and layout, the building can be said to be haphazard.



Figure 2. Classroom Building (existing)

There are several huts for the students Figure 3 and Figure 4 who are enrolled at the Radjasyah Islamic Boarding School, located on the banks of a river. The shape of these huts resembles traditional Sasak houses, which are the traditional homes of the Sasak tribe on the island of Lombok. Each hut can only accommodate about 3 students. This is enforced by the pesantren so that the students feel comfortable living in them, which will also indirectly make

the students feel comfortable studying at the Rajasyah Islamic Boarding School and feel connected to the surrounding nature.



Figure 3. Huts where students live on the banks of the river



Figure 4. Conditions inside the student huts.

The student huts themselves measure 4m x 6m and are used as a place of rest for students studying at the Radjasyah Islamic boarding school. With the increasing number of students accepted at the Radjasyah Islamic boarding school, the existing dormitory facilities are filled with six students per dormitory. This has become one of the problems at this Islamic boarding school. Therefore, it is necessary to build a new dormitory in the Islamic boarding school area.

The problems at the site itself arise due to various interrelated activities that require concrete solutions, including: The existing classroom buildings appear chaotic in their form, which is evident due to the lack of prior planning, and the lack of sufficient parking space causes traffic congestion in the area. Therefore, it is necessary to plan how to provide effective and useful supporting facilities and infrastructure, such as open parking and green space, which require a significant amount of land use while paying attention to the management of a humane environment. The current dining facilities are adequate, but the building is in a worrying condition. In addition, the dining room has a great view as it overlooks the field across the river and the outbound field. This dining room building can be maintained with a new structural design to make it stronger Figure 5.



Figure 5. Condition of the dining hall building

The existing land of the Radjasyah Islamic boarding school has three ponds around the existing mosque building. These ponds need to be reduced to reduce air humidity and create comfort on the site. The ponds are currently not well maintained and are no longer used for cultivation and fishing Figure 6.



Figure 6. Existing fish ponds around the pavilion



Figure 7. Zoning of the Radjasyah Islamic Boarding School Area

Access to the site can be achieved from various directions that border the site, whether by visitors, residents, employees who drive or walk, or by service and goods. The criteria for determining the location of access points are considered in terms of clear and easily accessible capture points, traffic safety and smoothness around the site, safety for drivers, pedestrians, and people with disabilities, separation between vehicle, goods, and pedestrian traffic so that they do not interfere with each other, diversity of activities within the site, and applicable design regulations and standards.

4.2 Building Design Results in the Rajasyah Islamic Boarding School Area

The Radjasyah Islamic Boarding School area is not neatly organized. Therefore, a plan was made to reduce the level of disorder in the Radjasyah Islamic Boarding School area. This garden is located in zone 1 (one), which is close to the mosque and the kindergarten/Raudhatul Athfal (RA) location. This garden uses a relaxation concept with park benches around it. The pond used is an existing fish pond that has been tidied up and provided with a path made of paving blocks Figure 6. The vegetation concept used is to not remove large trees. In addition, flowering shrubs are added to enhance the aesthetic value around the garden Figure 7. The flowering shrubs used are Japanese jasmine *(Pseuderanthemum reticulatum)*, begonia *(Begonia sp.),* and ornamental pennisetum *(Pennisetum setaceum).*



Figure 8. Relaxation Pond



Figure 9. Concept of Flowering Shrubs

The original canteen building and gazebo seating area were moved closer to the pavilion. This was done to make the garden appear more spacious. More open garden benches were placed in this location to replace the gazebo seating area Figure 8. In addition, Ketapang Kencana trees *(Terminalia mantaly)* were planted to provide shade for these park benches Figure 9.



Figure 10. Seating to replace the gazebo



Figure 11. Ketapang Kencana trees providing shade for park benches

The side of the pond closest to the canteen is covered with a row of plants. This is intended to prevent the view from the garden from directly facing the canteen, thereby creating a calm and relaxing impression in the designed garden. The plants used to block the view are Cemara Gembel *(Cuppressus papuana)* Figure 12.



Figure 12. Row of Cemara Gembel Plants as a View Barrier

This research program is in line with the learning outcomes of Educational Area Landscape Design. The learning outcomes are mastery of general theoretical concepts in a particular field of knowledge and skills, and further mastery of specific theoretical concepts in that field of knowledge and skills.

Conclusion

From the study conducted, the following conclusions can be drawn regarding the Radjasyah Islamic Boarding School area:

1. The Radjasyah Islamic Boarding School is a suitable area with sufficient potential to be used as a place for learning and teaching religious and scientific subjects, as it is supported by the location of the Medan Tuntungan sub-district and human resources to be used as an Islamic boarding school area.
2. Based on the results of the study, Radjasyah Islamic Boarding School has great potential to increase its potential in the education, culture, and religious sectors.
3. The facilities and conditions of the area are currently not well organized, so improvements are needed in terms of the concept of layout and supporting activities and facilities to create harmony and balance in the function and intensity of space usage.

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