

The Sabila Farm Culture, Education and Tourism for Melenial Indonesia 4.0

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ABSTRACT

Sabila Farm Yogyakarta is a well-known fruit garden in Yogyakarta with dragon fruit as the main plant. The goal of the development of Sabila Farm is not only for a tourist destination but also for educational purposes. Therefore, some innovations to attract the young age generation is necessary. The aim of this research is to create an agro-eco-tourism that combines local architecture building with technology 4.0 to attract the young-age generation involve in agrotourism as well as agribusiness. There are four additional infrastructures suggested for this place: (1) the infrastructure based on the thematic sequences representing local-based architecture, (2) additional new facilities, including new regional gates, amphitheater, and facilities to support the disabled, children, and the elderly. An in-depth interview followed by a descriptive analysis was carried out to decide the best design for the future development of Sabila Farm. The result shows that the Javanese traditional architecture combined with the exploration shape compositions based on the morphology of the dragon fruit is the most recommended one. The use of Yogyakarta-origin pottery material from Kasongan village will make the concept more interesting. All benefits of this research were part of the pilot project for the Sabila Farm's network in Indonesia

Keywords: agrotourism, dragon fruit, Indonesia 4.0, Javanese traditional architecture, Sabila Farm of Pakem

1. INTRODUCTION

Beside Yogyakarta as the famous city of student, also has potential in agricultural sector and have beautiful natural resources such as hill, beach. Because of it, so that Yogyakarta it become a favourite of tourist destination. Sabila Farm, is one of the agrotourism based horticultural gardens in Pakem of Yogyakarta. They developed in an area of 5 hectares and the rest are other tropical fruit commodities They produce the superior products of tropical fruits such as avocado, crystal guava, banana, with the dragon fruit as the main plantation. One of Sabila Farm superior commodities are the Red and White Sabila Dragon Fruits [1]. An agrotourism is a tourist destination that integrated activities between agricultural activities and education to empowering environment and improving the farming [2]. The Sabila Farm also an agrotourism based of horticultural garden that includes conservation, production, recreation and education activities. Based on their activity then Sabila Farm has developed into a tourist garden as well as the tourist

destination by extended location started from 5 hectares to 2,3 hectares [3].

Aim of the research study purpose how to create the architectural design to enrich the Sabila Farm's development. Based on study analyzed in several data then we are purposed Sabila Farm to be a tourist destination for three generations including children, teenagers and parents. Especially to teenagers Sabila Farm's may concern to carry out the millennial education to learn agribusiness. In order to realize the goals, than all effort to increase the potential of selected tourist destinations that synergize with the concept of *Indonesia* 4.0.

The Architectural Concept

Based on the potential of site and the Javanese culture surrounding of Sabila, then the research purpose the architectural design by focus in infrastructure design and the new facilities. The basic concept synergized with the number of SDGs; (a) Goal 4 – Quality Education, (b) Goal 8 – Decent Work and Economic Growth, (c) Goal 11- Sustainable Cities and Communities, (d) Goal 15-Life on Land, and (e) Goal 17- Partnership to Achieve the Goal [4].

Proposed Architectural Ideas

As tourist destination Sabila Farm is also need to have an iconic in architectural design facilities. Refers to the spirit of Globalization is the Localization touch [5]. Refers to the Javanese Culture of Yogyakarta then we adopted the Javanese architecture of Joglo as the basic for design ideas [6]. And, by refers to Antoniades, so we exploration the design based on the morphology of the dragon fruit itself in order to be a poetics of architecture [7]. As tourist destination, the idea of Sabila's developing area conduct to the conservation, production, recreation and education activities based on Indonesian Law No. 10 of 2009 [8]. The architectural design are also conduct to The National Disaster Management Agency (BNPB) [9]. By implementing this in the Sabila Farm development so the area has the potential to become a agrotourism destinations that safety for three generations; children, youth and the elderly.

The New Architectural Facilities

The architectural idea is to implement the development of the Sabila Farm by utilizing the potential of the location, presenting a comfortable impression. Both in the atmosphere and circulation of the area, providing facilities that support tourism activities, and displaying attractions that can attract visitors to enjoy the tourist destination. Thus, the new architectural infrastructure based on a thematic series. And, the number of new facilities for disability, children, and elderly, (iii) the Amphitheater, (iv) Joglo as the house of Java as the central of Sabila's facilities, (v) the Sabila Farm logo type, (vi) The Sabila shelter.

(I) The New Sabila's Gate Design



Figure 1 The New Gate of Sabila Farm (Design by: Sahadat Nafasia, 2022)

(ii) facilities for disability, children, and elderly,



Figure 2 The Disabled Track (Design by: Rafli Alviano, 2022)



Figure 3 The Disability Facility (Design by: Yuke Ardhiati, 2022)

(iii) the Amphitheater,



Figure 4 The Amphitheater Area (Design by: Rafli Alviano, 2022)

(iv) Joglo as the house of Java



Figure 5 The Rumah Joglo of Jawa Style (Design by: Rafli Alviano, 2022)

(v) The Sabila Farm Logo Type



Figure 6 The Sabila Farm Logo (Source: Rajah Indrayana, 2022)

(vi) The Sabila Shelter



Figure 7 The Shelter of Dragon Fruit Plantation (Design by: Kisti M Jaiz, 2022)

2. METHOD

This research refers to a Case Study as a Qualitative Research in architecture field [10]. The research data compiled by identifying the potential of Sabila Farm contour of location in mountainside of Merapi and the potential of Sabila horticultural garden. Meanwhile, the site information are collected by depth interviewing with Sabila Farm's management. Related to architectural style and shape, we adopted the Tschumi's theory, "Six Concepts" in Architecture and Disjunction [11].

3. RESULT AND ANALYSIS

In order to be a good and successful tourist area we concerned to several aspects, namely (1) maintaining or preserving the environment, (2) improving the welfare of the people in the area, (3) ensuring visitor satisfaction, (4) improve the integration and development of community units around development areas and zones [12]. Firstly, we analyzed the natural potential of the Sabila Farm itself as well as the table of the following form: **Table 1.** Sabila farm natural potential

No	Natural Potential	Educational Potential	Variabel Potential
1.	types of dragon fruit plants	Plant cultivation techniques	good natural condition
2.	other fruit crops such as avocado, crystal guava	adaptation of plants to the environment	human resources of farmer
3.	different contour variations	plant symbiosis	easy to reach/get
4.	natural plant reproduction	business and marketing strategy	location of market
5.	domination of agricultural land	packaging techniques	local wisdom
6.	sufficient water source		

Based on the analysis then we have the Sabila Farm's zoning area tourist destination and area of Sabila's production [13]. By created a sustainable tourism based on community empowerment especially to carry out millennial education to learn agribusiness, then Sabila Farm tourist destinations can synergize with the concept of *Indonesia 4.0.* is mean by making tourism more sustainable [14] in order meet to UN SDGs[15].

AUTHOR CONTRIBUTION

First author visited to Sabila Farm Management, and prepared a manuscript. The second author conducted a data search through exploration on the internet; Other authors conducted to prepare new gate design, new facilities, layout design of scientific writings. Correspondence carries out research directions, experimental design and completion of manuscripts.

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