

Optimization of Tangerang Regency Mangrove Park as A Learning Resource for the Community

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ABSTRACT

Objective: The Tangerang Regency Mangrove Park is a tourist attraction that offers numerous educational benefits to the community; however, the community has not been able to fully capitalize on these educational opportunities because visitors primarily engage in activities such as taking photos. **Method:** This study uses a quantitative approach, analyzing data using percentages, a Likert scale, and the 4A tourism object criteria (attractions, accessibility, facilities, and additional services). The data analysis techniques used were simple linear regression and a coefficient of determination summary model. **Results:** The results of the simple linear regression test indicate that the attractiveness of the mangrove park as a learning source (X) has a positive effect on tourist satisfaction (Y). The regression equation $Y = 61.78 + 0.213X$ shows that when the attractiveness of the mangrove park as a learning resource increases by one unit, tourist satisfaction increases by 0.213 units, assuming all other variables remain constant. The coefficient of determination of 0.927 or 92.7% indicates that the variation in tourist satisfaction can be explained by the attractiveness of the mangrove park as a learning resource. **Novelty:** This research fills a crucial gap in mangrove ecotourism-based geography pedagogy, where existing studies have not integrated the 4A framework (attractions, accessibility, facilities, amenities) equivalent to the learning resource optimization model of messages, people, media, tools, techniques, and settings, through place-based education design in Tangerang Mangrove Park especially iconic landmarks such as I Love Mangrove, the circular bridge, and the bird's nest through a cycle of experience: observation, reflection, conceptualization, and application. This approach has not been explored.

INTRODUCTION

A tourist attraction has educational value, primarily by providing a tourist experience that presents insights, which is the primary focus of tourism visited by the community (Hermawan et al., 2021). Attractions that support educational content, such as exhibitions, demonstrations, or relevant interactive activities (Guntur, 2023). Competent and experienced human resources can convey material well. These resources must also possess good communication skill (Guntur, 2023). Supporting facilities are equipped with adequate amenities and other necessary resources for the comfort of the community. Researchers' observations of the mangrove park tourist attraction suggest that mangrove planting activities occur only during special events. The park, which features beautiful mangrove-planted areas, serves as both a tourist attraction and a rehabilitation site (Mutmainah, 2024). Mangrove parks are currently a prime choice for educational activities that aim to enrich knowledge and character. However, in practice, these mangrove parks often lack official regulations in the form of a decree, despite being designated as educational tourism destinations. This is a significant concern, given that the existence of such a decree plays a crucial role in ensuring educational standards, safety, and the operational feasibility of educational tourism. Based on current conditions, these tourist attractions do not yet have an official decree governing their

status as educational tourism destinations. The absence of such a decree indicates a lack of formal recognition or standard operating procedures from relevant agencies, such as the Department of Education or the Ministry of Tourism.

Ketapang Mangrove Park is considered an educational tourism destination, with a primary focus on educational activities. Within the mangrove park, visitors can enjoy the natural beauty and participate in activities such as walking on footpaths or relaxing in designated areas. Community learning opportunities, such as enjoying the natural atmosphere for relaxation, are provided. The community can utilize the educational value inherent in the mangrove ecosystem as a learning resource in the mangrove park, while also providing hands-on experience (Prabowo, 2023) in line with the fourth SDG, which emphasizes the importance of quality education for all groups. The author identifies the problems to be examined in this study. The identification of problems in this study includes the Tangerang Regency mangrove park as a tourist attraction that offers many educational values to the community; however, the community has not been able to optimally utilize these educational values, as visitors primarily engage in activities such as taking photos. The Tangerang Regency mangrove park tourist attraction offers educational values that can enhance public appeal; however, it lacks new tourist attractions with educational value.

Visitors focus more on taking photos than truly observing their surroundings. For example, when visiting a Mangrove Park, many visitors immediately pull out their phones to capture the towering mangrove roots, the wooden bridges that cut through the forest, or the birds perched on the perches. While this photography activity helps document the experience, it often leads visitors to lose attention to important details such as the structure of the respiratory roots (pneumatophores), the distinctive aroma of the brackish mud, or the sounds of the various organisms living within.

Cognitively, when someone relies solely on photos, the brain fails to perform in-depth observation, categorize information, or connect it to existing knowledge. However, if visitors to a mangrove park observe directly without relying too much on a camera, they can understand more, such as the function of mangroves in preventing coastal erosion, providing habitat for various fish and bird species, and acting as a natural carbon sink. Experiences observed directly are usually more firmly embedded in the memory because they engage multiple senses, including sight, hearing, and even smell.

Thus, documenting through photographs is still beneficial, but it needs to be balanced with the awareness to be truly present and attentive to the surrounding environment. When visiting a mangrove park, for example, one might first observe the patterns of the mangrove roots, observe the movement of crabs in the mud, or listen to the sound of the wind passing through the tree canopy before taking a photo. This approach allows the experience to be stored not only in digital images but also in more meaningful and profound memories. Photo-taking is essentially consumptive and aesthetic, not educational, because visitors to the Ketapang Mauk Village Mangrove Park, Tangerang Regency, are more focused on pursuing visual content for social media at iconic spots such as the wooden bridge or "I Love Mangrove" without cognitive involvement in ecosystem functions such as the role of mangroves in preventing coastal abrasion, bird habitats, or carbon absorption. The implementation of educational activities has four stages including (1) The educational precondition stage, at this stage initial preparations are carried out to ensure that all aspects required for educational activities are ready; (2) The pre-educational stage, explaining the objectives of

educational activities so that the public knows what is expected and what will be learned; (3) The educational stage, this stage is the core stage in the activities carried out. These educational methods can vary, ranging from lectures to discussions. At this stage, interaction between teachers and participants is significant to ensure that participants can well understand the material; (4) The post-educational stage, after educational activities are completed, an evaluation is carried out to assess the optimality of education. This includes collecting feedback from participants and analyzing educational results to determine whether the objectives of educational activities have been achieved (Akbar, 2022).

The use of mangrove parks as learning resources is expected to provide the community with educational value about mangroves, not merely verbally, but instead directed towards the goal of gaining direct experience, allowing the community to learn from the presence of mangrove parks in coastal areas. Learning resources are various sources, including data, people, methods, media, and learning venues, used by students, university students, and the community to facilitate the absorption of the insights provided (Wicaksono, 2023).

The various learning resources, based on their classification, aim to provide a detailed overview of the various learning resources, such as messages, which are information presented in the form of ideas, facts, meanings, and data; people, which are individuals who act as the storage, management, and delivery of messages in learning activities; media, which are software that typically contains messages; and hardware, which are hardware used to convey messages contained in materials. Technique (technique) a specific process or procedure in the use of materials, equipment, environment, and people who convey messages in learning or activities; setting, as a place or environment where the message can be received by someone (Prastowo, 2018) It is hoped that this photo spot will become a modern attraction for tourists visiting the mangrove park, especially as time passes, as the photo spot has the potential to serve as a promotional platform for the mangrove park (Herliansyah & Siregar, 2025).

The 4A elements in the Ketapang Mauk Village Mangrove Park mutually support 6 learning resources in a specific and integrated manner: attractions function as visual conservation messages that immediately attract visitors' attention; accessibility (clear signs, spacious parking) creates a learning environment that is easily accessible without initial obstacles; facilities or amenities (clean prayer rooms, health posts) become tools to support physical comfort so that participants remain focused; services/ activities through competent local guides act as facilitators who explain the mangrove ecosystem; photo spots convey dynamic information; which transforms aesthetic tourism visits into sustainable holistic learning.

Attraction, according to Anwani (2021), has four elements: (1) Attraction is a significant element to attract tourists. The capital's attractions that attract tourists include natural resources, cultural attractions, and Man-made attractions. (2) Accessibility is an element that is equated with the ease of moving from one area to another. If an area has tourism potential, it must be equipped with adequate accessibility so that visitors can easily access the area. (3) Amenity (Facilities or Accommodation) is an element of facilities and infrastructure needed by tourists while at a tourist location, such as: lodging, restaurants, recreation areas, camping areas, transportation, and travel agents, the necessary infrastructure such as: highways, water supply or toilets, electricity, waste

disposal sites. (4) Ancillary (additional services) are elements that the manager of the tourist location must provide.

Musdalifah (2020) defined it as an effort, process, method, and action to use existing resources to achieve the best, most profitable, and most desired conditions within certain limits and criteria (Mayasiana, 2022). Optimization has three indicators that can be identified, namely, as follows (Jose & Araujo, 2021) including: (1) Objectives can be maximized or minimized, objectives that can be maximized are used if the optimization objectives are related to profits, revenues and so on, while the minimized form will be used for optimization objectives related to costs, time, distance and so on (Asisdiq, 2022); (2) Alternative Decisions are intended as decision makers are faced with many choices to achieve goals. Alternative decisions with limited resources are the available choices that decision-makers have. Alternative decisions can be defined as actions taken to achieve specific goals (Jose & Araujo, 2021); (3) Limited resources are based on resources, such as sacrifices that need to be made to achieve goals. These resources are not widely available or are limited; therefore, involvement necessitates an optimization process (Alfarizi, 2021). Some optimization statements have a meaning that focuses on the outcome (result) of something expected to be considered adequate, where the output produced can be the best or highest (Widiastuti & Rosyidi, 2018).

Satisfaction is defined as a person's feelings of contentment, pleasure, and relief, which are realized when the experience meets the tourist's pre-formed expectations and the tendency to make repeat visits is observed (Marc, 2024). Tourist satisfaction is identified as the most influential factor in traveling or visiting a place that is a tourist attraction (Yap, 2025). Tourist satisfaction is a highly debated topic in the tourism industry (Zhao, 2024). The overall tourist experience is memorable (Fathy, 2025). It is hoped that the three indicators felt by tourists during their visit to the Ketapang Village mangrove park are (1) functional, which includes providing comfort and consistent service quality. (2) social, which is like tourists feeling special and giving a good impression to others, (3) emotional plays an important role in shaping tourist satisfaction, such as enjoyment and happiness that are always remembered by tourists. Based on these three indicators, this theory is used to analyze and measure tourist satisfaction in the Ketapang Village mangrove park (Sahabuddin, 2024).

RESEARCH METHOD

The type of research employed in this study is descriptive, with a quantitative approach. The researchers aimed to analyze how to optimize the mangrove park in Tangerang Regency as a learning resource for the community. The research location is in the Ketapang Mangrove Park, Tangerang Regency. The Mangrove Park area is situated in Ketapang Village, Mauk District, Tangerang Regency, Banten Province. See the map of the Ketapang Mangrove Park location. The sample in this study was taken using a sampling technique, namely Non-Probability Sampling, the type used in this study is Accidental Sampling (Sugiyono, 2022). During the initial observation to the research location, the researcher received information from the Ketapang Mangrove Park manager that the number of tourists visiting on weekdays and weekends was not stated, so based on this statement, the number of respondents will be used as a sample based on chance, if seen by people who happen to be met are suitable as data sources. The number of samples determined in this study uses the Lemeshow formula, because the population size is unknown or not achieved.

Participants

The population in this study was divided into two groups: (1) the Regional population, encompassing the Tangerang Regency Mangrove Park area. (2) Human population, comprising the community, including tourists, residents, and managers of the Tangerang Regency Mangrove Park.

Sampling Technique

The sample in this study was drawn using a non-probability sampling technique; the type used in this study is accidental sampling (Sugiyono, 2022). During initial observations at the research site, the researcher received information from the Ketapang Mangrove Park manager that the Number of tourists visiting on weekdays and weekends was uncertain. Therefore, based on this statement, the sample size was determined by chance, as people encountered by chance were deemed suitable as data sources. The sample size was determined in this study using the Lemeshow formula, as the population size was unknown or infinite. The following formula is used by Lemeshow (Rosyida & Priantiantiasari, 2023): The sample size was determined using the following formula: The answer to the question for 96.04, which we rounded up to 100 individuals. This study utilizes data from a sample comprising at least 100 individuals who visited the Tangerang Regency mangrove park. A Likert scale consisting of 40 items was filled out via Google Forms, with 100 tourist respondents responding on a scale of 1-5 (strongly disagree to strongly agree) regarding their agreement with the park as a learning resource. This survey was completed via Google Forms, with 100 tourist respondents responding on a scale of 1-5 (strongly disagree to strongly agree) regarding their agreement with the park as a learning resource. The instrument has been validated by the product-moment correlation ($r\text{-count} > r\text{-table}$) and shows reliability, as evidenced by Cronbach's Alpha (0.60-1.02).

Data Analysis Techniques

This study employed both direct and in-depth observation using an observation sheet. This technique was implemented by distributing a questionnaire to tourists visiting the Tangerang Regency Mangrove Park. Data collection was based on answers provided by the researcher and respondents' responses, which involved selecting answers from a set of options provided by the researcher. The researcher conducted open-ended and in-depth interviews, asking questions to obtain detailed information, necessitating an interview guide. The interviewees included managers and the surrounding community. Documentation in this study included documents, files, notes, or activities related to the Tangerang Regency Mangrove Park (Sugiyono, 2019). Observations include recording of category 4A tourist attractions (attractions: panoramic views of mangrove species; accessibility: pedestrian paths; facilities: parking, restaurants; services: general information). Observations from June 30 to July 13, 2025, at key locations to check the accuracy of the questionnaire data. Semi-structured interviews with three mangrove park managers discussing educational tourism regulations, new attractions, and challenges in obtaining detailed mangrove information, and transcribed to confirm the observations. Quantitative analysis aims to process quantitative data analysis techniques regarding knowledge carried out by using quantitative analysis technique calculations, namely percentage techniques (%), with the formula:

$$\% = \frac{Fo \times 100}{N} \quad (1)$$

Description:

- % = Percentage of each alternative answer
 FO = Number of answer frequencies
 N = Number of samples or respondents
 100 = Constant Number

Table 1. Research Result Percentage Criteria

Nu.	Percentage (%)	Criteria
1.	100	All
2.	75-99	Almost All
3.	51-74	Most
4.	50	Half
5.	25%-49	Almost Half
6.	1-24	Small Portion
7.	0	None or no one

Source: (Airlangga, 2024)

Table 2 Tourist Questionnaire Analysis Results

Nu.	Percentage (%)	Criteria
1.	0-36	Strongly Disagree
2.	37-72	Disagree
3.	73-108	Agree
4.	109-144	Strongly Agree

Source: (Qur'ani, 2021)

The table contains values, each with a specific meaning based on the Likert scale used. These values will be accumulated and calculated to obtain more comprehensive results.

Simple Linear Regression Analysis

$$Y = a + bx \quad (2)$$

Description:

- Y = Measured or calculated value of the dependent variable
 x = Specific value of the independent variable
 a = Intercept or intersection of the regression line with the y-axis
 b = Regression coefficient or slope of the regression line, or to measure the increase or decrease in y for each one-unit change in x, or to measure the magnitude of x's effect on y if x increases by one unit (Egistin, 2025).
- 1) The Independent Variable (X) based on this study is the attractiveness of the mangrove park as a learning resource.
 - 2) The Dependent Variable (Y) based on this study is tourist satisfaction as the consequence.

Model Summary Coefficient of Determination

After obtaining the linear regression equations for Y and X from the obtained data, the coefficient of determination can be determined using the formula:

$$D = r^2_{xy} \times 100\% \quad (3)$$

Description:

- D = Determination
 r² = Coefficient of Determination
 xy = Linear Regression xy

RESULTS AND DISCUSSION

Results

The Educational Program Consisted Of Four Stages (Akbar, 2022), Namely:

Preconditions: This preconditioning phase was conducted on Saturday, June 30, and Sunday, July 1, 2025. This phase involved observations of the mangrove park environment using observation instruments to assess educational tourism attractions, treatment strategies, and mangrove park conditions, as well as to evaluate the Tangerang Regency mangrove park. Researchers researched the park's environmental conditions. Observations at the mangrove park were conducted over a period of two days. **Pre-Education:** This phase is the initial step in providing information to tourists visiting the mangrove park. The primary objective is to convey information clearly and straightforwardly, enabling tourists to gain a basic understanding of mangroves without requiring overly complex or in-depth discussions. This phase focuses on providing an initial introduction to the existence of mangroves and why this ecosystem is important to protect and preserve. Tourists are introduced to mangroves, which grow in coastal areas and play a vital role in environmental balance. Tourists will receive a brief overview of the primary benefits of mangroves, including their role in protecting the coastline from erosion, providing habitat for various species of animals and fish, and contributing to the maintenance of seawater quality. This stage provides introductory information to provide tourists with a sufficient understanding of the subsequent stages, namely education and post-education. **Education,** the education provided at this stage aims to introduce tourists to several main mangrove species that grow in the mangrove park area, particularly at three favorite photo spots: the I Love Mangrove Landmark, the circular bridge amidst the mangroves, and the bird's nest photo spot.

At this stage, tourists not only gain a compelling visual experience but also acquire firsthand knowledge about mangrove diversity in the field. Each mangrove species found in these three spots will be explained in detail, using language that is easily understood by all levels of tourists. The explanations include the distinctive characteristics of each mangrove species, such as the unique shape and size of their leaves, the different types of roots, the colors of flowers growing on the mangrove trees, and the important ecological role each mangrove species plays in the three photo spots. **Post-Education,** Tourists visiting the mangrove park will be asked to complete an online questionnaire. The questionnaire consists of 40 questions and will be distributed via a Google Form link. This link will be shared with 100 tourists who have participated in the pre-education and education phases at the mangrove park. The purpose of this questionnaire is to collect data and opinions from tourists regarding their experiences during their visit.

Characteristics of Tourist Spots That Are Popular and Frequently Visited by the Public

Respondents were given several answer options to measure the frequency of tourist visits. Based on the research results, 87% of respondents stated that almost all tourists visit the mangrove park frequently, indicating a high and consistent level of visitation. Meanwhile, six respondents chose the category "often," and four respondents chose "sometimes," indicating moderate to irregular tourist visits. A small percentage, namely three respondents, stated they rarely visit, and no respondents were categorized as "never." This data illustrates the diverse interests and engagement of the community in

the mangrove park, both as a tourist destination and an educational space for environmental awareness. The results showed that almost all tourists were connected to the natural scenery of the mangrove park. A total of 85 respondents stated they were very interested, while 15 respondents chose the category "interested," resulting in a total of 100 respondents expressing positive appreciation. No respondents chose "indifferent," "not interested," or "very uninterested," indicating that the natural scenery of the mangrove park attracts almost all visitors as the main attraction of the Ketapang Village mangrove park.

The question asked: "How do you rate accessibility (ease of reaching the location)?" The majority of respondents rated accessibility to the location as very easy, with 75 people choosing this category, representing 75% of the criteria. Furthermore, 25 respondents reported that accessing the location was relatively easy. No respondents rated it as adequate, complicated, or very difficult, thus concluding that the mangrove park has excellent accessibility. The question in the table reads: "Do the facilities (toilets, parking) in the park meet your needs?" Eighty-two respondents rated the facilities as very adequate, while ten respondents stated they were adequate. Only eight respondents rated them as adequate, and none selected the 'inadequate' or 'very inadequate' categories. These findings indicate that, in general, supporting facilities such as toilets and parking areas in the park are adequate to meet visitor needs.

The results show that 90 respondents rated the educational facilities as very important, and ten respondents rated them as important. No respondents provided an average rating; instead, they chose either "less important" or "unimportant". These findings indicate that almost all visitors consider the mangrove educational facilities to be a crucial component of the tourist area. For the question "Do additional activities (such as planting mangroves, exploring mangroves, or fishing) increase your interest?" the "strongly agree" category received a score of 5 with a frequency of 92 respondents, indicating a very high level of agreement with these additional activities. The "agree" category received a score of 4 with a frequency of 4 respondents, reinforcing the impression that most respondents felt increased interest through the activities of planting, exploring mangroves, and fishing. The "indifferent" category received a score of 3 with a frequency of 4 respondents, while the "disagree" and "strongly disagree" categories were almost absent, indicating that negative attitudes toward these additional activities were very low in the sample studied.

The questionnaire item asked "How do you rate the cleanliness of the mangrove park?" with responses ranging from "very clean" to "not clean." The majority of respondents rated the mangrove park as "very clean" (87 respondents) and "clean" (12 respondents), while only one respondent rated it as "quite clean," and none rated it as "not very clean" or "not clean." This indicates that visitors rated the mangrove park as very clean. The table above shows that visitor ratings of the mangrove park entrance fee vary considerably. The table displays the questionnaire item "How do you rate the entrance ticket price?" with options ranging from "very affordable" to "very expensive." Twenty-five respondents rated it as "very affordable," 22 respondents rated it as "affordable," four respondents rated it as "moderate," 33 respondents rated it as "expensive," and 16 respondents rated it as "very expensive." Thus, the ticket price ratings tended to be divided between being considered affordable and expensive. Based on the questionnaire results, the question "Do you think this mangrove park area is safe?" indicates that the majority of respondents felt the area was safe. Eighty-one respondents

answered "very safe," and nine respondents answered "safe," while only nine respondents rated it "quite safe." None stated "less safe" or "not safe." Therefore, visitors rated the mangrove park as very safe.

The Attraction of Mangrove Parks as a Learning Resource for the Community

Table 3. Park Accessibility Attractions

Indicator	Criteria Answer (%)				Total Score (%)	Criteria Percentage
	Good	Average	Not Good	Bad		
Accessibility	93	2	5	0	100	93% Almost all of it

Source: Researcher's Processed Results, 2025

Mangrove parks like Ketapang Mauk in Tangerang have access to major highways connecting them to downtown Jakarta, allowing for a short trip of around 30-60 minutes. Well-paved roads and clear signage facilitate navigation for tourists. The Tangerang government's construction of wooden bridges and safe trekking paths has facilitated easy access for all age groups. This satisfaction data demonstrates increased visitor comfort. Collaboration with the private sector through CSR ensures routine maintenance, area cleanliness, and the development of attractive tourist spots. This distinguishes the mangrove park from other less well-maintained locations

Table 4. Mangrove Park Tourist Attractions

Nu.	Indicator	Criteria Answer(%)				Total Score (%)	Criteria Percentage
		Good	Average	Not Good	Bad		
1.	Traffic signs to the mangrove park	74	16	9	1	100	74 %
2.	Information facilities	90	5	5	0	100	Mostly 90%
3.	Security facilities	92	8	0	0	100	Almost completely 92%
4.	Parking lots	82	10	8	0	100	Almost completely 82%
5.	Mosques	63	13	12	2	100	Almost completely 63%
6.	Health facilities	44	12	21	23	100	Mostly 44%
7.	Sanitation facilities	87	13	0	0	100	Almost completely 87%
8.	Variety of activities	92	4	1	3	100	Almost completely 92%
							Almost all

Source: Researcher's Processed Results, 2025

The Ketapang Mauk Village Mangrove Park in Tangerang Regency is generally well-received by tourists, although there are differences in facilities that need improvement. The facilities and infrastructure at the Ketapang Mauk Village Mangrove Park directly impact the quality of learning, as the location serves as a natural learning resource for environmental education and ecotourism. A prominent strength is the high variety of activities, as the management provides many options such as mangrove trails, bird watching, and engaging environmental education for all ages. This data supports

effective learning, such as mangrove ecosystem observations or conservation workshops, so students and tourists are more focused and motivated to understand the mangrove park in a real-life context. Cleanliness is also excellent, thanks to regular cleaning by a local team, which creates a comfortable environment, which increases knowledge retention and active participation, as defined by Samsinar's (2019) definition of learning quality. Furthermore, information and security are strong due to clear signage and officer supervision in the relatively safe beach area. Lack of security can reduce the quality of tourism because visitors worry about injury while trekking, thus reducing the duration of educational visits and disrupting the learning process. Limited worship facilities reduce inclusivity, making diverse groups less comfortable participating fully (Wicaksono, 2023).

Parking and suboptimal road signs also trigger initial stress, diverting attention from the learning material. Poor health facilities are caused by a shortage of medication at medical posts and a lack of trained emergency personnel. The lack of emergency services makes participants feel unsafe, diverting attention from core topics such as mangrove ecosystems to personal concerns. Consequently, visits are short and knowledge retention is reduced. Places of worship, such as prayer rooms (musholla) are untidy and unsanitary, and space is limited, so congregational prayers with many people must be performed in shifts and cramped. Large groups, such as school students or tourist groups, cannot pray together, forcing them to take turns, which wastes time and disrupts the learning schedule. As a result, some participants miss important moments in the environmental education program. Parking is a complaint during busy times due to limited space, resulting in late arrivals for groups, shortening time for core sessions such as educational trekking or ecosystem discussions, thus interrupting learning content and reducing participant understanding. Unclear signs on the outskirts of Tangerang. Unclear signs make participants anxious or frustrated at the beginning of the visit, shifting focus from environmental education content to practical issues, thus diminishing understanding of mangroves. First-time educational visitors or those from outside the area struggle to follow inconsistent instructions, reducing full participation in hands-on activities. Improved digital signage or interactive maps would maximize a smooth learning experience.

The Attraction Of Mangrove Parks As A Source Of Learning For Community Satisfaction

This simple linear regression test was conducted to determine whether the independent variables have a linear relationship with the dependent variable. The following table shows the results of the calculations for the attractiveness of the mangrove park as a learning resource (X) and public satisfaction, specifically tourists (Y).

Table 5. Koefisien Determinasi Model Summary

Regression Statistics	
Multiple R	0,304567002
R Square	0,927610585
Adjusted R Square	0,833106528
Standard Error	3,669336655
Observations	98

Source: Research results processed using Microsoft Excel

Table 6. Coefficient of Determination Model Summary

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	t table
Intercept	61,789141	4,8204935	12,818011	1,63374E-	52,220537	
X	0,2134621	0,0681339	3,1329800	0,022948	0,7821744	1,984984

Source: Research results processed using Microsoft Excel

Description:

- 1) If the Sig. Value is < 0.05 ; there is a significant effect.
- 2) If the Sig. The value is greater than 0.05, indicating no significant effect.

Description of the t-table and t-calculation:

- 1) If the calculated t-value is $> t$ -table, there is a significant effect.
- 2) If the calculated t-value is $< t$ -table, there is no significant effect.

Based on the research results, the analysis of the attractiveness of mangrove parks as a learning resource for community satisfaction yielded a significance level of $P < 0.05$. Value of < 0.05 , namely 0.02295, indicating an influence between X and Y.

Optimizing Mangrove Parks As A Learning Resource For The Community

Table 7. This tourist questionnaire was conducted to determine the level of success during the implementation of the mangrove park as a learning resource.

Nu.	Question	Results (%)	Criteria
1.	Tourists gained a better understanding of mangroves during the educational process at the mangrove park as a learning resource	93	Agree
2.	As a tourist, I found it easier to understand mangroves after participating in the educational process at the mangrove park	84	Agree
3.	The mangrove park made the educational process more enjoyable	91	Agree
4.	The mangrove park made the educational process more interesting	91	Agree
5.	The mangrove park made me, as a tourist, more enthusiastic about the educational process	92	Agree
6.	The educational process at the mangrove park met my expectations	93	Agree
7.	Are you enthusiastic about using the mangrove park as a learning resource	91	Agree
8.	The mangrove park makes traveling more meaningful.	91	Agree
9.	The educational process at the mangrove park increases tourist appeal	93	Agree
10.	The mangrove park allows me, as a tourist, to explore and gain more knowledge	91	Agree
11.	The educational process at the mangrove park increases my activity	94	Agree
12.	The mangrove park is of high quality	93	Agree
13.	The mangrove park, as a learning resource used in educational activities, is easy to understand for tourists	93	Agree
14.	Is the mangrove park necessary for educational activities during tourism	96	Agree
15.	The educational activities in the mangrove park meet my needs as a tourist	89	Agree
16.	The educational activities that have been implemented are easy to understand for tourists	91	Agree
17.	The explanations during the educational activities cover the relevant aspects of the mangrove park	94	Agree
18.	The material presented by the researcher during the educational activities is explicit	93	Agree
19.	The mangrove park can be used as a direct learning resource for tourists, making the material more contextual	94	Agree



Nu.	Question	Results (%)	Criteria
20.	The mangrove park, as a learning resource, can make learning more communicative because tourists can discuss, collaborate, and observe coastal phenomena directly in the field	93	Agree
21.	The mangrove park, as a learning resource, can increase motivation in learning by providing hands-on experiences. Direct access, beautiful views, and a fundamental understanding of the importance of preserving coastal ecosystems	92	Agree
22.	The mangrove park, as a learning resource, broadened my knowledge as a tourist during the educational process	96	Agree
23.	The mangrove park, as a learning resource, increased my motivation to visit	94	Agree
24.	I enjoy the mangrove park as a learning resource because it adds to the comfort of traveling	93	Agree
25.	Were you satisfied with the mangrove park education program as a learning resource	91	Agree
Total		2.306	
Average		92	Agree

Source: Research Data, 2025

Based on the data in the table above, the average result is 92%, indicating that tourists agree that the mangrove park serves as a valuable source of learning for tourism activities, enhances the atmosphere during educational visits, and effectively attracts tourists' attention to the material presented.

Discussion

The Educational Program Consisted Of Four Stages

The four stages of education in the Tangerang Regency Mangrove Park integrate the theories of (Hermawan, 2021) on the value of education through immersive experiences, (Moussa, 2024) on interactive content, competent human resources, and supporting facilities, and (Wicaksono, 2023) on direct experiential learning resources. Preconditions, this stage applies (Hermawan, 2021) through a two-day observation (June 30–July 1, 2025) to ensure authentic insights into park conditions, maintenance strategies, and educational objects using the instruments in (Guntur, 2023). Apply competent human resources who complete the instruments, supported by natural environmental facilities as initial learning resources. Pre-Education (Hermawan, 2021) provides a concise introduction to mangrove forests, highlighting their roles as erosion barriers, habitats for biota, and regulators of water quality, offering fundamental insights without in-depth discussions suitable for all tourists. Support this with experienced human resources who communicate effectively (Guntur, 2023) describe a hands-on experience at the entrance as an introductory method, with supporting facilities for convenience. Education: This stage embodies the educational value through visual experiences and direct knowledge of mangrove species at favorite spots (I Love Mangrove, circular bridges, bird nests), including the characteristics of leaves, roots, flowers, and their ecological roles. Integrate interactive content (field demonstrations), human resource guides with inclusive communication, photo opportunities, and experiential learning resources. After their education, evaluate a survey using a 40-item Google Form questionnaire administered to 100 travelers, capturing overall insights and experiences. Applied this approach, supported by digital facilities and research human resources (Guntur et al., 2023) to

opinion analysis, thereby strengthening the data-people-media-place learning resource for continuous feedback (Wicaksono, 2023).

Characteristics of Tourist Spots That Are Popular and Frequently Visited by the Public

The research results illustrate the consistent high frequency of tourist visits to the Ketapang Village Mangrove Park, reflecting its strong appeal as a tourist destination and environmental education space, where almost all visitors show a deep interest in the lush natural scenery such as the coastal mangrove forest which has become a natural tourism photo spot according to, with elements such as dense forests and expansive panoramic backgrounds that blend perfectly with wooden walkways for an authentic visual experience. Straightforward accessibility via smooth asphalt roads and clear directional signs facilitate repeat visits, supporting the development of mixed tourism photo spots (natural and artificial) such as circular bridges and elevated stages per (Moedia & Pramitasari, 2025) where natural wooden materials allow tourists to traverse the mangrove ecosystem while enjoying the view from above, thus enhancing the experience of capturing memories with a comfortable forest setting that blends with the environment.

Supporting facilities such as adequate restrooms, parking, and rest areas, along with clean, litter-free paths and high security, including child-friendly amenities, enhance the comfort of artificial tourist spots like the I Love Mangrove Landmark and bird nests, which were built with contemporasry heart, circle, or nest shaped designs for attractive photos ((Mohd, 2023) New tourists are encouraged to consider these locations through visual promotions on social media. The importance of educational facilities, such as information boards and interactive tours, along with additional activities like mangrove planting, ecosystem exploration, and fishing, significantly increases interest in the subject. This is combined with decorative lighting at photo spots that enhance the beauty of the night (Pakaya, 2023), creating a complete sensory experience where tourists not only take photos but also actively engage. Variations in ticket pricing suggest potential adjustments, such as offering student discounts, to promote greater inclusivity. Overall, these 4A elements (attractions, accessibility, facilities, and additional services) position the Mangrove Park as an optimal mixed conservation tourism area, where natural wood photo spots with aesthetic lighting not only enhance the photo results but also integrate mangrove education into recreation, encourage visitor loyalty, and promote sustainable organic growth.

The Attraction of Mangrove Parks as a Learning Resource for the Community

The results of the study show that traffic signs to the mangrove park have reached the majority category, which supports accessibility as a central pillar of tourism objects, according to Cooper (1995), where easy information and safe roads facilitate unhindered tourist travel, thereby increasing visits to natural attractions such as coastal mangrove forests. Almost complete information facilities and almost complete security facilities strengthen the accessibility and supporting facility elements (Salsabila, 2023) tourists get clear information and a sense of security during temporary movements for valuable experiences, in line with the definition of tourism as non-revenue travel for pleasure and learning (Kusuma, 2024) Supporting facilities for almost complete parking lots, almost complete sanitation facilities, and almost complete health facilities reflect the completeness of basic infrastructure such as toilets, parking, and health services, which are essential for tourist comfort according to and (Anwani, 2021) where facilities must be

clean, tight, usable, and easily accessible to maintain visitor satisfaction and loyalty. Mosques often serve as a category of essentially complementing worship needs, providing daily facilities that support maximum post-attraction experiences, such as mangrove panoramas, unique roots, and artistic elements of photo spots (Salsabila, 2023) and (Apriliyanti, 2020) attractions and additional services with various activities are almost all the main attractions according to (Widaningsih, 2020) classifying attractions as nature (dense mangrove forests), culture (local potential), and community activities (planting, exploring), which attract tourists for repeat visits and recommendations through uniqueness, beauty, and educational arts. The integration of the 4A (attractions, accessibility, facilities, additional services) according to Kusuma (2024) positions the mangrove park as a sustainable destination, where almost complete facilities encourage motivation to visit and positive experiences, although the mosque and health need optimization for full inclusivity.

The Attraction Of Mangrove Parks As A Source Of Learning For Community Satisfaction

Based on a simple linear regression test, the constant (a) is 61.78, and the regression coefficient X is 0.213. The simple linear regression equation is as follows:

$$Y = a + bX$$
$$Y = 61.78 + 0.213X$$

The constant value of 61.78 represents the value of the tourist satisfaction variable. With a regression coefficient of X of 0.213, a 1% increase in the attractiveness of the mangrove park as a learning resource is expected to result in a 0.213% increase in tourist satisfaction, taking into account other variables not examined. To determine and measure the influence of the attractiveness of the mangrove park as a learning resource on tourist satisfaction, see Table 5. Based on the coefficient of determination in Table 5, the correlation value (R) for the attractiveness of the mangrove park as a learning resource (X) is 0.304, and tourist satisfaction (Y) is 0.927. This value indicates that tourist satisfaction is influenced by the attractiveness of the mangrove park as a learning resource, with a percentage of 92.7% ($0.927 \times 100\%$). In comparison, the remaining 7.3% is attributed to other variables not examined in this study (excluding the researcher's variables).

The calculation results in Table 6 show a calculated t-value of 3.132 with a significance level of 0.022948. Therefore, it can be concluded that there is an influence between the variable (X) of the attractiveness of the mangrove park as a learning resource and tourist satisfaction (Y). The influence between the two variables can be compared using the calculated t-value and the t-table value. Based on the t-test in the column above, the calculated t-value is 3.132. The value in the t-table is the t-level, so the calculated t-value is greater than the t-table value at a significance level of 0.05 with a $df = n - k$, resulting in a value of 1.984. Based on Table 6, the calculated t-value is 3.132, and the t-table value is 1.984. This indicates that the calculated t-value is greater than the t-table value, indicating a significant influence. The results of the simple linear regression test show the equation $Y = 61.78 + 0.213X$ with an R value of 0.927 which indicates a strong influence of the attractiveness of the mangrove park as a learning resource on tourist satisfaction, where the calculated t value is greater than the t table at a significance of 0.05, proving a significant relationship that is in line with the definition of satisfaction as

a feeling of satisfaction, pleasure, and relief when the experience reflects previous expectations (Marc, 2024). The Functional Indicator Constant 61.78 represents functional satisfaction from comfort and consistent services such as easy access, almost complete sanitation, and parking facilities, and maintained cleanliness, which are the main factors influencing tourist visits to tourist destinations according to (Yap, 2025) and (Sahabuddin, 2024), where this basic infrastructure ensures a memorable overall experience and supports repeat loyalty. Social indicators the regression coefficient of 0.213 highlights the influence of X's attractiveness on Y, reflecting the social aspect where tourists feel special through various activities almost everywhere such as mangrove planting and trekking, as well as local hospitality that encourages recommendations to others (Sun, 2024), thus increasing the popularity of the destination as a tourism hot topic per (Zhao, 2024). Emotional Indicators The influence of 92.7% of X variables on Y confirms the emotional dimension of satisfaction through enjoyment and happiness remembered from cultural contact, eco-friendly values, and authentic experiences at iconic spots, which trigger return intentions as explained by (Huu, 2024) and (Fathy, 2025) with 7.3% of other variables indicating potential for optimization for a more substantial holistic experience

Optimizing Mangrove Parks As A Learning Resource For The Community

The average 92% approval rate of tourists towards the mangrove park as a learning resource reflects the success of resource optimization, according to Mayasiana (2022), where collaborative efforts between researchers and tourists convey information on the types, characteristics, growth factors, functions, flora-fauna, and conservation of mangroves through direct observation. The educational process of (Akbar, 2022) is perfectly integrated: pre-observation conditions June 30–July 1, 2025 with park condition instruments, pre-education simple introduction to the benefits of mangroves (anti-abrasion, habitat, water quality), detailed education of species in favorite spots (I Love Mangrove, circular bridge, bird's nest) including characteristics of leaves-roots-flowers-ecological roles, and post-education 30-item Google Form questionnaire for 100 tourists measuring experiences, resulting in an educational atmosphere that attracts attention. Methods and Actions, such as interactive lecture methods, field discussions, and participatory trekking to popular spots, maximize real experiences, in line with which emphasizes non-verbal learning from coastal ecosystems for conservation wisdom. Six Indicators: (1) The message (message) based on the context of the mangrove park as a learning resource for tourists is information conveyed to visitors about the types of mangroves, the characteristics of mangroves, factors that influence mangrove growth, the function of mangroves, mangrove flora and fauna and mangrove conservation.(2) Humans (people) based on research on mangrove parks as a learning resource for tourists, humans play a role as a keeper, manager and distributor of educational messages that connect tourists with the mangrove park. Researchers act as tour guides in the mangrove park acting as a direct channel of the main message through interactive narratives, field creation and discussions about the types of mangroves, mangrove characteristics, factors that influence mangrove growth, the function of mangroves, mangrove flora and fauna and mangrove conservation. In addition, the role of managers and the community stores and manages messages through information boards, educational instructions, and activities such as planting seeds, while the role of local communities is involved in cleaning the environment and supporting the preservation of

the mangrove park. Collaboration between these roles creates an optimal experience in the mangrove park. (3) Software media materials (materials), without software media materials in the mangrove park can be described through direct experiences that can be seen through the senses, more authentic than digital. The mangrove park itself is the best learning resource. Tourists can experience the experience of visiting the mangrove ecosystem themselves. (4) Hardware equipment (devices), the mangrove park itself serves as the main tool, where tourists can directly observe mangrove roots, changes in air and soil, flora and fauna found in the mangrove ecosystem. Without hardware equipment. Researchers convey messages verbally while showing real examples of mangroves, so that the educational process remains interactive and easy to understand by tourists. (5) Techniques, in mangrove park research as a learning resource for tourists refer to systematic procedures that integrate teaching materials, equipment, the natural environment, and human roles to convey educational messages effectively to visitors. Research on mangrove parks as a learning resource for tourists Referring to this direct observation procedure involves tourists walking along a trekking path while observing mangroves in tourist spots that are popular with tourists, guided by researchers who act as guides who explain the types of mangroves, mangrove characteristics, factors that influence mangrove growth, mangrove functions, mangrove flora and fauna and mangrove conservation. This active participation technique can invite tourists to participate in mangrove education and discussions and directly touch the mangrove ecosystem. (6) Setting of a mangrove park as a learning resource for tourists refers to the physical and natural environment, which serves as the primary setting where educational messages can be directly received and understood by tourists. The mangrove park provides a natural setting, consisting of brackish mud and adaptive tree roots, creating an authentic atmosphere that allows for direct observation of the mangroves. Supporting elements include pedestrian paths, prominent tourist spots such as the "I Love Mangrove" landmark, bird's nest photo spots, and a bridge amidst the mangroves.

Based on the data in the table, the average score was 92%, indicating that tourists agreed that the mangrove park served as a learning resource for tourism activities, provided an educational atmosphere during the visit, and was able to engage tourists' attention with the material presented. This very high level of agreement confirms the success of the mangrove park as a learning resource, in line with the statement (Pardede et al., 2021) that it effectively and efficiently achieved the desired results. The natural panorama and mangrove ecosystem were not only visually captivating but also served as interactive learning resources for understanding mangroves. In line with the high frequency of visits reaching 87% of respondents who stated very often, it shows the consistent involvement of tourists in enjoyable environmental learning, so that the mangrove park not only functions as a tourist destination but also an important space for building insight among visiting tourists.

CONCLUSION

Fundamental Finding: This research successfully optimized not only the addition of information boards, but also designed a tiered educational stage that transforms visitors' basic intention of taking photos into meaningful exploration through four integrated educational stages and strong 4A elements, elements, resulting in an immersive experience that consistently captivates visitors. **Implications:** educational programs based on iconic spots such as "I Love Mangrove," the circular bridge, and the bird's nest

enhance conservation awareness through interactive content, competent guides, and supporting facilities, encouraging repeat visits, social media visual promotion via aesthetic photo spots, and active engagement in activities such as mangrove planting for sustainable environmental awareness. **Limitation:** Ketapang Mauk Mangrove Park, Ketapang Village, Mauk District, Tangerang Regency, optimally fulfills the essential 4A framework as an edutourism destination, with tourist attractions consisting of natural attractions (14 ha mangrove forest, 16 species of flora and fauna), cultural (fisherman community interactions), and popular areas (I Love Mangrove spot, circular bridge, bird nests), supported by excellent accessibility (30-60 minutes from Jakarta, clear signage, wooden walkways above the mangrove park), complete amenities (spacious parking, clean toilets, prayer rooms, local stalls), and professional ancillary services (local guides, boat rentals, ecosystem information). Tourists gain a vital understanding of mangroves: ecological functions (abrasion, habitat, carbon), species identification, conservation (mangrove seedlings, planting techniques), and participatory activities transform Instagrammable selfie tourism into contextual place-based learning. with high satisfaction. **Future Research:** Further developments could explore the integration of AR/VR for digital content, long-term conservation impact analysis through repeat visit tracking, and optimization of inclusive facilities such as student discounts and comprehensive infrastructure.

REFERENCES

- Airlangga, S. (2024). Daya Tarik Taman Mangrove Ketapang Sebagai Edutourism Di Desa Ketapang, Kecamatan Mauk, Kabupaten Tangerang. *UPI*, 33–51. <https://repository.upi.edu/127753>
- Akbar, R. R., Anissa, M., Hariyani, I. P., & Rafli, R. (2022). Edukasi Masyarakat Mengenai Gejala Cemas. *Dinamisia: Jurnal Pengabdian Kepada Masyarakat*, 6(4), 876–881. <https://doi.org/10.31849/dinamisia.v6i4.10008>
- Alfarizi, M., Hanum, R. K., & Hidayat, S. A. (2021). Optimizing the Use of Sharia Digital Transactions To Support Indonesia's Economic Recovery. *JIIET (Jurnal Ekonomi Terapan)*, 6(1), 122–132. <https://doi.org/10.20473/jiet.v6.i1.25977>
- Anwani. (2021). Analisis Obyek Daya Tarik Wisata Dan Aksesibilitas Terhadap Minat Berkunjung Analysis of the Objects of Tourist Attractions and Accessibility Towards Tourist Visiting Interest On Pantai Baru Yogyakarta. *Jurnal Pariwisata Dan Budaya*, 12, 57–64. <https://doi.org/10.31294/khi.v12i1.10182>
- Apriliyanti, E., Hudayah, S., Za, S. Z., Ekonomi, F., & Mulawarman, U. (2020). Pengaruh daya tarik wisata, citra destinasi dan sarana wisata terhadap kepuasan wisatawan citra niaga sebagai pusat cerminan budaya khas kota samarinda tourist satisfaction of commercial images as a center of cultural reflection typical of samarinda city. *Jurnal Manajemen*, 12(1), 145–153.
- Asisdiq, I., Sudding, & Side, S. (2022). Strategi Baitul Mal Aceh Dalam Optimalisasi Pengumpulan Zakat Di Provinsi Aceh. *Mahasiswa FISIP Unsyiah*, 1(1), 91–99.
- Fathy, E. A., Salem, I. E., Zidan, H. A. K. Y., & Abdien, M. K. (2025). From plate to post: how foodstagramming enriches tourist satisfaction and creates memorable experiences in culinary tourism. *Current Issues in Tourism*, 28(20), 3373–3392. <https://doi.org/10.1080/13683500.2024.2405625>
- Guntur, M., Hasanah, D., Musyarrofah, S., Septia, N. I., & Sahronih, S. (2023). Optimalisasi Program Mangrove Literacy Edutourism (MANGLIEDS) Berbasis

- Konservasi Mangrove Pendahuluan Desa Mundupesisir merupakan salah satu desa yang terletak di pesisir laut Jawa Barat dan memiliki potensi besar karena hampir disepanjang menjaga fung. *Prima Abdika: Jurnal Pengabdian Masyarakat*, 5636(4), 369–382.
- Herliansyah, D., & Siregar, C. A. (2025). Pembangunan Spot Foto sebagai Daya Tarik di Danau Kaolin Bangka Belitung. *SCIENTIFIC JOURNAL OF REFLECTION : Economic, Accounting, Management and Business*, 8(4), 1506–1514. <https://doi.org/10.37481/sjr.v8i4.1279>
- Hermawan, Y., Hidayatullah, S., Alviana, S., Hermin, D., & Rachmadian, A. (2021). Pemberdayaan Masyarakat Melalui Wisata Edukasi dan Dampak yang Didapatkan Masyarakat Desa Pujonkidul. *Edusia: Jurnal Ilmiah Pendidikan Asia*, 1(1), 1–13. <https://doi.org/10.53754/edusia.v1i1.21>
- Huu, T. N., Ngoc, H. N., Dai, L. N., Nguyen, D., & Thu, T. (2024). Effect of tourist satisfaction on revisit intention in Can Tho City , Vietnam. *Cogent Business & Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2322779>
- Jose, O., & Araujo, M. D. E. (2021). Optimalisasi Usaha Mikro Kecil dan Menengah (UMKM) Dalam Upaya Pemulihan Ekonomi Masyarakat Akibat Dampak Pandemi Covid-19 Di Kota Kupang Provinsi Nusa Tenggara Timur. *Prodi Studi Keuangan Daerah*.
- Kusuma, A. H., Hutahaean, A. A., Siregar, A. M., Faisal, A. R., Yanvika, H., & Marpaung, E. M. (2024). Serapan Dan Stok Karbon Di Vegetasi Mangrove Pantai Ketapang, Desa Batu Menyan, Kecamatan Teluk Pandan, Kabupaten Pesawaran, Provinsi Lampung. *Jurnal Perikanan Unram*, 13(3), 935–946. <https://doi.org/10.29303/jp.v13i3.616>
- Kusuma, & et.al. (2024). Pengembangan Wisata Desa Melalui Olahraga Air Sungai Di Desa Wonodadi Kulon Kecamatan Ngadirojo Kabupaten Pacitan. *Journal of Social Community Service*, 01(01), 1–9. <https://Repository.Antispublisher.My.Id/Id/Eprint/109/1/1%2bpengembangan%2bwisata%2bdesa%2bmelalui%2bolahraga%2bair%2bsungai%2bdi%2bdesa%2bwonodadi%2bkulon%2bkecamatan%2bngadirojo%2bkabupaten%2bpacitan.Pdf>
- Marc, W., Jasim, K. M., & Das, M. (2024). Augmented and virtual reality in hotels : Impact on tourist satisfaction and intention to stay and return. *International Journal of Hospitality Management*, 116(November 2023), 103631. <https://doi.org/10.1016/j.ijhm.2023.103631>
- Mayasiana, N. A., Sari, E. E., & ... (2022). Optimalisasi Pengelolaan Usaha Rumah Tangga Opak Gulung Cak Min. *Jurnal Pengabdian ...*, 3(2), 1164–1169. <http://ejournal.sisfokomtek.org/index.php/jpkm/article/view/510>
- Moedia, N. I., & Pramitasari, D. (2025). Preferensi Pengunjung Terhadap Karakteristik Arsitektur. *Sinektika Jurnal Arsitektur*, 22(1), 96–112.
- Mohd, I., Muhammad Lathiful, Y., Muhammad Dani, A., Agung Nur, R., Fadillah Agung, A., & Yogi Putera, S. (2023). Pembuatan Spot Fotografi di Obyek Wisata Ujong Eumpee, Desa Deudap Pulo Nasi. *Jurnal Pengabdian Aceh*, 3(2), 111–118. <https://jpaceh.org/index.php/pengabdian/article/download/212/145>
- Moussa, L. G., Mohan, M., Burmeister, N., King, S. A. L., Burt, J. A., Rog, S. M., Watt, M. S., Udagedara, S., Sujud, L., Montenegro, J. F., Heng, J. E., Carvalho, S. A., Ali, T., Veettil, B. K., Arachchige, P. S. P., Albanai, J. A., Sidik, F., Shaban, A., Peñaranda, M. L. P., ... Ewane, E. B. (2024). Mangrove Ecotourism along the Coasts of the Gulf

- Cooperation Council Countries: A Systematic Review. *Land*, 13(9), 1351.
<https://doi.org/10.3390/land13091351>
- Mutmainah. (2024). *Taman Mangrove Ketapang Tangerang Sebagai Wisata Rekreasi Edukasi dan Ekonomis*. <https://kabarbanten.pikiran-rakyat.com>
- Pakaya, S. M., Putri, C. F. I. . D., Mursalim, M. A., & Ananda, D. Y. R. (2023). Komunikasi Kelompok Pelaku Usaha Dalam Pemberdayaan Ekonomi Masyarakat Pada Objek Wisata Di Kawasan Pesisir (Studi Pada Objek Wisata Tamendao Beach). *JMBI UNSRAT (Jurnal Ilmiah Manajemen Bisnis Dan Inovasi Universitas Sam Ratulangi)*., 10(3), 2521–2534. <https://doi.org/10.35794/jmbi.v10i3.54387>
- Pardede, P. D. K., Tafonao, D. J., & Buulolo, E. E. (2021). Optimalisasi Penggunaan Dana Desa Dalam Pembangunan Desa Lolosoni Kecamatan Gomo Kabupaten Nias Selatan 2019/2020. *Jurnal Governance Opinion*, 6(2), 78–89.
- Prabowo, A., Merdeka, R. D. H., & Hayati, A. (2023). Pengaruh Pengembangan Pariwisata Terhadap Pendapatan Masyarakat Di Taman Mangrove Ketapang Kabupaten Tangerang. *WisataMuh (Journal of*
[Ahttps://jurnal.umt.ac.id/index.php/wisataMuh/article/download/9758/4526](https://jurnal.umt.ac.id/index.php/wisataMuh/article/download/9758/4526)
- Prastowo, A. (2018). *Sumber belajar dan pusat sumber belajar: Teori dan Aplikasinya di Sekolah atau Madrasah*. Kencana. <https://books.google.co.id/books?id=EhZNDwAAQBAJ>
- Sahabuddin, M., Alam, M. S., & Nekomahmud, M. (2024). How do perceived and environmental values influence tourist satisfaction, loyalty, and environmental awareness? *Environment, Development and Sustainability*.
<https://doi.org/10.1007/s10668-024-05094-3>
- Salsabila, S., Nathalia, T. C., & Harapan, U. P. (2023). Pengaruh Atraksi Wisata Dan Fasilitas Terhadap Kepuasan Pengunjung Di Taman Mini Indonesia Indah Pasca Revitalisasi. *Journal Of Tourism And Economic*, 6(2), 195–206.
- Wicaksono, B. A., Khotimah, K., Bayu, N., & Prastiyono, H. (2023). Analisis Potensi Ekosistem Mangrove Center Tuban Sebagai Sumber Belajar Pendidikan Lingkungan Bahari Dalam Pembelajaran IPS. *Sosearch*, 3(2), 2774–2776.
- Widaningsih, T. T., Nugraheni, Y., Prananingrum, E. N., & Rahayunianto, A. (2020). Pengaruh Terpaan Media dan Daya Tarik Destinasi Wisata terhadap Minat Berwisata. *Komunikatif*, 9(2), 174–190.
- Widiastuti, T., & Rosyidi, S. (2018). Model Pendayagunaan Zakat Produktif Oleh Lembaga Zakat Dalam Meningkatkan Pendapatan Mustahiq. *Jurnal Ekonomi Bisnis*, 1(1), 89–102.
- Yap, Y., Tan, S., Tan, B., & Tan, S. (2025). Acta Psychologica Smart tourism technologies and tourist satisfaction : A systematic literature review and research agenda. *Acta Psychologica*, 258(July), 105191. <https://doi.org/10.1016/j.actpsy.2025.105191>
- Zhao, Y., Zhan, Q., Du, G., & Wei, Y. (2024). The effects of involvement, authenticity, and destination image on tourist satisfaction in the context of Chinese ancient village tourism. *Journal of Hospitality and Tourism Management*, 60, 51–62.
<https://doi.org/10.1016/j.jhtm.2024.06.008>



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