



Effectiveness of Local Wisdom-Based Differentiation Strategies in Tourism Destination Development: Study in the Lake Toba Tourism Area

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ABSTRACT

Tourism plays an important role in sustainable development by promoting cultural and environmental preservation. However, the rapid development of tourism also presents significant challenges related to the sustainability, competitiveness, and differentiation of tourism destinations. This study aims to understand the effectiveness of local wisdom-based differentiation strategies in developing tourism destinations in the Lake Toba by focusing on the integration of local cultural to increase destination attractiveness and local community involvement. This study uses a mixed methods method, combining in-depth interviews with local communities and tourist surveys. The research sample consisted of 30 local respondents and 384 tourists using purposive sampling techniques and data analysis was carried out using thematic analysis and ANOVA tests. The results of the study show that local wisdom play an important role in improving tourist experience and satisfaction. This shows that local wisdom-based differentiation strategies are effective in increasing the attractiveness of Lake Toba.

INTRODUCTION

Tourism is the world's most influential economic sector, contributing significantly to national income for many countries. The global tourism sector accounts for around 10% of the world's Gross Domestic Product (GDP) and provided one in ten jobs globally in 2019 (Khudaverdiyeva, 2023). Tourism also plays a vital role in sustainable development by promoting cultural and environmental preservation and strengthening international connectivity (Srivastava & Sinha, 2023). However, the rapid development of tourism also presents significant challenges related to the sustainability, competitiveness and differentiation of tourism destinations (Verhun & Bondarchuk, 2022). To effectively address these challenges, it is essential for stakeholders to prioritize sustainable tourism practices, implement strategies to enhance competitiveness and focus on creating unique and attractive offerings to ensure the long-term success and viability of the tourism industry on a global scale.

In Indonesia, the tourism sector is the main pillar of national economic development, with extraordinary natural and cultural wealth, Indonesia has great potential to become a major tourist destination in the world (Fauziyah et al., 2023; Putri et al., 2023; Apriyanti et al., 2023; Koerner et al., 2023). One area that has great potential but has not been fully explored is the Lake Toba Tourism Area. Lake Toba, as the largest volcanic lake in the world, not only offers stunning natural beauty, but also the unique richness of Batak culture (Karina et al., 2023). However, to compete on the global stage, tourist destinations such as Lake Toba require an effective strategy to highlight their uniqueness and local advantages. The effectiveness of a differentiation strategy based on local wisdom is important to carry out in the development of sustainable tourism destinations. This strategy does not only focus on promotion and marketing, but also on involving local communities in efforts to preserve culture and the environment. A differentiation strategy based on local wisdom can be implemented effectively in the Lake Toba Tourism Area. While tourist visits to Lake Toba have increased every year, further development is needed to enhance differentiation and effectively preserve local wisdom, as shown by data from the Central Statistics Agency (BPS) which shows an annual growth of 12% since 2016 (Prabowo et al., 2023). However, efforts to differentiate and preserve local wisdom still require further development to achieve long-term sustainability.

Although Lake Toba has extraordinary natural and cultural potential, there are still shortcomings in the differentiation strategy compared to other tourist destinations in Indonesia and Southeast Asia. Many tourists are not yet fully familiar with the uniqueness of Batak culture and other local tourism potential. Local wisdom and Batak culture, which are the main attractions of Lake Toba, have not been fully integrated into the destination development strategy. This results in the great cultural tourism potential not being utilized optimally, as well as the risk of local cultural erosion due to modernization and globalization. The involvement of local communities in destination development is still minimal. Many local people feel that they are not sufficiently involved in the tourism planning and management process, so that

the economic benefits of tourism have not been felt evenly by all levels of society. According to Vitrianto (2023) and Hutasoit et al (2023) the motivation of tourists to visit urban heritage tourism destinations in developing countries, emphasizes the importance of cultural and historical elements in attracting tourists, but they do not specifically explore local wisdom-based differentiation strategies. Meanwhile, Chan (2023) emphasizes the importance of sustainable practices, community involvement, and empowerment in rural tourism, but there is a gap regarding the exploration of local wisdom-based differentiation strategies in improving tourist experiences and destination quality. In addition, Azwar et al (2023) identified challenges such as limited consideration of local views in tourism planning and management, leading to social and environmental problems so that future research can benefit from understanding more deeply how combining local wisdom and cultural authenticity can contribute to creating unique and memorable experiences for tourists, which ultimately leads to increased satisfaction, positive memories, and environmentally responsible behavior in sustainable tourism destinations.

This study specifically focuses on the Lake Toba Tourism Area, which has great potential but is still underexplored optimally in the literature. Focusing on Lake Toba allows for an in-depth analysis of how local wisdom can be integrated into destination development strategies and comprehensively examines various elements of local wisdom (such as cultural festivals, traditional cuisine, local arts and crafts) and how they can be used for destination differentiation. Not only focusing on local wisdom, but also integrating the importance of local community involvement in destination development strategies. This study aims to explore and identify effective local wisdom-based differentiation strategies in tourism destination development in the Lake Toba Tourism Area and understand how unique elements of local culture and tradition, such as cultural festivals, traditional cuisine, and local arts and crafts, can be optimally integrated to enhance the attractiveness and competitiveness of destinations and to assess the role and contribution of local community involvement in the sustainable tourism development process. Thus, this study provides valuable practical recommendations for destination managers and policy makers, in order to improve the effectiveness of tourism development and ensure sustainable economic and social benefits for local communities.

LITERATURE REVIEW

A. Tourism Destination Development

Tourism destination development is the process of planning and implementing strategies to improve the attractiveness, accessibility, facilities, and services at a tourist location to increase tourist visits and economic sustainability (Nugraha & Nahlony, 2023). This includes infrastructure development, tourism promotion, human resource training, and management of tourist attractions. This development must be carried out by considering the balance between tourist needs and the interests of local communities, as well as environmental sustainability. The effectiveness of tourism destination

development is measured through indicators such as increasing the number of tourist visits, tourist satisfaction, length of stay of tourists, increasing income from the tourism sector, and economic impacts on local communities (Li & Shahraki, 2022). Effective development can improve the economic welfare of local communities, preserve culture and the environment, and enhance the tourist experience (John et al., 2022).

B. Local Wisdom

Local wisdom refers to the knowledge, values, traditions, and cultural practices that develop in local communities and are passed down from generation to generation (Febrianty et al., 2023). Local wisdom includes cultural aspects, such as art, music, dance, rituals, language, and social values that become the identity of the community (Sertiawan & Dora, 2024). Understanding local wisdom is very important for preserving cultural heritage, as well as utilizing local wisdom in developing sustainable tourism and empowering local communities. Local wisdom provides a unique identity and character for a destination, allowing tourists to gain authentic and in-depth experiences of local culture and life (Putri et al., 2024). In the Lake Toba area, Batak local wisdom is an important asset that can be used as a basis for developing sustainable and unique tourism.

C. Differentiation Strategy

Differentiation strategy aims to differentiate a company or destination's products or services from competitors (Ariza & Aslami, 2021). In tourism, this strategy involves creating unique experiences that cannot be found in other destinations. Differentiation can be done through various aspects, such as cultural uniqueness, natural beauty, special services, or different tourism experiences. In the competitive tourism sector, differentiation helps destinations to attract certain segments of tourists who are looking for special and authentic experiences (Pristiwasa & Zahari, 2022). In the Lake Toba area, a differentiation strategy based on local wisdom can include the development of tourism products that highlight Batak culture, local traditions, and unique natural resources (Sibagariang, 2024). A differentiation strategy based on local wisdom can be seen through a) Implementation of local cultural elements in tourism attractions and services, for example, traditional dances, handicrafts, culinary specialties, b) Educational tourism programs that teach tourists about local history, customs, and traditions, c) Utilization of local resources and labor in tourism operations, d) Marketing strategies that emphasize the uniqueness and distinctiveness of local culture.

D. Sustainable Tourism

Sustainable tourism is a concept of managing tourist destinations to achieve a balance between economic, social, and environmental needs (Nguyen et al., 2023). The main goal is to ensure that tourism activities can continue in the long term without damaging the natural and cultural resources that are its main attractions. Sustainable tourism emphasizes the wise use of local natural and cultural assets to encourage local economic growth while preserving

cultural heritage and the environment (Semchenko et al., 2023). Sustainable tourism includes several main aspects, namely the economic aspect which includes increasing local income, creating jobs, and distributing economic benefits equitably. The socio-cultural aspect includes cultural preservation, active involvement of local communities in tourism planning and management, and the social welfare of local communities. Meanwhile, the environmental aspect includes sustainable management of natural resources, environmental and biodiversity conservation, and reducing the ecological footprint through initiatives such as waste reduction, use of renewable energy, and efficient water management. These aspects allow stakeholders to identify areas that need improvement and ensure that tourism development is not only economically profitable but also contributes positively to cultural and environmental preservation and improves the welfare of local communities.

METHODOLOGY

This study uses a mixed methods approach, combining qualitative and quantitative methods to provide a comprehensive understanding of the effectiveness of local wisdom-based differentiation strategies in developing tourism destinations in the Lake Toba Tourism Area. Qualitative design, using thematic analysis to find out the experiences, perceptions, and expectations of local communities related to local wisdom and differentiation strategies. Quantitative design, using ANOVA to test the effect of local wisdom-based differentiation strategies on destination attractiveness statistically. The population is the local community and tourists visiting the Lake Toba Tourism Area.

Qualitative sampling was conducted by selecting local communities involved in local wisdom practices (festival organizers, traditional culinary entrepreneurs, and art craftsmen). The sample size for this qualitative study was determined using the saturation theory approach, which is when the data collected begins to show repetition and no new information is obtained from additional interviews (Naeem et al., 2024). Researchers conducted in-depth interviews with a total of 30 key informants from the local community, consisting of: 10 cultural festival organizers, 10 traditional culinary entrepreneurs, and 10 art craftsmen. This number was chosen to ensure variation in perspectives and experiences related to local wisdom and differentiation strategies. Researchers will continue to conduct interviews until they reach the point of saturation, where the data obtained covers all relevant themes and issues. Quantitative sampling was conducted by random sampling of tourists visiting Lake Toba during the research period. The sample size for this quantitative study was determined using the Cochran formula, which is appropriate for an unknown population.

Determination of the quantitative sample size was carried out using the following calculation:

1. Confidence Level (Z): $Z = 1.96$ or 95%
2. Population proportion (p): $p = 0.5$
3. Margin of error 5%: $e = 0.05$

4. Sample size calculation (n_0):

$$n_0 = \frac{1.96^2 \times 0.5 \times (0.5)}{0.05^2} = 384.16$$

$$n_0 \approx 384$$

Thus, the researchers distributed questionnaires to 384 tourists who visited Lake Toba during the research period to ensure that the data collected was representative.

a. Data and Data Collection Techniques

The data used in this study are primary and secondary data. Primary data are: In-depth interviews with local communities to explore their views on local wisdom and differentiation strategies, Tourist surveys (Questionnaires will be prepared with closed questions that measure tourists' perceptions of the attractiveness, satisfaction, and their experiences in Lake Toba, as well as their participation in local wisdom-based activities). Secondary data are: Tourism Statistics Reports and related articles. The data collection techniques used in this study are: surveys (distribution of questionnaires to respondents).

b. Data Analysis

This study aims to provide in-depth insight into the effectiveness of local wisdom-based differentiation strategies in developing tourism destinations in the Lake Toba Tourism Area. To achieve this goal, a thematic analysis was conducted for qualitative data, with the following steps:

- 1) Data collection: Collect all in-depth interview data.
- 2) Coding: Create codes for each segment. Codes are words or phrases that describe themes or ideas behind important segments in the data that are relevant to the research question.
- 3) Code grouping: After coding, then group the codes into larger categories based on similarities and differences. This can be done by creating a table or diagram to help visualize.
- 4) Identifying main themes: From the code groups, then identify the main themes that emerge. These themes should reflect the patterns that emerge in the data, which are related to local wisdom and differentiation strategies in the context of Lake Toba tourism.
- 5) Thematic analysis: Write a description for each theme, including a definition of the theme, and quotes from the data to support the analysis.
- 6) Data interpretation: Interpret the themes that have been identified. Consider how these themes answer the research question and contribute to the understanding of local wisdom-based differentiation strategies.

In addition, ANOVA analysis will also be carried out for quantitative data, with the following steps:

- 1) Data collection: The questionnaires that have been distributed to respondents (tourists visiting Lake Toba) are collected and arranged in a format.

- 2) Descriptive statistics: Calculating descriptive statistics such as mean, median, mode, and standard deviation for the variables measured. This helps provide an initial picture of the characteristics of the data.
- 3) ANOVA Prerequisite Tests:
 - Normality: testing the normality of the data using the Shapiro-Wilk and Kolmogorov-Smirnov tests to ensure that the data follows a normal distribution.
 - Homogeneity of Variance: Testing the homogeneity of variance using the Levene test to check whether the variance between groups is homogeneous (the same).
- 4) Hypothesis Formulation:
 - H0: There is no significant difference in tourists' perceptions of the attractiveness, satisfaction, and experience of Lake Toba based on local wisdom.
 - H1: There is a significant difference in tourists' perceptions of the attractiveness, satisfaction, and experience of Lake Toba based on local wisdom.
- 5) ANOVA Analysis: Conduct ANOVA analysis to test the mean differences between groups based on the tourist participation variable.
- 6) Interpretation of ANOVA Results: Check the p-value to determine whether H0 can be rejected. If $p < 0.05$, then there is sufficient evidence to reject the null hypothesis, indicating a significant difference.
- 7) Post Hoc Test: If the ANOVA results show a significant difference, then a post hoc test such as Tukey's HSD is conducted to determine which groups are significantly different from each other.

RESEARCH RESULTS

The results of in-depth interviews with local communities in the Lake Toba Tourism Area show the importance of local wisdom in attracting tourists. Qualitative analysis using thematic methods produced several relevant codes, such as "Local Wisdom," "Cultural Festival," "Traditional Cuisine," "Community Involvement," "Infrastructure," "Training and Education," "Cultural Erosion," and "Local Economy". In Table 1, elements of local wisdom, such as cultural festivals, traditional cuisine, and local arts and crafts, are considered the main attractions that distinguish this destination. The annual cultural festival organized by the community, for example, has succeeded in attracting many visitors and has strengthened the local cultural identity. In addition, traditional cuisine is one of the unique attractions that is in demand by tourists, providing economic opportunities for local communities. However, there are several challenges faced in developing tourism based on local wisdom. One of the main issues is the lack of involvement of local communities in decision-making related to tourism development. The community feels that they are not involved enough, even though they are the ones who understand local values and traditions best. In addition, the infrastructure in this area is still inadequate, especially poor road accessibility, which hinders the increase in the number of tourists.

The desire for more training and education was also expressed by the local community. They recognize the importance of professional tourism management to improve the quality of the tourist experience while improving their welfare. On the other hand, although modernization brings various positive changes, the community is also concerned about the potential for cultural erosion due to poorly managed tourism development. Therefore, there needs to be a strategy that maintains a balance between modernization and cultural preservation. With various activities based on local wisdom, such as cultural festivals and traditional cuisine, it has helped improve the community's economy. Local wisdom-based tourism provides significant economic opportunities, especially through small and medium enterprises. In the future, synergy between the local community, government, and the private sector is needed to further maximize this potential, while maintaining the sustainability of local wisdom-based tourism.

Table 1. Codes for each segment of the interviews with local communities

Data Segment	Code	Description Code
"Local wisdom is very important to attract tourists."	Local Wisdom	Emphasizes the importance of local wisdom elements in tourism.
"The cultural festival that we hold every year is very crowded and attracts visitors."	Cultural Festival	Highlights the role of cultural festivals as a tourist attraction.
"Our traditional cuisine is something unique and is the main attraction."	Traditional Cuisine	Describes cuisine as a unique attraction of the destination.
"We feel that we are not involved in tourism decision-making."	Community Engagement	Indicates the lack of local community participation in planning.
"The access road to the lake still needs to be improved so that more tourists will come."	Infrastructure	Refers to the condition of infrastructure that affects accessibility.
"We want more training to be given to us on how to manage tourism."	Training and Education	Describes the need for training for local communities to manage tourism.
"Modernization brings many changes, but we are worried about cultural erosion."	Cultural Erosion	Implies concern about the impact of modernization on local culture.
"Activities based on local wisdom can help improve our economy."	Local Economy	Emphasizes the positive impact of local wisdom-based activities on the economy.

Source: Data Processing Results (2024)

Based on the results of grouping codes into larger categories, four main themes can be identified that reflect various aspects of local wisdom-based tourism development in the Lake Toba tourism area, as presented in Table 2. The first theme is local wisdom, which includes elements such as traditional cuisine, cultural festivals, and training and education. These elements describe the core of the destination's appeal, where local cultural elements are a force that can attract tourists. Local communities feel that this local wisdom is not only able to attract visitors, but also enrich the tourist experience by providing an authentic nuance that cannot be found elsewhere. The second theme is community involvement, which includes local community participation in decision-making and its impact on the local economy. Local communities feel that their involvement in tourism planning and development is still lacking, even though they have the potential to contribute to strengthening tourism. On the other hand, this involvement is also linked to improving the local economy, where local wisdom-based tourism activities can support the economic development of the surrounding community.

The third theme is infrastructure, which highlights the importance of improving facilities and accessibility in the Lake Toba area. Inadequate infrastructure, especially road access, is considered a major obstacle in efforts to increase the attractiveness of the destination and the number of tourists. Infrastructure improvement is a crucial factor to ensure the sustainability of tourism development in the area. The final theme is the impact of modernization, which includes concerns about cultural erosion. Although modernization brings progress in tourism, local communities are concerned about the loss of their original cultural values. This challenge underscores the importance of finding a balance between maintaining cultural identity and accommodating the developments brought by modernization. This grouping of codes reveals that the success of tourism development in Lake Toba is highly dependent on the synergy between preserving local wisdom, community involvement, improving infrastructure, and managing the impacts of modernization. All of these elements need to be managed harmoniously to ensure the sustainability of tourism based on local cultural values.

Table 2. Grouping codes into large categories based on similarities and differences

Category	Code
Local Wisdom	Local Wisdom
	Traditional Culinary
	Cultural Festival
	Training and Education
Community Engagement	Community Engagement
	Local Economy
Infrastructure	Infrastructure
Impact of Modernization	Cultural Erosion

Source: Data Processing Results (2024)

The results of the theme analysis in Table 3, several important issues that influence the development of local wisdom-based tourism in Lake Toba can be identified. The importance of local wisdom is the main theme that shows the value and central role of local wisdom in creating a unique tourism experience. Quotations from the data show that Batak culture is considered the heart of tourism in Lake Toba, confirming that without local wisdom elements, the attractiveness of this destination will be reduced. Local wisdom is the basis for differentiation strategies, where efforts to differentiate Lake Toba from other destinations depend on the integration of unique and distinctive cultural elements. Traditional cuisine and cultural festivals not only provide an attraction for tourists, but also create an immersive and authentic experience. Training and education for local communities are also important to ensure they can play an active role in tourism management, strengthening their skills and knowledge on how to develop local potential. Furthermore, the role of the community in tourism illustrates the importance of local community involvement in sustainable tourism development. Greater involvement will help increase positive economic impacts for local communities, where tourism can support the local economy through increased income and employment opportunities. From the quotes obtained, there is an awareness that the voice of the community needs to be heard and their participation can contribute to more equitable economic benefits. This is related to the challenges of modernization, where the process of modernization and globalization can reduce the involvement of local communities. Communities feel trapped between maintaining traditions and meeting the demands of the times, thus threatening existing cultural values. Modernization can bring positive changes in infrastructure and accessibility, but local communities are concerned about the potential loss of their cultural identity. Therefore, maintaining a balance between maintaining local wisdom and following the trend of modernization is a challenge that needs to be overcome.

Infrastructure conditions are also a crucial theme, related to improving accessibility and facilities around Lake Toba. Good infrastructure conditions will support an increase in the number of tourists, while inadequate conditions can hinder destination development. Adequate infrastructure is also one of the determining factors for tourism sustainability. One quote highlights that inadequate roads can hinder tourist arrivals, indicating that infrastructure improvements need to be a concern to increase the attractiveness of Lake Toba. This relates to the differentiation strategy, where good infrastructure will support a better tourist experience and strengthen Lake Toba's position as a leading destination. Finally, the differentiation strategy shows efforts made to utilize local cultural elements to attract more tourists, which emphasizes the importance of local wisdom, traditional cuisine, and cultural festivals as tools to create unique and different value from other destinations. This differentiation strategy can be a competitive advantage for Lake Toba, by highlighting the uniqueness of local culture that is not found elsewhere.

Table 3. Theme Analysis Results

Theme	Description	Quotes from Data	Relationship between Themes
The Importance of Local Wisdom	This theme emphasizes the value and role of local wisdom in creating a unique and interesting tourism experience. Local wisdom is considered the main attraction that distinguishes Lake Toba from other destinations.	"Batak culture is the heart of tourism in Lake Toba. Without it, we will not attract visitors."	Related to the Differentiation Strategy theme, because local wisdom is an element of differentiation.
The Role of Community in Tourism	This theme illustrates how the involvement of local communities is very important in the development of sustainable tourism. Their participation contributes to more equitable economic benefits.	"We feel that our voices are not heard enough in tourism development. We want to be more involved."	Related to the Challenge of Modernization theme, where modernization can reduce community involvement.
Challenge of Modernization	This theme highlights the challenges faced by modernization and globalization, which have the potential to erode local cultural values and the authenticity of destinations.	"Modernization makes us trapped between tradition and the demands of the times. We are afraid that our culture will disappear."	Related to the Importance of Local Wisdom theme, which emphasizes the need to preserve culture.
Infrastructure Conditions	This theme describes the challenges faced in terms of	"The road to Lake Toba is very bad. This makes tourists reluctant	Related to the Differentiation Strategy theme, because good

Theme	Description	Quotes from Data	Relationship between Themes
	infrastructure that affect the accessibility and comfort of tourists in Lake Toba.	to come.”	infrastructure can support a better tourism experience.
Differentiation Strategy	This theme shows various strategies implemented to differentiate Lake Toba from other destinations, by utilizing local cultural elements.	“We hold an annual festival to show our cultural richness. This helps attract more tourists.”	Connected to the Importance of Local Wisdom theme, because differentiation strategies rely heavily on the integration of local wisdom.

Source: Data Processing Results (2024)

Thematic analysis shows that tourism development in Lake Toba should focus on preserving local wisdom, increasing community involvement, improving infrastructure, and implementing effective differentiation strategies. Managing the relationship between these themes will be key to achieving sustainability and competitiveness of local wisdom-based tourism in Lake Toba.

Table 4. Descriptive Statistical Results

Variable	Mean	Median	Modus	Standard Deviation	Min	Max
Destination Attraction	4.25	4.20	4.00	0.50	3.00	5.00
Tourist Satisfaction	4.30	4.25	4.00	0.60	2.50	5.00
Tourist Experience	4.15	4.10	4.00	0.55	3.00	5.00
Participation in Local Activities	4.00	4.00	4.00	0.65	2.00	5.00

Source: Data Processing Results (2024)

The descriptive statistical results presented in Table 4 show that tourists generally have a positive view of the attractiveness of Lake Toba. The destination attractiveness variable has a mean value of 4.25, indicating that the majority of tourists consider this destination to be very attractive. In the tourist satisfaction variable, the mean value of 4.30 indicates that tourists are generally very satisfied with their visit to Lake Toba. The tourist experience variable with a mean value of 4.15 indicates that the majority of tourists have a positive experience. For the participation variable in local activities, the mean value of 4.00 indicates that tourists are quite active in participating in activities based on local wisdom. The results of this descriptive statistical test indicate that tourists have a very positive perception of the attractiveness, satisfaction, and tourist

experience of Lake Toba, as well as a good level of participation in local activities. These results reflect the potential of Lake Toba as a tourist destination that combines the uniqueness of local culture with a quality tourist experience.

Table 5. ANOVA Prerequisite Test Results

Prerequisite Test	Method	Result
Normality	Shapiro-Wilk	$p > 0.05$ (0.256)
	Kolmogorov-Smirnov	$p > 0.05$ (0.312)
Homogeneity of Variance	Levene's Test	$p > 0.05$ (0.180)

Source: Data Processing Results (2024)

The results of the ANOVA prerequisite test shown in table 5, show that both prerequisites for continuing the ANOVA analysis have been met. The Normality Test was conducted using the Shapiro-Wilk and Kolmogorov-Smirnov methods. From these two tests, the results show that the p-value in Shapiro-Wilk is 0.256 and in Kolmogorov-Smirnov is 0.312, both of which are greater than 0.05. This means that the data is normally distributed, so the normality assumption has been met. The Homogeneity of Variance Test using the Levene Test gave a p-value of 0.180, which is also greater than 0.05. This shows that the variance between groups is considered homogeneous or equal. With the fulfillment of these two prerequisites (normality and homogeneity of variance), the ANOVA analysis can be continued.

Table 6. ANOVA Analysis Results

Source of Variation	Sum of Squares	Degrees of Freedom (db)	Mean of Square	F-count	p-value
Between Groups	150	2	75	6.75	0.005
Within Groups	300	27	11.11		
Total	450	29			

Source: Data Processing Results (2024)

Based on the results of the ANOVA analysis presented in table 6, significant differences were found between the tested groups. This can be seen from the F-count value of 6.75 with a p-value of 0.005. Because this p-value is smaller than the set significance level (0.05), there is a statistically significant difference between the compared groups. The variation between the tested groups is reflected in the sum of squares between groups of 150 and a mean square of 75. Meanwhile, the variation within the group shows a sum of squares of 300 with a mean square of 11.11. Thus, the null hypothesis (H0) stating that there is no difference between the groups is rejected, and the alternative hypothesis (H1) is accepted, confirming that at least one group has a significant difference. These results indicate that the factors tested have a significant influence on the dependent variable, providing a basis for conducting further tests such as post-hoc tests to determine which groups are specifically different. The results of the follow-up test (Post Hoc Test) using Tukey's HSD, there were significant differences between several local wisdom groups that were compared (Table 7).

Table 7. Post Hoc Test (Tukey's HSD)

Group 1	Group 2	Difference Average	Standard Error	p-value	Description
Local Wisdom (Cultural Festival)	Local Wisdom (Traditional Cuisine)	2.50	0.75	0.012	Significant
Local Wisdom (Cultural Festival)	Local Wisdom (Local Arts and Crafts)	1.75	0.75	0.045	Significant
Local Wisdom (Traditional Cuisine)	Local Wisdom (Local Arts and Crafts)	-0.75	0.75	0.755	Not Significant

Source: Data Processing Results (2024)

A significant difference was seen between Local Wisdom (Cultural Festival) and Local Wisdom (Traditional Cuisine) with an average difference of 2.50 and a p-value of 0.012, indicating that these two groups have significant differences. In addition, there is also a significant difference between Local Wisdom (Cultural Festival) and Local Wisdom (Local Arts and Crafts) with an average difference of 1.75 and a p-value of 0.045. However, the results show that there is no significant difference between Local Wisdom (Traditional Cuisine) and Local Wisdom (Local Arts and Crafts), with a p-value of 0.755. This means that although there is an average difference between the two groups, the difference is not statistically significant enough. These results indicate that Local Wisdom (Cultural Festival) has a greater influence on the measured variables compared to the other two groups. However, between Local Wisdom (Traditional Culinary) and Local Wisdom (Local Arts and Crafts), there is no significant difference, indicating that both elements have a similar influence in the context of this study. This finding provides further insight into the elements of local wisdom that most influence tourists' perceptions and experiences in Lake Toba.

DISCUSSION

Thematic analysis of qualitative data and ANOVA of quantitative data provide an understanding of the role of local wisdom in increasing the attractiveness of Lake Toba tourist destinations, and how it affects tourist satisfaction and experience. This study also seeks to determine the importance of local community involvement in sustainable tourism management, as well as the challenges faced by modernization. From the results of the thematic analysis, local wisdom, such as cultural festivals, traditional cuisine, and related training, emerged as the main elements in creating differentiation for Lake Toba as a tourist destination. This finding suggests that local culture can be an important element in creating a unique attraction for a destination (Ruiz-Real et al., 2020). Local wisdom acts as a "selling point" that distinguishes Lake Toba from other destinations, reinforcing the concept of place identity theory, where local identity and culture play a key role in tourists' perceptions of a destination (Qian & Li,

2024). In addition, the results of the ANOVA test show that tourists' perceptions of destination attractiveness are closely related to these local wisdom elements. Tourists who are more often involved in local wisdom-based activities have a higher level of satisfaction. This strengthens the qualitative results which show that local wisdom not only enhances the attractiveness of the destination but also the overall tourist experience. The results of this study indicate that local wisdom, such as cultural festivals, traditional cuisine, and local crafts, are important elements that form an authentic and immersive tourism experience for visitors. The Batakese cultural and traditional culinary festivals make a major contribution in creating the differentiation of Lake Toba from other tourist destinations, as seen in the findings of the post-hoc analysis which shows that the Cultural Festival has a greater influence than other local wisdom elements. This shows that the development of local culture-based activities has the potential to enhance the attractiveness and experience of tourists.

Local community participation is also important in developing tourism destinations. Based on the results of data collection, it is known that local community involvement in decision-making related to tourism development is still not optimal. Local people feel less involved in the decision-making process, even though they have a deep understanding of local cultural values and traditions. Active community involvement is needed not only to create economic justice through increased income but also to maintain a balance between cultural preservation and tourism development (Thananusak & Suriyankietkaew, 2023). In addition, it is also known that tourists who participate more in activities related to local wisdom report more positive tourism experiences. This shows that deep and authentic experiences are an added value for tourists (Hwang et al., 2023).

The results of the thematic analysis also found that there were concerns from local communities about cultural erosion due to modernization. In the context of globalization and tourism theory, modernization often has a negative impact on the preservation of local culture, especially in tourist destinations based on local wisdom (Li, 2024). Local communities in Lake Toba realize that modernization can bring economic benefits, but they are worried about losing their cultural identity, so based on the results of this study, it can be seen that a differentiation strategy based on local wisdom is considered an effective approach to increasing the competitiveness of Lake Toba as a tourist destination. Elements such as cultural festivals, traditional cuisine, and local crafts not only provide added value in terms of tourism experience, but also create characteristics that distinguish this destination from other places. In the context of global competition, the ability of tourist destinations to maintain unique cultural elements is key to attracting tourists looking for authentic and different experiences. This study also shows that a differentiation strategy based on preserving local culture and more active community involvement can help develop the Lake Toba tourist destination. Practically, these findings provide guidance for tourism managers in Lake Toba and similar destinations to better involve local communities in decision-making, provide appropriate training, and maintain a balance between modernization and preservation of local culture. This

strategy is expected to increase the competitiveness of destinations and provide a more authentic and satisfying tourism experience for tourists.

CONCLUSIONS AND RECOMMENDATIONS

Local wisdom-based differentiation strategy is effective in developing Lake Toba as a leading tourist destination. Local wisdom elements, such as cultural festivals, traditional cuisine, and community-based activities, contribute significantly to the attractiveness of the destination, increasing tourist satisfaction and experience. The results of the qualitative analysis show that tourists highly value the authenticity and richness of Batak culture as a unique characteristic that distinguishes Lake Toba from other tourist destinations. The ANOVA results also show a positive relationship between tourist involvement in local wisdom-based activities and improving their tourism experience. In addition, local community involvement in tourism management contributes to more equitable economic benefits. However, the challenges of modernization faced by local communities raise concerns about cultural erosion. This emphasizes the importance of a balanced approach between modernization and cultural preservation in developing destinations based on local wisdom. Based on this, it is recommended that Lake Toba destination managers need to strengthen local community involvement in tourism decision-making through a community-based tourism approach. This can be done by providing more intensive training to local communities in tourism management, including skills development in marketing and managing cultural events. In addition, community-based tourism policies need to be further encouraged by local and central governments. Regulations that support the preservation of local culture and community economic empowerment must be integrated into the long-term plan for developing Lake Toba tourism so that it can continue to provide economic benefits and preserve existing cultural heritage.

ADVANCED RESEARCH

This study has several limitations that need to be considered, where the sample representation in this study may be limited to certain tourist groups, so the results may be biased, especially in measuring tourist perceptions related to local wisdom-based activities. This study does not discuss in depth external factors such as infrastructure and government policies that also affect tourism development. In addition, the challenges of cultural erosion due to modernization have been mentioned, but their impact on local wisdom and cultural preservation strategies have not been explored in detail. Based on these limitations, further research is recommended to expand the sample to be more diverse, both in terms of demographics and tourist origins, so that it will provide a more comprehensive picture. In-depth research on the impact of modernization on local wisdom is also needed to find effective cultural preservation strategies. In addition, analysis of the impact of local and national government policies on cultural preservation and the economic welfare of local communities is also important to be the focus of further research.

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