GEOTOURISM DEVELOPMENT FOR YOUNG TOURISTS BASED ON EDUCATION ASPECT IN TONGGING, KARO REGENCY

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ABSTRACT
In recent years, the tourism industry is extremely competitive. Tourist destinations must continue to innovate to attract tourists currently dominated by young tourists who like to seek new knowledge and experiences. Besides innovating, tourist destinations must pay attention to environmental sustainability. One of the tourism concepts that prioritizes sustainability and provides new knowledge and experiences is geotourism. Geotourism is a tourism concept that used geodiversity, biodiversity, and cultural diversity as a tourist attraction that can also educate tourists where its management prioritizes environmental sustainability. Tongging is one part of the UGG Geopark Caldera Toba, which many young tourists currently visit. However, the application of geotourism in Tongging is still minimal, especially the educational aspect. Therefore, this paper aims to develop the concept of geotourism that can be applied to young tourists in Tongging based on the educational aspect. Elements of education, promotion and interpretation, were analyzed using descriptive analysis using a mixed method by conducting field observations, distributing questionnaires, and interviews. This study shows that the use of social media in the promotion and innovative interpretation can increase the development of geotourism for young tourists based on educational aspects, which are currently still not optimal.

KEYWORDS: Education, Geotourism, Tongging, Young Tourists

1. INTRODUCTION
Tourism is one of the country's most significant foreign exchange incomes [1]. Therefore, the tourism industry is one of the most highly competitive industries. It makes the countries continue to develop their tourism to compete continuously. Currently, sustainable tourism is most widely used because this concept will continue to make a sustainable tourist destination in the future. One of the concepts of sustainable tourism is geotourism. The concept of geotourism or geotourism is a tourism development concept that prioritizes natural wealth, namely geodiversity, as a tourist attraction that can also educate tourists where its management prioritizes local communities while maintaining environmental sustainability and sustainability [2] – [4].

The concept of geotourism has an indirect relationship with young tourists. Geotourism is a relatively new type of tourism, so it requires much promotion. Young tourists can provide these promotions for
free easily and quickly through social media [5]. In addition, young tourists in traveling are looking for new experiences that can provide by geotourism [6] - [7]. Young tourists often get less attention because they are considered not much, but recently, tourism for young tourists has increased and has become an essential role in the tourism industry [5]. It is shown by UNWTO report in 2016 [8], which says that Youth travel has become one of the fastest-growing segments of international tourism, representing more than 23% of the over one billion tourists traveling each year internationally.

The concept of geotourism introduced in Indonesia as in 2012, Mount Batur Bali became a UNESCO Geopark (UGG) member, followed by Mount Sewu and Ciletuh 2015. Lastly, Lake Toba became a member of UGG in April 2020. Tongging is one part of the Toba Caldera, which has outstanding natural beauty. Nowadays, Tongging is quite popular, especially among young people. They can visit many interesting places such as Sapo Juma, Puncak Sipiso-piso, Sipiso piso Waterfall, Gajah Bobok, Jabu Ertuah Flower Garden, and Tongging beach.

One aspect of forming geotourism is the educational aspect. Education in geotourism provides the basis for formal and non-formal education for people of all ages through desk-based learning and outdoor learning opportunities regarding knowledge related to geodiversity [9]. One of the motivations for young tourists to travel is education, where young tourists are strongly influenced by the desire to gain new knowledge and experiences [7]. Currently, no research examines Tongging to be developed with the concept of geotourism for young tourists, primarily based on the educational aspect. Therefore, this paper aims to develop the concept of geotourism that can be applied to young tourists in Tongging based on the educational aspect.

2. LITERATURE REVIEW

2.1. Geotourism

Geotourism is a type of sustainable tourism that can be said to be relatively new. The term of geotourism was first used by Hose in 1995. They defined geotourism as tourism that conducts geo-conservation to understand the geology (geohistory) history that can be easily interpreted to the general public (geo-interpretation) [10]. Dowling also defines geotourism as a form of sustainable tourism that focuses on experiencing the earth's geological features by fostering an understanding of the local environment and culture, appreciating and conserving it, and benefiting society [3]. According to Fung, geotourism is a form of nature tourism for notable interest tourists to learn about the geological significance of an area [11]. In her article, Ginting wrote that geotourism could be considered nature-based tourism but with a unique location and an educational element that makes it different [12]. From the opinion of several experts, it can be concluded that one of the essential elements that must have by geotourism is the element of education obtained from geological interpretation to ordinary people such as tourists.
2.2. Young Tourists
Young tourists are young people aged 15 to 29 years who go for walks without a parent or guardian [7]. According to Haigh, young tourists, when traveling, have their preferences for travel costs, prioritizing places where they can meet tourists again, organize their trips, have flexible time, and take long vacations [13]. Young tourists are interested in recreational activities and visit new places even though they have limited funds [6]. Young tourists are also thrilled to get unexpected experiences and discover something on the way, and they are also interested in the local community's culture [14].

2.3. Education Aspect for Young Tourists
Education in geotourism is vital because one of the main goals of geotourism is to educate visitors about geological formations. In geotourism, education is in the form of interpretation of geological significance where the interpretation is in the form of interpretive panels, tour guides, cultural/tourist activities, and in the form of museums [3], [11], [15]. Overall, education in tourism is not only in the form of interpretation but also promotion [16]. According to Horak & Weber [7], one of the motivations of young tourists traveling is education, where young tourists are strongly influenced by the desire to get new experiences. So different from other visitors who travel because they want to escape from real life, young tourists travel because they are thirsty for new knowledge and experiences.

Destination promotion is the first education that tourists get that affects their motivation to visit a place [17]. Promotion is selling tourist attractions to tourists and providing education or information about the history, culture, and environment there [18]. Various forms of promotion include brochures and leaflets, travel services, websites, or the most effective for today, namely social media [18]. Concerning young tourists, they can provide promotions for free, efficiently, and quickly through social media to tourist destinations [5]. However, it depends on how the existing conditions at the tourist destination must be the same or better than the promotion. If there is a negative difference, then young tourists will become dissatisfied and criticize the place [16].

The experiences gained by tourists in a tourist destination can make tourists learn and contribute to maintaining the sustainability of the place. A reasonable interpretation is needed to get it so that they understand what they are experiencing [17], [19]. At this time, the interpretation model is not only in the form of an ordinary information panel or just a tour guide but can take the form of other things such as the direct practice of doing a local community activity (cultivating crops, weaving). For young tourists, the old ways, such as the "one on one" interpretation given by tour guides, are not very effective because young tourists like adventure and new experiences, so they do not like the slightly formal way.
3. RESEARCH METHODOLOGY
This study aims to find the development of geotourism for young tourists from an educational aspect. This research uses a mixed-method with primary data taken by distributing questionnaires, interviews, and field surveys in the study area (Figure 1). For the distribution of questionnaires, 150 young tourists with an age range of 15-29 years, sampling was carried out by probability sampling selected randomly in 6 tourist destinations in Tongging, which became the study area. Interviews were conducted with six interested parties in tourism in geotourism destinations in Tongging; in this case, the figures involved are the Regional Government, the Central Government, the Toba Caldera Geopark Management Agency, and tourism actors/tourist destination managers.

Figure 1: Tourism Destinations in Tongging, Karo Regency which are Research Areas

Primary data was obtained through the distribution of questionnaires in the form of nominal data and Likert scale (scale 1 to 5) questions analyzed by descriptive analysis through frequency distribution for nominal data and central tendency-mean for Likert scale questions (table 1). Furthermore, it will be translated by connecting it with related theories. From the results of this interpretation will be obtained conclusions and recommendations for this study.
### Table 1: Variable from the educational aspect and the method of data collection

<table>
<thead>
<tr>
<th>Statement</th>
<th>Data Collection</th>
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<tbody>
<tr>
<td>Promotion</td>
<td></td>
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<tr>
<td>Promotion in this tourist destination is interesting.</td>
<td>Observation; Interview; Questionnaire (Likert scale)</td>
</tr>
<tr>
<td>Information/Promotion related to tourist destinations is matched with the conditions at the location.</td>
<td>Observation; Interview; Questionnaire (Likert scale)</td>
</tr>
<tr>
<td>Media used to obtain information related to tourist destinations.</td>
<td>Observation; Interview; Questionnaire (Nominal Data)</td>
</tr>
<tr>
<td>Interpretation</td>
<td></td>
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<tr>
<td>The activities and information that achieve at this tourist destination gave a new experience.</td>
<td>Observation; Interview; Questionnaire (Likert scale)</td>
</tr>
<tr>
<td>The activities and information are easy to understand</td>
<td>Observation; Interview; Questionnaire (Likert scale)</td>
</tr>
<tr>
<td>Knowledge of Young Tourists about Geotourism/Geopark</td>
<td>Observation; Interview; Questionnaire (Nominal Data)</td>
</tr>
</tbody>
</table>

### 4. RESULT & DISCUSSION

The questionnaire respondents were 150 people from 6 tourist destinations in Tongging. The majority of young tourists who are respondents are 15-20 years old (60%). They are also majority from regencies/cities around Karo Regency, as many as 142 people or 95%, most of them coming from Medan city as many as 83 people or 55%, and about three people or 2% from Java (Central Java & DKI Jakarta). They are dominated by males, with as many as 84 people (56%) of the total respondents as many as 150 people. Most of the respondents' last education was high school/equivalent to 93 people (62%). Following their latest education, most respondents do not have a job (95 people or 63%), while those who work are from private companies, as many as 35 people (23%). The majority of tourists return home in visiting tourist attractions, as many as 83 people (55%); the remaining 41 people (27%) stayed for one day; 24 Persons (16%) stay for 2-3 Days, and two people (1%) stay more than three days.

### 4.1. Promotion

Destination promotion is the first education that tourists get that can affects their motivation to visit a place (Falk et al., 2012). Promotion is selling tourist attractions to tourists and providing education or information about the history, culture, and environment there [18]. Based on the questionnaire results (Table 2), according to young tourists, the promotions carried out in the Tongging area have been quite...
attractive (3.69). Karo Regency government uses media such as websites (Figure 2) and social media such as Instagram (Figure 3) to promote tourist destinations and tourist events in Karo Regency and especially tourist destinations in Tongging. However, this website and social media are still not up to date. Of the six tourist destinations surveyed, only Sapo Juma has social media on Instagram (Figure 3). It is in line with young tourists’ opinion that the promotion carried out by Sapo Juma (3.92) is the most attractive among the six geotourism destination locations surveyed. Tourist destinations that can use social media will be able to compete compared to those that do not [20].

Figure 2: Karo Regency Tourism and Culture Office Website

According to interviewees, the promotion of tourist destinations that have been carried out is also quite good but must be improved again. The Karo Regency Government plans to improve marketing by strengthening existing websites and social media, increasing tourism events that the government and the private sector carry out, and increasing collaboration in promoting tour packages and tourism events.

“We currently have a website and social media to promote geotourism in Karo Regency. We have held annual tourism events such as flower and fruit festivals, paragliding attractions, Karo coffee festivals, and tours de Sinabung. In the future, we will increase marketing through websites and social media, increase tourism events by the government and the private sector, and increase collaboration in promoting tourism packages and events in Karo.”

Local Government/ Office of Tourism and Culture of Karo Regency
According to young tourists, information and promotions related to tourist destinations match the conditions at the location. (3,51). Promotions carried out by the local government and managers of tourist destinations in Tongging are currently matched with the conditions at the location; nothing is exaggerated; this can be seen from the uploads of photos on the website or social media. In line with the informant’s statement, the promotion of tourist destinations in Tongging matched the existing conditions so that tourists who came did not feel disappointed. Promotions must be matched with the conditions that exist in tourist destinations. It is to make young tourists believe in the places they visit, what they get at tourist destinations they will convey to social media so that inappropriate promotions can have a harmful impact, so otherwise [5], [21].

“Of course, what we promote to tourists must be matched the conditions in tourist destinations so that tourists will not be disappointed when they come to tourist destinations.”

Tourist Destination Manager
Table 2: Promotional elements in Educational Aspects for Young Tourists

<table>
<thead>
<tr>
<th>Statement</th>
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<tbody>
<tr>
<td>Promotion in this tourist destination is interesting.</td>
</tr>
<tr>
<td>3.52 3.68 3.64 3.92 3.72 3.68 3.69</td>
</tr>
<tr>
<td>Information/Promotion related to tourist destinations is matched</td>
</tr>
<tr>
<td>with the conditions at the location.</td>
</tr>
<tr>
<td>3.48 3.44 3.44 3.52 3.52 3.68 3.51</td>
</tr>
</tbody>
</table>

The media used to obtain information related to tourism destinations in Tongging (Table 3) which is most in demand by young tourists, is social media (48%). Other than social media, direct testimonials from family and friends are also young tourist's favorite (32%). Internet platforms other than social media are less favorite media used by young tourists (15%). Likewise, travel agencies do not become a medium used by young tourists to obtain related information about the tourism destinations they want to visit (5%). It is in line with what was stated by Chiguvi [22], who said that social media is the best place to interact with potential tourists and is highly effective in attracting world markets and can form good relationships with tourists. The tourist market mainly obtained from social media is the young tourist market whose daily life is influenced by the internet and social media. They are easier to adapt to the information obtained than other generations [23].

Table 3: Promotional elements in Educational Aspects for Young Tourists

<table>
<thead>
<tr>
<th>Media used to obtain information related to tourist destinations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sipiso – Piso Waterfall</td>
</tr>
<tr>
<td>Internet platform</td>
</tr>
<tr>
<td>Social media</td>
</tr>
<tr>
<td>Family and friend</td>
</tr>
<tr>
<td>Travel Agent</td>
</tr>
</tbody>
</table>

Although social media is a favorite media for young tourists to get information related to tourist destinations, the use of social media in tourist destinations in Tongging is still minimal. Furthermore,
it can be seen as only one social media account (Figure 3) promoting tourist destinations in Karo Regency, which upload frequency does not often and only in the form of reposts from other accounts. In addition, of the six geotourism destination locations in Tongging surveyed, only Sapo Juma has a social media account (Figure 3). However, the uploads are also still in the form of reposts from other accounts.

The promotion of tourist destinations in Tongging can be improved again by using social media effectively, a favorite promotional media for young tourists. It has also been proven through research conducted by Sahin & Sengun [24] that social media greatly influences the preferences of young tourists when traveling. So local governments and managers of tourist destinations must be more creative and innovative in the use of social media. Good use of social media can increase potential tourists coming to visit tourist destinations [25]. Rathore explains again that stakeholders must focus on utilizing social media and providing reliable information. This information includes special events, destination stories, and testimonials from tourists who have visited. Local governments and managers can use social media to interact with young tourists to convince young tourists of their tourist destinations.

4.2. Interpretation

Education in tourism is in the form of experiences gained by tourists through the interpretations of the tourist destination. The experience gained by tourists in tourist destinations can make tourists learn and contribute to maintaining the sustainability of that place. An excellent interpretation is needed to get it to understand what they are experiencing [17], [19].

Figure 4: Geopark Educational Activities carried out at Sipiso-Piso Waterfall (source: Karo Regency Tourism and Culture Office)

Based on the questionnaire results (Table 4), the activities and information that young tourists get at tourist destinations in Tongging provide new experiences for them (3.85). Sipiso-Piso Waterfall received the highest rating from young tourists (4.16). The high rating of Sipiso-Piso Waterfall is in
line with the conditions found at the location. Sipiso-Piso Waterfall has geotourism interpretation panels, and geotourism events (Figure 4) are often held at this location. Meanwhile, Jabu Ertuah Flower Garden received the lowest rating from young tourists (3.40). This place is a colorful and well-organized flower garden that is the most attractive place for young tourists to take pictures in the middle of a flower bed. There are no geotourism educational activities there at all.

Table 4: Elements of Interpretation in Educational Aspects for Young Tourists

<table>
<thead>
<tr>
<th>Statement</th>
<th>Sipiso – Piso Waterfall</th>
<th>Puncak Sipiso - Piso</th>
<th>Gajah Bobok</th>
<th>Sapo Juma</th>
<th>Jabu Ertuah Flower Garden</th>
<th>Tongging Beach</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>The activities and information that achieve at this tourist destination gave a new experience.</td>
<td>4.16</td>
<td>3.92</td>
<td>3.84</td>
<td>3.88</td>
<td>3.40</td>
<td>3.92</td>
<td>3.85</td>
</tr>
<tr>
<td>The activities and information are easy to understand</td>
<td>3.52</td>
<td>3.56</td>
<td>3.48</td>
<td>3.76</td>
<td>3.68</td>
<td>3.88</td>
<td>3.64</td>
</tr>
</tbody>
</table>

According to young tourists, the activities and information obtained from tourist destinations in Tongging are easy to understand (3.68). Tongging Beach got the highest rating from young tourists (3.88). It is because, just like Sipiso-Piso Waterfall, on Tongging Beach, there are interpretation panels (Figure 5), and geotourism education activities are often carried out in this place. Gajah Bobok Hill received the lowest rating from young tourists (3.48). It is because at Gajah Bobok there are no interpretation panels and only a camping place. Interviewees believed that the information obtained was easy to understand, but this was due to the lack of available forms of interpretation. Gordon [26] states that the interpretation must be more innovative and involve tourists more to get new and memorable experiences. Young tourists will prefer tourist destinations that give them unexpected new experiences, and they are also interested in the local community's culture [14].
In line with the informant's statement, when asked about the knowledge of young tourists related to geotourism/geoparks (Table 5), very few young tourists know about geotourism/geopark. As many as 69% do not know about geotourism/geoparks. From this, it can be concluded that the interpretation in Tongging has not been successful. The current interpretation media are interpretation panels, which unfortunately are no longer adequate, and geopark educational activities are not carried out regularly by the Government and tourism managers. In addition, in Tongging, there is also no geotourism/geopark information center that can provide initial knowledge for tourists.

“In Tongging, there is still very little information related to geotourism. Information panels are only few, and many have been damaged; there is also no information center for geotourism”

Toba Caldera Geopark Management Agency

<table>
<thead>
<tr>
<th>Tourist Destination</th>
<th>Know</th>
<th>Not Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sipiso-piso Waterfall</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Puncak Sipiso-piso</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Gajah Bobok</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Sapo Juma</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>Jabu Ertuah Flower Garden</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Tongging Beach</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>%</td>
<td>31%</td>
<td>69%</td>
</tr>
</tbody>
</table>
Interpretation in the Tongging tourist destination is still lacking; the Government and destination managers can innovate and be creative in interpreting. This interpretation can take the form of exciting information panels, geotourism information centers, and conservation activities or performances involving tourists [3]. An excellent interpretation will add experience and knowledge to tourists and make them more interested in conservation [10]. An excellent interpretation is when information about geoheritage can be understood and becomes an exciting experience for tourists [9]. One of them is by not only telling the story clearly but also connecting it with engaging storytelling or connecting it with cultural performances, interesting thematic trails, or other activities that directly involve young tourists [9], [27]-[28]. Enjoyable interpretation activities will surely make young tourists like this tourist destination even more because they are looking for tourist destinations that can provide them with new and exciting experiences [6], [14].

5. CONCLUSION & RECOMMENDATION
The development of geotourism for young tourists based on the educational aspect in Tongging, Karo Regency is still not optimal. Overall, young tourists quite like the promotions where they think that the promotions are pretty interesting, and the information promoted matches the conditions in the location. However, the current promotion of tourist destinations has not maximized the use of social media, even though social media has become a favorite medium for young tourists in Tongging. The existence of doubts about the results obtained through social media makes the government and destination managers not invest more in social media marketing [29]. However, based on the results of this study, the government and tourism destination managers can start investing in social media marketing.

Regarding the interpretation that has been done so far, there is still very inadequate. However, young tourists think they have got new experiences and exciting and easy to understand, but more than half of young tourists do not know what geotourism/geopark is. This lack of knowledge is due to the lack of interpretation media in Tongging, only in information boards without guides or information centers. Government and tourism destination managers can use innovative interpretations that integrate geological and cultural history, such as based around trails and on-site panels, digital tools and novel exhibits and installations of rock sculptures and land art designed to stimulate people's interest, along with creative experiential engagement with local schools [9]. Further research is needed on other aspects that affect geotourism, such as geological, conservation, and economic significance, to further develop geotourism for young tourists in Tongging, Karo Regency.

REFERENCES


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