Promoting Equitable Tourism by Improving the National Museum’s Accessibility for People with Impairments

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Abstract. The government’s appreciation for persons with disabilities in the country, as initiated by the CRPD at the United Nations, is one of the parameters of a developed country. The purpose of this research is to discuss the national museum’s attempts to promote culture by converting Latin script into Braille for the blind. Researchers conducted in-depth observations and interviews with museum staff and visually impaired visitors. National museum collections are currently implementing the principle of no one being left behind by converting the collection description into braille. Generally, not all collections are explained in braille; there is no row accessibility for people with visual impairments, and there is no special guide for people with visual impairments. Various types of efforts must be made, including the implementation of accessibility for visitors with disabilities, referring to Regulation of Ministry of PUPR Number 42, 2020 concerning accessibility of public services for disabilities. Public service providers are also required to provide optimal, fair, and dignified facilities and treatment without discrimination for disabilities, including: a. assistance, translation, assistance, and the provision of easily accessible facilities at public service places at no additional cost; b. provision of infrastructure and facilities that are easily accessible for Persons with Disabilities; and c. information systems, both electronic and paper-based. In providing services, public service providers are required to provide professional information and human resources, thus they can assist people with disabilities. Indonesia is expected to be able to resolve disability issues through increased accessibility of public services including museums.

Keywords: accessibility · visually impaired people · national museum collection

1 Introduction

Indonesian culture and history are ancestral heritage that must be preserved by the current generation, even generations to come. The museum and its collections are one of the relay tools that inform the legacy between generations, not only for fellow Indonesian citizens, but also for foreign tourists. Based on Peraturan Pemerintah Nomor 66 tahun 2015, museums are institutions that function to protect, develop, utilize collections, and communicate them to the public.

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According to the regulation, museum collections are very useful for historical, scientific, educational, religious, cultural, technological, and/or tourism services. Museums can help visitors reflect on their place in the world, their identity, their differences and similarities…Museums can provide a tolerant space where difficult contemporary issues can be explored in safety and in the spirit of debate (Department for Culture, Media and Sport 2005; Sandell 2007).

Besides being useful for providing information, museums also have an important role in people’s literacy skills. Carr (2004) stated that literacy learning in museums would hold the promise of vivid examples, international artifacts, and dedicated conversations between a learner and a tutor. Museums provide information, pluralism in things, and physical objects that ignite to human’s critical thinking. Another source of critical literacy is new literacy studies, which argues that literacy should be studied from not only cognitive perspectives but also historical, cultural, social and institutional perspectives (Collins and Blot, 2003; Janks, 2010).

The Ministry of Education and Culture of the Republic of Indonesia reports that there are 439 museums in Indonesia. Meanwhile, based on data compiled by the DKI Jakarta Tourism and Culture Office, there are a total of 90 museums in DKI Jakarta consisting of various types of museums. Nevertheless, only several museums in Indonesia are attempting to create inclusive museums for people with disabilities, including the Balai Kirti Presidential Museum in Bogor, the Sonobudoyo Museum in Yogyakarta, and the National Museum in Jakarta. Even though the government creates regulations on public service standards for persons with disabilities, museums in Indonesia are still unable to totally complete these responsibilities.

The benefits of museums as public facilities provided by the state must be felt by all levels of society, including persons with disabilities. Refer to Peraturan Pemerintah Nomor 42 Tahun 2020, public service providers are required to provide public services with optimal, fair and dignified facilities and treatment without discrimination for persons with disabilities, including: a. assistance, translation, assistance, and the provision of facilities that are easily accessible at public service places at no additional cost; b. provision of infrastructure and facilities that are easily accessible for persons with disabilities; and c. information systems both electronic and non-electronic that are easily accessible by persons with disabilities. In addition, public service providers who already use technology are required to provide technology that is easily accessible for persons with disabilities, including audio, tactile signs, braille, and information or visual cues.

The museum as a public space to gain knowledge has not been effectively felt by persons with disabilities. In Indonesia, museum buildings are old buildings that are difficult to renovate, even some museum buildings are part of cultural heritage. This is one of the reasons why museums are difficult to turn into inclusive. Quoted from jatimnet.com, Chairman of the East Java Indonesian Museum Association, Dwi Cahyono, noted that there are 56 museums throughout East Java, but only 10% of museums provide facilities for people with disabilities and the source of the problem is that many museum buildings occupy old buildings whose original designs were not disability friendly.

The National Museum is one of the museums in Indonesia that is progressing to be inclusive and friendly to persons with disabilities. Since several years ago, the National
Museum has given more attention to people with disabilities. In accordance with Permen-
dikbud Nomor 41 Tahun 2018, people with disabilities visiting the National Museum are free of charge. In addition, articles on the official website of the National Museum are published showing the existence of collaboration with communities or institutions with disabilities in carrying out activities at the National Museum.

Based on this, this study will discuss equitable tourism and access to literacy learning for persons with disabilities at the National Museum. Then, to further limit the research, persons with disabilities that will be discussed in this study are persons with visual impairments.

2 Literature Review

2.1 Related Research Articles

Number of studies on promoting equity tourism in museums for people with visual impairments have been conducted for years by many researchers. First, The work of Saraswati who identified the museum of Bank Indonesia in 2021. The Museum of Bank Indonesia is one of the museums in Indonesia that is considered to be a good work of architecture. It attracts a wide range of visitors, including those with visual impairments. To accommodate visitors with visual impairments, the Museum of Bank Indonesia must include design elements that allow them to participate in activities despite their limited vision. The purpose of this study is to discover how physical elements in the Bank Indonesia Museum accommodate the orientation and mobility of visitors with visual impairments. This is a descriptive study with a qualitative component. Data on physical elements in the Museum of Bank Indonesia and data on the behavior of visually impaired visitors while doing orientation and mobility in the Museum of Bank Indonesia exhibition area were collected. The data are collected through observation and interview, then analyzed by using a table which elaborates physical elements from technical requirements aspect and sensory design aspect, and how they accommodate visually impaired visitors. Research shows that some physical elements in the Museum of Bank Indonesia are already adequate in accommodating visually impaired visitors. They able to provide assistance for visually impaired visitors while doing orientation and mobility, as well as gathering information on the museum objects. On the other hand, there are also some physical elements that hinder visually impaired visitors because they don’t technically meet the user’s needs. Therefore, improvement in the physical elements design is needed, so it can accommodate visitors with visual impairments better (Saraswati & L. Lukman, 2021).

Second, the Konferensi Asia Afrika (KAA) Museum is a well-known tourist attraction in Bandung. The study’s primary goal is to determine what facilities and accessibility tourists with disabilities require. Next, identify the barriers to accessible tourism at the Museum. The descriptive qualitative research method was used to gain data. The data analysis techniques and field observations supplemented the literature studies. According to the findings, the Museum of the Asian-African Conference does not meet the criteria for an accessible tourism destination. The main challenges that the museum faces are a lack of government support and license (Sumiarsa et al., 2022).
2.2 The Concept Of Equity Tourism

Equity is indeed a basic concept of tourism development that addresses equity in the access, use, and distribution of goods and benefits from sustainable tourism in order to meet the needs of both present and future generations. Development of tourism should be based on massive economic, ethical, and social equity criteria for the destinations’ local populations (Mariana JUGANARU – 2003 in Saravanan & Rao, 2012). This research attempted to promote equity in the tourism sector which accommodate people as visitors. Therefore, equitable tourism is a type of tourism development that seeks to apply the principles of equitable commercial activity in the tourism industry, while complying to a set of criteria that highlight respect for inhabitants and their way of life, as well as the sustainable development of tourism advancement for local communities. In general, “equitable tourism development” is the distribution of economic activity and connect directly to it along a region, nation, or supranational territory (Patsy Healey-2002). In this sense, it can be expressed as: where all government investment and promotional activities in the tourism sector and economic opportunities are focused on all parts of the region with the goal of building equitable tourism growth. More and more countries are developing an equal and fair tourism strategy. However, the advancement of the tourism industry in a specific state is not accomplished to gain a competitive advantage, but rather to help the community develop through various multiplier effects. Unbalanced tourist destination development will increase disparities among communities and between urban and rural areas, within and between countries, as a result of natural differences, socio-cultural conditions, and policy decisions (Saravanan & Rao, 2012).

Furthermore, sustainability of museums (sustainable tourism development) emerged as a critical result of tourism activities, particularly during the growth and development of mass tourism in various destinations around the world. Tourism at the time was synonymous with poor planning, was unrestricted (sporadic), and seemed only concerned with economic growth or materialism, so it could often erode or reduce the carrying capacity of both natural and cultural resources. These negative consequences may jeopardize the community’s long-term economic sustainability. As a result, the notion of environmentally friendly tourism emerged, which is expected to have negative huge development consequences. So, sustainable development can be defined as an effort to manage tourism by realizing sustainable development, so that natural resources are always worthy of future generations and the balance between economic benefits, natural environment preservation, and socio-cultural values is always maintained.

2.3 Museum As A Means of Promoting Equity Tourism

The term “museum” derives from the Latin “museum” (“musea”). Originally from the Greek “mouseion,” a temple dedicated to the Muses (9 goddesses of art in Greek mythology), and a building for education and the arts, particularly the institute for philosophy and research at Alexandria’s library, founded by Ptolomy I Soter 280 BC (August, 1983). Many experts had clearly characterized this kind of term and widely spread to be recognized. Thus, the definition comes from the perpetual term which can be identified as the institutions that function to protect, develop, use, and communicate collections to the public, according to Government Regulation No. 66 of 2015. The 22nd General
Conference of the ICOM (International Council Of Museums) on August 24, 2007, a museum is defined as a permanent, not-for-profit institution that serves the community and its development by collecting, caring for, researching, communicating, and exhibiting material and intangible cultural and environmental heritage for the purpose of study, education, and enjoyment (Brown & Mairesse, 2018). Relates to the statement that the museum should be a place that all people can use, the museum’s design must be capable of meeting the needs of every visitor, including those with disabilities. As a result, the museum’s design must be usable by people from all walks of life, including those in special need. To put it another way, universal design must be applied to museum design.

A universal design of the museum is a design which accommodates the need of all people who want to explore more about the collection of the museum. They want to gain a better understanding of the objects in public. As a consequence, it is essential for a museum to have a description of collection objects with special requirements that visitors from various circles can recognize. Of course, visitors will have different viewpoints on what they see and feel after visiting a museum; however, not all visitors will be able to enjoy museum collections in the same way. Visitors with disabilities must be prioritized by the museum’s developer. This study will go into greater detail about the museum developer’s efforts to present museum collections that are accessible to people with disabilities, particularly the visually impaired people.

A universal design is a choice to promote museum collections become eligible collections. Museums in Indonesia should design features that assist visually impaired visitors in moving around, despite their limited senses and vision. Because blind people are relying on other senses for activities, particularly orientation and mobility, the required new designs can be in the form of physical elements that are sensory enhancers stimulating senses other than sight.

A museum should consider the checklists to be evaluated by many stakeholders in order to be accessible. Ambrose and Paine (2006) stated that when considering how to make museums more accessible to people with disabilities, it is important to conduct an access audit, which is an assessment of all aspects of the museum that may present barriers to access. This can aid museums in developing action plans and prioritizing future enhancements. Access audits should be conducted with people with various types of disabilities so that the museum’s response can be appropriately communicated. The checklist below provides an example of the types of questions museum managers should consider regarding the external and internal features of museum buildings when considering accessibility for people with disabilities (Fitriani, 2018).

Outside the Museum:

a. Orientation for persons with disabilities
b. Access route/road
c. Ramps and stairs
d. Entrance and room

Inside the museum:

a. Orientation
b. Altitude
c. Elevator
d. Seating  
e. Material and coating  
f. Lighting  
g. Heating  
h. Disaster management  
i. Induction loops  
j. Sign  
k. Touch exhibitions/displays/tours/workshops  
l. Cafe  
m. Toilet  
n. Integrated tour  

This is also completely in line with the four accessibility principles outlined in the Minister of Public Works Decree No. 468/KPTS/1998 as follows:  
a. Ease, in that everyone can access all public places or buildings in an environment.  
b. Usability, that is, everyone must be able to use all common places or buildings in an environment.  
c. Safety, that is, every general-purpose building in a built environment must consider the safety of all people.  
d. Independence, which means that everyone must be able to reach, enter, and use all public places or buildings in an environment without the assistance of others.  

2.4 Giving Literacy Information in the Museum for People with Visual Impairments  
Literacy is usually defined as ability to read, write, and comprehension. Ferrell et al. (2006), however, defined literacy in his research project as the ability to read and write in braille and/or print. Listening and oral comprehension also met the definition of literacy for this study. Furthermore, Ferrel et al. (2006) showed that the result of their study about the literacy of visual impairments was there were four components in literacy.  
a. Alphabetics  

Alphabetics includes phonemic awareness and phonics. Phonemic awareness is the ability to manipulate the smallest sounds of spoken language, whereas phonics refers to the letter-sound relationship and includes an understanding that spoken words are composed of tiny sound segments or phonemes (National Reading Panel, 2000; Ferrel et al., 2006).  
b. Fluency  

Fluency is the ability to “read orally with speed, accuracy, and expression” (National Reading Panel, 2000; Ferrel et al., 2006). There are two conclusions in their study about fluency as literacy’s component. Those are (a) automated practice in braille reading
improves reading speed and decreases errors in braille code recognition; and (b) use of low vision devices appears to increase reading speed and amount of reading.

c. Comprehension

Comprehension involves vocabulary instruction, text comprehension instruction, and teacher preparation and comprehension strategies instruction (National Reading Panel, 2000; Ferrel et al., 2006). Identical to fluency, Ferrel et al. (2006) concluded that comprehension could be improved by automated practicing in braille and using of low vision devices.

d. Computer Technology

Using computer to teach reading is one of literacy’s components. Technology is a powerful tool with enormous potential for paving high-speed highways from outdated educational systems to systems capable of providing learning opportunities for all, to better serve the needs of 21st century work, communications, learning, and life (Thomas, 2003; Ferrel et al., 2006).

Literacy improvement could be done in various ways and tools. One of those ways is visiting museum. Carr (2004) stated that literacy learning in museums would hold the promise of vivid examples, international artifacts, and dedicated conversations between a learner and a tutor. Museums show collections which are able to increase people knowledge and ignite their critical thinking.

Nevertheless, the existence of an accessible museum to people with disabilities is a manifestation of the United Nations’ Convention on the Rights of Persons with Disabilities (CRPD) (UN). One of these forms of accessibility is aimed at public spaces, so that there is no difference in obtaining public service facilities between the general public and people with disabilities. These are expected to have the same access to information as the general public.

The information itself should be delivered in a very effective way. The museums display the collections and describe the how and when they were perpetuated in the museum. These information are relatively gained and understood by people with visual impairments. This effort becomes important for people with visual impairments to feel as they read in Braille. Making information available in braille for the visually impaired is an effective literacy improvement strategy. Museum designers have learned a lot about creating independence for visitors with visual impairments.

The capacity to access information efficiently and effectively, evaluate information critically and competently, and use information accurately and creatively is also defined as information literacy (Voogt and Roblin, 2012, p. 308). According to Bawden (2002), information literacy is the set of mental skills required to access, manage, and communicate information effectively and ethically. Research Methods (Parisi-Moreno et al., 2021).

Obtaining maximum information for people with visual impairments to achieve inclusive literacy goals can also be done by combining four main accesses, such as gallery, library, archive, and museum or better known as GLAM. The fulfillment of the need to accommodate the rights of persons with visual impairments in obtaining information does not only come from one source, but can also come from various other sources that support the accessibility of obtaining information in an integrated manner.
to improve literacy. Libraries, archives, and museums can work together or collaborate in six aspects, such as: service to all users, support for scientific activities, benefit from technological developments, budget and administrative efficiency, adaptation to digital objects, comprehensive view of the collection (Duff, 2013, Carter, Cherry, et al., 2013). Australia is a country that has implemented GLAM collaboration as an institution. However, in Indonesia, the application of the GLAM concept is still not fully integrated, even though there are several libraries that have become part of the archives and museums (Dwi Fitrina, C. and Lasenta, 2017).

3 Methods

This research is a qualitative study, specifically a case study research that discusses the attempts to improve the equity tourism area in the National Museum for visitors with visual impairments. This study described museum developers’ efforts to convert the Latin text contained in each elaboration of a museum collection into braille. This was also intended to improve literacy community and accessibility for people with disabilities, especially people with visual impairments. The data were obtained through several techniques: First, researchers visited the National Museum and identified which collections have braille descriptions. Furthermore, we carefully examined braille legibility from an aesthetic and safety standpoint. This observation was conducted during a sufficiently adapted period of time. In addition to direct observation, the researchers asked the museum developer to learn more about the National Museum’s development efforts. The researchers then checked and triangulated the data with questionnaires distributed by the museum developer to visitors, particularly visual impairments and low vision visitors, after receiving the information orally. The three data collection techniques’ results were then analyzed and presented in this research report.

4 Finding and Discussion

The National Museum has a collection of objects related to culture and language which is also a vehicle for cultural literacy and citizenship. In terms of introducing linguistic and cultural knowledge to the public, the National Museum has made various efforts and achievements so that visitors can enjoy various collections as a vehicle for education both offline and online. Online visitors can enjoy the museum through the virtual National Museum service https://museumnasional.ihertage-virtual.id/. But for visitors who want to see the collection in person, can visit the National Museum. Currently, the category of visitors to the National Museum is only based on children, adults, the elderly, and foreigners. There is no category of persons with disabilities. Based on interviews with museum officials, there have been several persons with disabilities who have come to visit the museum. This shows that it is proper for persons with disabilities to have the same rights as others to obtain information through visits to museums. There are still some obstacles faced by visitors who have limitations or have disabilities. So far there have been improvements in terms of accessibility and there are some things that still need attention. This is very necessary because people with disabilities are part of the community and environment in Indonesia and also as a practice of the law to
include people with disabilities in various educational activities without exception (no one left behind), including activities in public services such as the national museum. The following are some findings related to the accessibility of linguistic and cultural knowledge for persons with disabilities as an effort to increase cultural literacy and citizenship.

1. No sign language guide available

The Fig. 1 shows the museum’s service schedule by providing service facilities in four foreign languages, such as English, Japanese, Korean, and French. Considering that visitors who come to the National Museum also come from people with disabilities, on the schedule board there is no language used for people with disabilities such as the availability of sign language.

2. Braille collection

Braille is available for several collections and can be felt by people with visual impairments. However, for visitors who have severe low vision and have not mastered braille, the tools needed are the use of a projector and or audio book to clearly describe and explain the collection information (Fig. 2).

3. Map introduction

Indonesian maps and language maps also include visual collections that are introduced to museum visitors. However, the level of readability is still not optimal for people with visual impairments. A map that is friendly for people with visual impairments is a map that can be touched and can provide information. Visually, a map intended for people with visual impairments is a map that has a raised surface so that it is highly legible when touched and the information is in braille, as shown in Fig. 3.

![Fig. 1. Museum service schedule](image-url)
Fig. 2. Description of the collection in braille

Fig. 3. Map introduction
4. Accessibility inside the museum

In accordance with Indonesian government regulations, museums are categorized as cultural heritage that must be preserved because they contain various collections of historical objects that represent culture. Given that these regulations are very binding to make museums sustainable, it is necessary to find solutions so that inclusive facilities and infrastructure can be properly facilitated. Figure 4 shows a visitor with a visual impairment reading a collection using braille. There are no facilities around

**Fig. 4.** There is no guiding block around the braille collection yet

**Fig. 5.** Accessibility outside the museum
visitors, such as guiding blocks as directions and/or ramps so that the safety of people with visual impairments is maintained.

5. Accessibility outside the museum

Disabled visitors could easily come to this museum, because the pavements around the museum have guiding blocks and the location of the museum is in the middle of the city. They could easily come by public transportation as well because the Government of DKI Jakarta provides public transportations which is disability-friendly. Furthermore, visitors could use the wheelchair ramp when entering the museum (Fig. 5).

6. Visitor satisfaction questionnaire

Although the evaluation of visitor satisfaction has not been maximal in including the needs of persons with disabilities, there are several lists of questions that can be added to accommodate the needs of persons with disabilities. In the visitor satisfaction questionnaire issued by the museum, there were several questions related to the satisfaction of the guide, arrangement of the exhibition space, understanding of the storyline, intensity of lighting in the collection room, directions, parking area, and security. In capturing the level of satisfaction from all diverse visitors, it is necessary to add a list of questions to the visitor’s personal data section for the visitor identity category. To capture the needs of persons with disabilities, a list of questions related to identity categorization is needed before the core questions about museum service satisfaction. The following is a list of questions related to identity categorization for persons with disabilities. “Are you a person with a disability?”; “If yes, what is your variety of disability?”; “What support do you need when visiting a museum?” (Fig. 6)
<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Puas terhadap pelayanan pemandu *</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Sangat Tidak</td>
</tr>
<tr>
<td>Setuju ○○○○○○ Sangat Setuju</td>
</tr>
<tr>
<td>Penataan ruang pamer memiliki konsep yang menarik</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Sangat Tidak</td>
</tr>
<tr>
<td>Setuju ○○○○○○ Sangat Setuju</td>
</tr>
<tr>
<td>Alur cerita (storyline) pameran mudah dipahami</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Sangat Tidak</td>
</tr>
<tr>
<td>Setuju ○○○○○○ Sangat Setuju</td>
</tr>
<tr>
<td>Intensitas cahaya di ruang pamer memiliki kualitas yang baik</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

Fig. 6. Visitor Satisfaction Questionnaire
5 Conclusion and Recommendation

a. Museum developers need to make replicas for people with disabilities who have difficulty touching collections due to their limitations, according to Government Oversight Number 66 of 2015 concerning museums, as explained in Chapter VII article 43 regarding utilization. The creation of a replica of the vulnerable collection is very helpful for persons with disabilities in order to preserve the collection and achieve maximum use for people with disabilities.

b. It is highly beneficial for people who are blind, both totally blind and with low vision, if the museum’s collection of objects is equipped with audio devices and projectors. This effort may also benefit visitors who are elderly or dyslexic.

c. Museums should work collaboratively with galleries, libraries, archives, and other museums to improve accessibility. GLAM (galleries, libraries, archives, and museums) is a movement to increase collections as a source of knowledge and information for the public.
References


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