IJDS 2022; Vol. 9 No. 2, December 2022, pp. 225-242
P-ISSN: 2355-2158, e-ISSN: 2654-4148
DOI: doi.org/10.21776/ub.ijds.2022.009.02.07

Development of Accessible Museum for Blind Tourists: A Case Study in Museum of The Asian-African Conference

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Article history:
Received: September 15, 2022
Revised: December 6, 2022
Accepted: December 16, 2022

Published online at
ijds.ub.ac.id

Abstract

Museums store a lot of visual objects. Blind people who do not have vision will have difficulty enjoying the visual objects of the museum. A qualitative research method with a case study approach was used. This study discusses the tourist attractions of the museum that blind tourists can enjoy. The results showed that blind tourists enjoyed museum attractions in two ways, hearing and touching. Information will be received by listening to museum educators explain stories about visual objects. Then to add information, blind tourists can touch the visual object. Accessibility that needs to be developed in the Museum of the Asian-African Conference is guiding block, braille, and audio media. Museum educators can be trained to be able to guide blind tourists properly.

Keywords: Accessibility, Accessible Museum, blind tourist, Museum of the Asian-African Conference

1. Research Background

The main problem faced by a blind person is the limitation to access public facilities due to limitations in seeing (Nawawi, 2010). Another problem that is often experienced by the blind is that it is challenging to access high-rise buildings because there are no particular directions for the blind. In addition, too bright or dim light also makes it difficult for people with visual impairments to access a building (Tarsidi, 2011).

One sector that has the opportunity to develop a service that is accessible for blind people is the tourism sector. Tourists who come to a tourism destination can contribute positively to regional income and income and improve the population's economic level (Ozturk et al., 2008). Services oriented to the satisfaction of blind tourists can be the centre of attention of the government or tourism managers so that blind tourists get a good impression during their visit to a tourist destination. Things that can be of particular concern in developing accessible tourism understands the needs of blind tourists during their trip.

In tourism research, the blind are rarely looked at, and the focus of research is only on wheelchair users, and there is an assumption that blind people can interfere with groups when travelling (Cahyana, 2019). Even so, the number of tourists who have limited vision is not small. If the needs of blind tourists can be met during their tour, then blind tourists can also enjoy tourist attractions.

There is also a prohibition on the blind from travelling in nature tourism because it is considered dangerous, even though blind tourists can enjoy the tour by feeling it when they touch or stand on the place they visit (Cahyana, 2019). Therefore, comprehensive research is needed to discover tourist attractions and accessibility that blind tourists can enjoy.

Museums are a means of cultural development and influence human civilization. The museum does not only act as a cultural driver but also as a driver of the economic, political, and social sectors. Visitors' experience with and without the visually impaired is influenced by the presence or absence of inclusive services in the museum environment. However, this situation becomes complicated when museums focus on visitors with disabilities, as their disability can mean that they are highly dependent on others (Chiscano & Jiménez-Zarco, 2021).

Museums can be categorized as artificial tourist attractions (built environment attractions). Attractions in this context are intended for tourists to provide entertainment, have fun, educate and watch something interesting (Mauludin, 2017). Woollard (Junaid, 2017) suggests two approaches that need to be considered to optimize the museum as a tourist attraction, namely visitor services and access for visitors. In this case, the need for services oriented towards friendly services for blind tourists and access for blind tourists.

As part of the public space, museums can provide exceptional services for disabilities through unique accessibility for blind tourists. Accessibility is everything that makes it easy for tourists to come to visit a tourist destination (Mill, 2000).

Museums can provide accessibility such as Braille, audio descriptions, descriptive letters or signs whose size and colour are adjusted to the needs of the blind. Then, staff who have been trained to assist the blind. Streachay and Annis (2012) (in Dincer et al., 2019) provide a more in-depth idea of museum accessibility for blind people.

Argyropoulos & Kanari, (2015) research investigated the experiences of individuals with visual impairments regarding museum visits. This study focuses on factors that facilitate and hinder accessibility, such as museum companions, information, and museum services. Asakawa et al., (2018) investigated the opinions and expectations of the blind when visiting museums independently and the user interface requirements to support them.

March et al., (2005) conducted a study on a promising discovery to improve accessibility to science museums for visually impaired visitors through the Ping! System.

Research conducted by Mesquita & Carneiro, (2016) shows a broad set of strategies to improve museum accessibility to visually impaired visitors and analyzes museum accessibility in four European cities.

From the explanation above, it is clear that blind tourists have become a concern for academics. These studies have not touched on how blind people can understand the message conveyed and enjoy the tourist attractions in the museum. However, based on the four studies, the focus is on providing services or accommodation for blind people.

Departing from these problems, the author is interested in studying the development of an accessible museum for blind tourists. The museum of the research location is the Museum of the Asian-African Conference in Bandung City. Two research questions have been formulated as follows:

1. How can blind tourists enjoy the museum's tourist attractions?

2. How can blind tourists enjoy the accessibility of the museum?

2. Research Methodology

In this section, there are an explanation of methods, data collection, techniques for determining informants, and data analysis techniques.

2.1 Metode

According to Arikunto (2005), qualitative research is intended to collect information about the status of an existing symptom, namely the state of the symptoms according to what they were at the time the research was conducted. Based on the approach and type of data used, this research is included in qualitative research so that it will produce descriptive data. The data analyzed in it is descriptive and not in the form of numbers, as in quantitative research.

The opinion of Lincoln and Guba (Welerebun et al., 2016) states that a qualitative approach with case studies, namely in-depth and detailed research on everything related to the research subject. This qualitative research is specifically directed at using the case study method. In addition, case studies can also be interpreted as a technique to study an individual in depth to help him get a reasonable adjustment.

2.2 Research Area

This research will be at the Museum of the Asian-African Conference. The selection of this research location was also based on the consideration of the research topic raised by the author, namely the development of an accessible museum for blind tourists at the Museum of the Asian-African Conference. The museum is located in the city of Bandung, Indonesia.

One of the museums that have paid attention to the needs of blind tourists is the Museum of the Asian-African Conference, located in Bandung. This museum is a museum

managed by the Indonesian Ministry of Foreign Affairs. This museum presents information about the Asian-African Conference.

The Museum of the Asian-African Conference has started to develop museum services that are accessible to tourists with disabilities, including the blind. This museum has collaborated with the blind community, Yayasan Mata Hati Indonesia (YMHI) and the Indonesian Braille Literacy Center (BLBI) Abiyoso. The results of this collaboration can be seen in the presence of the Braille Corner in the library of the Museum of the Asian-African Conference. At the Braille Corner, various books are available in Braille versions and audiobooks and provide blind travellers with access to reading books.

Another development that blind tourists can feel is holding a disability week, which is held annually. The development of a museum accessible to blind tourists still needs to be done at the Museum of the Asian-African Conference. In the museum, there is still no Braille in any museum exhibits or the collection of museum objects. There is also no unique accessibility for blind tourists. In connection with that, if there is no unique accessibility for the blind, it is also impossible for blind tourists to receive information and enjoy museum tourist attractions.

At the Museum of the Asian-African Conference, blind tourists can touch objects in the museum. However, not all objects can be touched by the visually impaired because some of these objects are stored in glass boxes, so objects that cannot be touched need to be explained in detail and clearly. However, educators of the Museum of the Asian-African Conference still have difficulty explaining these visual objects in a narrative that can be accepted and understood by blind tourists.

2.3 Data Collection

2.1.1 Interview

In this study, the interviews conducted were semi-structured. This type of interview aims to find problems more openly, and the interviewees are asked for their opinions and ideas (Sugiyono, 2016). Interviews will be conducted with informants who were selected according to the criteria in this study, namely, those related to the development of a blind-friendly museum at the Museum of the Asian-African Conference. The criteria for informants will be explained in the subchapter of Informant Determination Techniques.

2.1.2 Observation

Observations were made to collect data following the nature of the study. When collecting data, the researcher stated frankly to the data source that he was conducting research. In essence, the informants know about the research activities from the beginning to the end (Sugiyono, 2016). Observations were made by going directly to the Museum of the Asian-African Conference and seeing the availability of special facilities for blind tourists.

2.1.3 Literature Study

Data related to the Museum of the Asian-African Conference Museum and previous research related to the development of a blind-friendly museum will be used to develop concepts related to the research topic and become the basis for the discussion chapter.

2.2 Informant Determination Techniques

This study selected informants using the "snowball sampling" informant determination technique. This technique collects data sources that are initially small in number but gradually become large. This technique is done because the small number of data sources cannot provide satisfactory data, so look for other people who can be used as resources. Thus the number of samples of data sources will be even more significant, such as a rolling snowball, which gradually becomes large (Sugiyono, 2016).

The criteria for informants in this study are as follows:

1. Informants are visually impaired, both those who have visited the research site museum and those who have not. These informants were selected to provide information on how they capture visual messages and information in the museum. In addition, these informants are expected to be able to provide information about the facilities needed by blind tourists when visiting the museum.
2. Informant from the Museum of the Asian-African Conference. The selection of this Informant is expected to provide information regarding the provision of special services for blind tourists and the development of a museum that is friendly to blind tourists.

The author has interviewed eight key informants consisting of one civil servants of the African Conference Museum and seven blind people. The details of the eight informants are described in the table below.

No.	Initial	Status
1.	KT	Civil Servants of the Museum of the Asian African Conference
2.	RY	Blind Tourist
3.	DM	Blind Tourist
4.	IH	Blind Tourist
5.	LI	Blind Tourist
6.	SH	Blind Tourist
7.	NC	Blind Tourist
8.	AS	Blind Tourist

Tabel 1: List of Informants

2.5 Data analysis technique

The analytical model used to answer research questions is the interactive analysis model from Miles et al. (2014). After checking the validity of the data and the data obtained is considered comprehensive, the data will be analyzed through three procedures: 1) Data Condensation, 2) Data Display, and 3) Conclusion Drawing/Verification. The procedure will be explained as follows:

1. Data Condesation
   The first procedure is to select, focus, simplify, and filter the data obtained through the results of field observations, interviews, and documentation studies. Previously the term “data condensation” was “data reduction”. The term was replaced because, in data reduction, there was a deliberate omission of data in the data analysis process. In data condensation, unnecessary data will disappear, and the data obtained will become stronger.
2. Data Display
   The presentation of data is interpreted as an organized collection of information. In connection with this, researchers can conclude. The most frequent form in qualitative research is narrative text. However, apart from being a narrative text, data can also be presented through graphs and matrices.
3. Conclusions: Drawing/Verifying
   Conclusions are data that have been compiled. After the conclusion is drawn, the next step is to verify the data during the data analysis (Miles et al., 2014).

3. Discussion

3.1 Museum Tourist Attractions for Blind Tourists

Limitations in seeing make blind tourists also have limitations in obtaining information through the sense of sight. In other words, the need for the function of the other senses, namely the senses of touch and hearing, to replace the function of the sense of sight (Erin and Koenig, 1997 in Muthmainnah, 2015). Based on this, it can be concluded that blind tourists will use their sense of hearing and touch to obtain information while travelling.

Through the sense of hearing, blind tourists can receive information about a tourist attraction through sound. By receiving this information directly from the place itself or from people around, blind tourists can gain knowledge and information about tourist attractions. Another alternative for blind tourists to obtain information is through the sense of touch or touch. Blind tourists use the sense of touch to describe an object's shape, weight, size, temperature, and location or position.

When travelling, blind tourists obtain information about tourist attractions by hearing, either directly from the tourist attraction or other people. Then blind tourists need an object or objects that can be touched to feel the object has a shadow or imagination of a tourist attraction or attraction. In this case, blind tourists can enjoy visual messages and information about tourist attractions.

It will be very easy for tourists who still have a clear vision to enjoy the tourist attractions at the Museum of the Asian-African Conference. However, for blind tourists, it will be difficult to enjoy the exciting treats from the museum, and problems begin to arise when they come to the museum. The need for tourist attractions that blind tourists can enjoy made the Museum of the Asian-African Conference take the initiative to develop the museum into a museum that is accessible to blind tourists. However, visual objects in the form of exhibitions, such as photos, pictures, paintings and flags, are still tricky for museum educators to explain to blind tourists. KT as the civil servant of the Museum of the Asian-African Conference, said:

> *"The problem is how do we guide friends with disabilities, especially the blind. That is not easy because we present photos and flags in the permanent exhibition hall, which are so-so. We still have a problem; yes, explain the flag, what it looks like, and the colours, for example, the Sri Lankan flag. What is complicated is that there is a lion in the middle and orange colours. That is not easy to explain. Likewise, the photo depicts how Pak Ali Sastroamidjojo has a beard, something like this. Well, that is the hard one. We have not, even though we have got a workshop for guiding friends with disabilities, but we have not been able to practice it in detail for friends with disabilities."*

The difficulties faced by educators of the Asian-African Conference Museum also affect the understanding of blind tourists. NC, during a visit to the Museum of the Asian-African Conference, said that:

> *"Honestly, when it comes to history, I am confused. Sometimes it is dizzy to understand history. How can it be like this? It is like there is no way this could stand; how did this conference start in the first place."*

Based on the interview excerpts, museum educators can understand the difficulties faced by conveying information to blind tourists. Visual objects that are still difficult to explain are the flags, colours, and details from the photos that are there. In conclusion, blind tourists are also hampered in understanding each story.

The difficulties still faced by the Museum of the Asian-African Conference and the obstacles for blind tourists to enjoy the stories and exhibits in the museum, therefore, the need for the Museum of the Asian-African Conference to be developed into a museum that is blind-friendly. In developing these objectives, it is necessary to pay attention to how they obtain information.

The process of enjoying tourist attractions for blind tourists is first through the sense of hearing. Blind tourists who come to the Museum of the Asian-African Conference will still be presented with stories about the Asian-African Conference, just

like tourists who are not blind. They also continue to be accompanied by one of the educators and will listen to explanations and information from the educators.

Museum educators can show the position of an object by mentioning the position of the object, such as right, left, front, and back. The goal is for blind tourists to get an idea of the object's position so that the information received is correct and precise.

As stated the following:

> *"Yeah, well, for the blind, it needs to be told what is going on on the right or the left. So, it is depicted in our shadows, oh, like this. For example, what is on the left if someone looks to the right? What is going on."*

The interview excerpt illustrates how to describe the condition of the surrounding environment. Museum educators can provide information about the environment and what objects are in the environment, so that blind tourists get clear and precise information.

Penyampaian informasi yang jelas dan detail IH selaku Ketua Yayasan Mata Hati Indonesia (YMHI) menyampaikan hal sebagai berikut:

Submission of clear and detailed information IH as the Chairperson of the Indonesian Mata Hati Foundation (YMHI) conveys the following:

> *"Must know better how to understand visualize. For example, there is a photo in front of us with directions. To show directions, right, we can show that in the rules for the visually impaired, there is a thing called determining the direction of the clock in the mobility orientation. Oh, the direction at 11 o'clock means in front of us is tilted to the left. In front of us at 11 o'clock, there is a photo of who, for example, Soekarno is wearing what colour suit, well, he is giving a speech at the welcoming ceremony or the opening ceremony. That is how he can visualize things."*

Based on the excerpt from the interview, it can be understood that detailed object visualization can make it easier for blind tourists to enjoy museum tourist attractions. Educators can also show the position of objects in a clockwise direction, in addition to the left and right directions, so that those blind tourists can find out the position of the object correctly and clearly.

Another thing that can be developed is the visualization of objects by mentioning in detail what is depicted in photos and pictures. If the picture is a person, the person's clothes and the person's expression and position can also be explained. Because blind tourists rely on their sense of hearing, there is a need for clear explanations from museum educators.

The next obstacle museum educators face conveying the colours in every visual object in the museum to blind tourists. This Problem is due to the background of the blind tourists themselves. Some blind people lose sight from childhood or birth, and some occur due to accidents or illnesses during their lifetime.

Blind tourists who have lost sight from birth can still imagine colours and still have memories of specific colours. Photos, flags, and images on display at the Museum of Asian-African Conference also have a variety of colours. These colours can also be conveyed to blind tourists.

Regarding colours and shapes, RY says the following:

> *"As for me, because I was not blind since I was a child, yes. From the age of 14 years. So I can still remember people's faces; What is the red colour? So, the imagination exists."*

Based on the excerpt from the interview, it can be understood that blind people who lose their sight are not born with it, so they still have a perception of colour. They can also imagine the colour and still remember those colours.

Blind tourists who have lost their sight since birth have no imagination of the colours in this world. This problem occurs because they have not been able to see since childhood and have no memory of the concept of colour. The absence of a concept or image of colour in completely blind tourists from birth is a challenge for museum educators to explain the colour of visual objects in the museum.

SH expressed the following opinion:

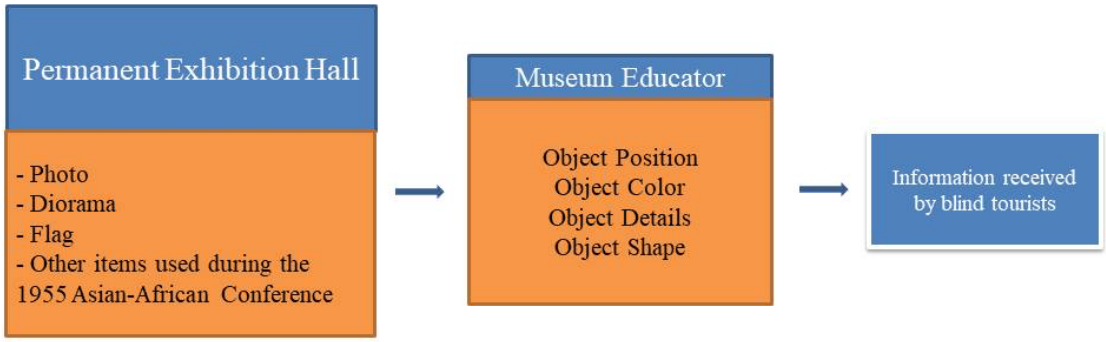
> *"I have never understood the concept of colour because this is a black-and-white comparison. So, those who are born just black and white do not know. It is difficult because it is different from blind who have been blind since adulthood. That is it, and there are remnants of the red concept. Like blood, right? What kind of white, yes, like flour or paper? If it is black like what, yes, dark."*

The difficulty of understanding the concept of colour for blind tourists was also conveyed by LI as follows:

> *"Look, every blind person has a different background for becoming blind. Some were born, and some may have seen before he/she was blind. Well, the hardest thing is from birth because they have never seen, so they are hard to imagine."*

Based on the results of the two interviews above, it can be understood that blind tourists who have seen colours during their lifetime still have memories of colours. However, in contrast to the blind, who have lost sight since childhood, they have no idea of colour.

As for what museum educators can do to explain the colours in museum objects, mention the existing colours; however, the colour intended by the educator must be correctly stated. For example, if the colours on the Indonesian flag are red and white, then museum educators can add information that the red colour on the Indonesian flag is at the top and white is at the bottom.



Picture 1: The Process of Blind Tourists Enjoying Museum Tourist Attractions through the Sense of Hearing

The picture above shows the process of how blind tourists enjoy museum attractions. In the permanent exhibition room of the Museum of the Asian-African Conference, there are various visual objects, including photos, dioramas, flags, and other historical objects. Museum educators will share information about these objects. The information will contain details of an object, and blind tourists will listen to the delivery of the museum educator.

Blind tourists can enjoy museum attractions through their sense of hearing. The story of the 1955 Asian-African Conference and visual objects such as photographs and sculptures can be explained by museum educators by visualizing them in detail and detail. They can be done by mentioning the object's position, either left and right or front and back. In addition, museum educators can also explain the position of objects by using a clockwise direction.

Museum educators can also add other information, such as facial expressions, clothing attributes, and colours when explaining stories to blind tourists so those blind tourists can well receive the information.

The second process that can be by blind tourists to enjoy tourist attractions other than using their sense of hearing is by using the sense of touch. In other words, the museum can allow blind tourists to be able to hold or feel an object.

The explanation above is in line with the results of research conducted by (Kusumaningrum, 2018). It is crucial considering that the visually impaired recognize objects through touch, so the presence of hands is essential. The availability of hands-on will provide an experience for the blind to come into direct contact with artefacts.

The process of touching an object helps be able to increase the insight of blind tourists into stories related to the Asian-African Conference itself, and visually impaired tourists have an idea of the objects used during the 1955 Asian-African Conference, such as flags and rattan chairs. In addition, blind tourists can also, for example, recognize the facial shapes of President Soekarno and representatives from other countries.

Some blind tourists who were interviewed expressed their opinions regarding the function of the sense of touch in providing information on visual objects. DM said the following opinion:

> *"Then for example, it's even better if you can touch it, right, because we can access information by touching and hearing, right? So, if sometimes for example there is a statue. The statue can be touched, oh, it looks like this, for example, what's with the head wearing a hat or sometimes, the museum has installation art. We can touch it there too."*

Through touch for objects such as statues, blind tourists can find out the shape and details of the statue. So that what is explained by the museum educators can be more enjoyed by touching and touching the statue.

The same thing was also stated by RY as follows:

> *"So, so that blind people also have imaginations too, for example the Bung Karno statue, here, the person turns out to be this big and tall so they have their own picture. Even if it is not real, is it? At least they have experience or have an idea. Moreover, right, for blind people who have not seen at all since birth. So, that was, the important thing is that they can feel good from the senses of hearing, touch, taste, and smell."*

Based on the excerpt from the interview, it can be concluded that when blind tourists are allowed to touch objects in the museum, it will provide them with information and an image of the shape of an object. In connection with that, imagination will also be formed in their minds which is obtained from touching the objects in the museum.

The absence of sight makes tourists need to touch objects in the museum. Touching the exhibition objects in the museum will help blind tourists know the object's shape, provide a description, and build the imagination of the object.

Moerdani (1987) states two ways to introduce objects to blind people: synthetic perception and analytic perception. Synthetic perception is thoroughly introducing an object or object to a blind person by using one or both hands, and the object or object will be described. Analytical perception is the introduction of objects or objects to blind people, not entirely because the object's size is too large or too far away. Therefore, blind people will be given a model or replica similar to the original object. It can help blind people to be able to understand something abstract (Mandola in Efendi, 2006).

While visiting the museum, blind tourists can be allowed to touch objects thoroughly if the objects are not too large. However, if an object in the museum cannot be touched for various reasons, the museum can make a replica of the object.

The results of this study are in line with the results of research by Dincer et al. (2019), which shows that blind tourists hope to be able to use the senses of touch, hearing, and smell when enjoying tourist attractions. The results of this study also

complement previous studies related to museum tourist attractions that blind tourists can enjoy.

2.3 Museum Accessibility for Blind Tourists

Based on the results of interviews and observations that researchers have done, there is four accessibility that helps blind tourists enjoy museum tourist attractions. Ease of tourist access is divided into two forms (Timothy & Boyd, 2003). The first is the physical type, which is related to the area's topography, infrastructure, transportation, and ease with which it can be reached by everyone with various physical conditions and abilities. The second is the type of market (market) related to things that prevent a person from reaching an area, such as cost and time. The four accessibility are as follows:

2.3.1 Guiding Block

A *guiding Block* is a path devoted to helping the blind walk or accesses a place. Guiding blocks have textures that are useful for directing and warning the visually impaired. The Museum of the Asian-African Conference has no particular guidelines for the blind. However, in the Asia-Africa Bandung region, there is already a guideline. As a result, blind tourists visiting the museum have obstacles to determining the road direction while in the museum and accessing the museum without a guide or educator.

Several informants expressed their opinion about the importance of guiding blocks in museums. NC disclosed the following:

> *"Accessibility is like that, after all, the access road. The thing is, if there is not one, we get confused. Especially if it is the first time you are confused, maybe if you already memorized it, it is okay."*

This excerpt from the interview means that the absence of a guide path at MKAA can confuse blind tourists to recognize the museum. If blind tourists visit the museum for the first time and there is no guiding block, then they must be guided to access the museum.

Guiding blocks will make it easier for museum educators to assist visually impaired tourists. Blind tourists can also access the Museum by themselves with the help of guiding blocks. Guiding blocks are already available in the Asia-Africa Bandung area but are not yet available in the Asian-African Conference Museum. So, outside the Museum, there are guiding blocks, and inside the Museum can be equipped with guiding blocks to access the Museum.

Picture 2: Guiding Block

There are two motifs in the guiding block. First, the motive is a line that shows the direction of travel and a warning block tile with a round motif. A warning block serves to warn about changes in the surrounding situation. When walking, blind tourists will walk following the available guiding blocks, and they will also know the direction with the guiding block, whether it has a striped or round motif.

LI expressed his opinion regarding the guiding block as follows:

> *"Necessary, I think. At certain times, yes, I feel like I'm a person who likes to walk alone. I do not like bringing a companion from home because if I bring someone from here, I have to follow their time. Nevertheless, if I can walk alone, I can walk whenever I want. So, it would be best if you had a guiding block like that. So that when I walk alone, I already know. At the very least, it will be explained later if you go this way "Yes, he/she can explain when we enter the museum. The rest, we can use our stick to follow the guiding block."*

Based on this opinion, it can be concluded that blind tourists can access the museum alone with a guiding block. For blind tourists who prefer to walk alone, the guide path can be accessible that can be used when they enjoy the museum.

Guiding blocks can also be made in contrasting colors. Contrasting colors can help low vision orientation because they can still have the residual vision. For example, if the floor is white, the guide path can be made with black color. For the total blind, the guide path is made textured and striped so that it can be felt and palpated by the total blind.

guide path can make it easier for blind tourists to enjoy the tourist attractions at the Museum of the Asian-African Conference. The guide path will provide easy access for blind tourists to determine directions and access the museum alone without a guide. Guiding blocks can also be made in contrasting colors and textures.

2.3.2 Museum Educator

When tourists visit the museum, usually the tourists will be accompanied or accompanied by a museum guide or, more accurately, referred to as a museum educator. In addition, a museum educator also has to accompany tourists who are visiting from the entrance to the exit. The task of a museum educator is to educate tourists about the objects in the museum in-depth and become an information center for tourists.

RY told his experience while at the Museum of the Asian-African Conference as follows:

> *"What is more important is when, for example, the Museum of the Asian-African Conference there are guests or visits from blind friends, what needs to be considered is how to respond or interact with blind friends themselves. So, for example, how to accompany how to guide him. The narrow road is the wide road, right, there is actually a technique. Actually, you need to know there, really. Learn mobility orientation."*

Based on this opinion, it can be understood that museum educators need to know about how to accompany the blind when visiting MKAA. Therefore, MKAA educators can be trained on mobility orientation and can accompany blind tourists safely.

Utomo & Muniroh, (2020) stated that the basic technique of accompanying the blind by an alert companion could be done in the following ways:

1. Blind tourists holding the educator's arm above their elbow.
2. The blind tourist's elbow holding the educator's arm can form an angle of 90 degrees.
3. The position of the blind tourist is half a step behind the educator.

Museum educators who can master mentoring techniques for blind tourists and successfully practice them, there will be several advantages that will be obtained, namely:

a) blind tourists will feel safe and comfortable during their visit or trip;

b) museum educators become information centers and can describe the environmental conditions being passed;

c) alert mentoring techniques can develop other skills such as concept orientation, kinesthetic, and awareness. (Utomo & Muniroh, 2020).

Based on the above advantages, the museum can provide training for museum educators regarding assistance for blind tourists. Of course, this will be an added value for the museum, and blind tourists who visit can also feel safe and comfortable while at the museum.

2.3.3 Braille

The writing system used by blind people, as well as people with low vision, is the Braille writing system. Braille is made up of symbols that represent letters, punctuation marks, and numbers. Braille letters are composed of dots that appear on paper and can be felt by the fingertips.

Braille can help blind tourists to receive information in the museum. The development that the Museum of the Asian-African Conference has carried out is the existence of a Braille Corner or a library that provides books in Braille. Based on researchers' observations, there has been no Braille writing in any museum exhibitions.

Regarding the addition of Braille, SH argues:

> *"Yes, can Added. For example, if there is a photo with a frame, underneath it can be written "Photo of Soekarno with the whole team of the Asian-African Conference." That can be. It won't disturb the thing. That might be used as input."*

Braille can be added under photos or near museum exhibits. If it is too long and interferes with the object's position, Braille can be added only with important information. The museum educator can convey the rest of the more detailed information.

Braille will make it easier for blind tourists to enjoy museum attractions. With this writing, blind tourists can touch it and read information about a visual object. If it is considered too long, the information in Braille can be presented concisely and concisely so that it does not interfere with the position of the visual object.

2.3.4 Audio Media

Blind tourists reach information by hearing. The information was obtained from the explanations given by the museum educators. In addition, blind tourists can also listen to information through audio media. The Museum of the Asian-African Conference has also provided audio media for blind tourists, namely audiobooks. However, there are still shortcomings or weaknesses of the sound book. According to KT, the audiobook in the Museum of the Asian-African Conference is less comfortable for blind tourists. It is still necessary to develop the book to be used for blind tourists.

The development that can be done for audio media as accessibility for blind tourists is to develop a button that can be set or played. DM expressed his opinion as follows:

> *"Many texts for instructions for instructions of all kinds. Many of them are textual, but if you make your own blind, you need media that can be touched or that can be heard. In fact, it would be great if the descriptive texts on each item in the museum had an audio player, for example there. So, can we see if there is a button that can play, for example, right? Or for example there are objects that we can touch."*

The audio media developed will make it easier for blind tourists to access information through sounds containing various messages. The messages are in the form of information about visual objects as well as information about directions. The ideas presented by DM can be taken into consideration for the management of the Museum of the Asian-African Conference.

The development of museum accessibility that can be done for audio media is to add barcodes for specific areas. Audio media that use barcodes as an intermediary can also be a new wind for the Museum of the Asian-African Conference to make the Museum of the Asian-African Conference a museum that is friendly to blind tourists. The barcode will also provide information about the visual objects in the Museum of the Asian-African Conference.

Blind tourists can use their smartphones and scan the barcode. The development of a museum using this media will give blind tourists the flexibility to access the museum and enjoy tourist attractions. LI, a tourist who has visited the Museum of the Asian-African Conference, also stated that using audio media will make it easier for him to get information. It is hoped that the audio media developed at the Museum of the Asian-African Conference will provide detailed information about an object and is easily accessible and easy to listen to by blind tourists.

Vaz et al., (2018) also conducted a similar study regarding audio descriptions accessible to blind tourists. The presence of audio descriptions in the museum yielded positive results, and the evaluation results also showed positive results. For this reason, audio media or audio descriptions can be considered for the Museum of the Asian-African Conference to be developed in the museum.

The results of this study - regarding the accessibility of the museum that blind tourists can enjoy - align with research conducted by Handa et al., (2010). The research shows that blind tourists need accessibility to enjoy exhibitions and collections. In addition, the study stated that museum staff needed assistance to accompany blind tourists. That is, this study also complements previous studies related to how blind tourists enjoy this accessibility.

4. Conclusion

Tourist attractions that can be enjoyed by blind tourists at the Museum of the Asian-African Conference are museum exhibits (dioramas, photos, flags, and objects used during the 1955 Asian-African Conference). However, these tourist attractions cannot be enjoyed by blind tourists to the fullest. Museum educators have difficulty explaining the details of museum exhibits to blind tourists. Thus, the development of tourist attractions that are friendly to blind tourists needs to be done. Blind tourists can enjoy museum attractions at the Museum of the Asian-African Conference in two ways; auditory and tactile. Museum educators can explain a visual object in detail about its shape, the object, color, and position of the object—the second way, namely through

touch. In order to get a more concrete picture of an object, blind tourists can touch museum objects.

Accessibility for blind tourists is not yet available at the Museum of the Asian-African Conference. Hence, accessibility development also needs to be done so that blind tourists can enjoy the museum's tourist attractions. The accessibility required by blind tourists to enjoy the museum's tourist attractions is; guiding block, Braille, and audio media. The guide path will provide easy access for blind tourists in determining directions and accessing the museum. Braille can also provide easy access to information for blind tourists. Audio media can also provide easy access to information through voices that blind tourists can hear. Museum educators who can assist the visually impaired correctly and adequately will provide comfort and a sense of security for blind tourists.

Bibliography

Argyropoulos, V. S., & Kanari, C. (2015). Re-imagining the museum through “touch”: Reflections of individuals with visual disability on their experience of museum-visiting in Greece. *Alter*, *9*(2), 130–143. https://doi.org/10.1016/j.alter.2014.12.005

Arikunto, S. (2005). *Manajemen Penelitian*. Rineka Cipta.

Asakawa, S., Guerreiro, J., Ahmetovic, D., Kitani, K. M., & Asakawa, C. (2018). The present and future of museum accessibility for people with visual impairments. *ASSETS 2018 - Proceedings of the 20th International ACM SIGACCESS Conference on Computers and Accessibility*, 382–384. https://doi.org/10.1145/3234695.3240997

Cahyana, L. (2019). Blind Tourism, Apa yang Dirasakan Pelancong Tunanetra? *Tempo.Co*.

Chiscano, M. C., & Jiménez-Zarco, A. I. (2021). Towards an inclusive museum management strategy. An exploratory study of consumption experience in visitors with disabilities. the case of the cosmocaixa science museum. *Sustainability (Switzerland)*, *13*(2), 1–14. https://doi.org/10.3390/su13020660

Dincer, F., Ozcit, H., Cifci, I., Sezer, B., Kahraman, O. C., & Sahinoglu, S. (2019). Accessible Museums for Visually Impaired: A Case Study from Istanbul. *Journal of Tourismology*, *5*(2), 113–126. https://doi.org/10.26650/jot.2019.5.2.0032

Efendi, M. (2006). *Pengantar Psikopedagogik Anak Berkelainan*. Bumi Aksara.

Handa, K., Dairoku, H., & Toriyama, Y. (2010). Investigation of priority needs in terms of museum service accessibility for visually impaired visitors. *The British Journal of Visual Impairment*, *28*(3), 221–234. https://doi.org/10.1177/0264619610374680

Junaid, I. (2017). *Museum dana Perspektif Pariwisata dan Pendidikan.* Dinas Kebudayaan dan Pariwisata Provinsi Sulawesi Selatan.

Kusumaningrum, H. (2018). Kajian Kebutuhan Wisatawan Difabel dalam Berwisata (Studi Kasus Museum Benteng Vredeburg). *Jurnal Kepariwisataan*, *12*(3).

March, S. L., Wiener, W., Naghshineh, K., & Giusti, E. (2005). Creating accessible science museums with user-activated environmental audio beacons (ping!). *Assistive Technology*, *17*(2), 133–143. https://doi.org/10.1080/10400435.2005.10132103

Mauludin, R. (2017). Pengaruh Atraksi Wisata Terhadap Minat Berkunjung Wisatawan Ke Daya Tarik Wisata Waduk Darma Kabupaten Kuningan. *Jurnal Manajemen Resort Dan Leisure*, *14*(2), 57–68.

Mesquita, S., & Carneiro, M. J. (2016). Accessibility of European museums to visitors with visual impairments. *Disability and Society*, *31*(3), 373–388. https://doi.org/10.1080/09687599.2016.1167671

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook*. SAGE Publications Ltd.

Mill, R. C. (2000). *Tourism the international business penerjemah Tri Budi Satrio*. Raja Grafindo Persada.

Moerdani, S. (1987). *Psikologi Anak Luar Biasa*. Universitas Islam Nusantara.

Muthmainnah, N. (2015). Pemahaman Siswa Tunanetra (Buta Total Sejak Lahir dan Sejak Waktu Tertentu) Terhadap Bangun Segitiga. *Fibonacci Jurnal Pendidikan Matematika Dan Matematika*.

Nawawi, A. (2010). Analisis Mobilitas Tunanetra. *Balai Pelatihan Pendidik Dan Tenaga Kependidikan Pendidikan Luar Biasa Dinas Pendidikan Provinsi Jawa Barat*.

Ozturk, Y., Yayli, A., & Yesiltas, M. (2008). Is the Turkish tourism industry ready for a disabled customer's market?. The views of hotel and travel agency managers. *Tourism Management*, *29*(2), 382–389. https://doi.org/10.1016/j.tourman.2007.03.011

Sugiyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. PT Alfabet.

Tarsidi, D. (2011). *Telaah Kendala Umumyang dihadapiPenyandangDisabilitas* Didi Tarsidi Kendala Umum yang Dihadapi Penyandang Disabilitas dalam Mengakses Layanan Publik*. *10*, 201–205.

Timothy, D. J., & Boyd, S. W. (2003). *Heritage Tourism*. Prentice Hall.

Utomo, & Muniroh, N. (2020). *Keterampilan Orientasi Mobilitas (OM) Bagi Tunanetra*. Nizamia Learning Center.

Vaz, R., Fernandes, P. O., & Veiga, A. C. R. (2018). Designing an interactive exhibitor for assisting blind and visually impaired visitors in tactile exploration of original museum pieces. *Procedia Computer Science*, *138*, 561–570. https://doi.org/10.1016/j.procs.2018.10.076

Welerebun, N., Hendrawan, & Mongi, V. (2016). Analisa Impelemntasi Pembayaran dan Pelaporan PBB Berbasis Web di Kota Tomohon. *Buletin Sariputra*.