

ANALYSIS OF FACILITY ACCESSIBILITY NEED FOR IMPROVING SERVICES FOR PASSENGERS WITH DISABILITIES

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ABSTRACT

Kalimara Airport is an airport located in Teluk Bayur District, Berau Regency, East Kalimantan. Where at the Kalimara airport terminal there are facilities for the public and for passengers with disabilities. As for the services provided in the form of assistance to make it easier for passengers with disabilities to communicate and move from the check-in process to the passengers with disabilities to carry out the boarding process. So that by providing the facilities and services that have been provided, the purpose of this study is to determine the ideal readiness of facilities and services as well as the availability of facilities for passengers with disabilities. In this study the authors used a quantitative research method. For data collection techniques using documentation, observation, interviews, and questionnaires. Whereas in processing the data from the questionnaire results the author uses validity test data and reliability test data, The final results achieved from this study indicate that for the results of the validity test all items obtained a value greater than the r table value, namely 0.344 which was declared valid and for the reliability test results obtained a value of 0.970 which was in the high category. So that a conclusion can be drawn where there are still deficiencies in fulfilling the accessibility of facilities for passengers with disabilities, while the availability of facilities and services that have been provided are quite good.

Keywords: *Accessibility, Facilities, Services, Persons with Disabilities*

1. INTRODUCTION

Transportation infrastructure plays a crucial role in advancing the growth of a region [1] [2] [3]. In Indonesia, a country comprised of numerous islands, air transportation has become a vital choice for connecting these islands. In today's era of globalization, aviation development is influenced by national progress, where air travel becomes a preferred option among people due to its speed and efficiency in covering distances compared to other modes of transportation.

An airport is a designated area on land or water used for aircraft to take off and land, passenger and cargo exchange, and connections to other modes of transportation. In the modern age, all airport facilities should be designed to serve all segments of society, including those with special needs such as individuals with disabilities [4] [5] [6]. However, in reality, many facilities still do not fully cater to the needs of people with disabilities, even though they have an equal right to receive equal services and facilities.

One of the airports focused on in this study is Kalimara Class 1 Airport, located in the Teluk Bayur District of Berau Regency, East Kalimantan. With the elevation of Kalimara Airport's status to Class 1, there has been an increase in passenger and aircraft numbers, necessitating the enhancement of services and facilities to streamline flight operations. In this context, the research focuses on the accessibility aspect of facilities and services at the Kalimara Airport terminal, particularly for passengers with disabilities [7] [8] [9].

Individuals with disabilities are those who experience physical, intellectual, mental, or sensory limitations that hinder their interaction with the environment and their participation in social activities [10]. To improve the lifestyle and health status of individuals with intellectual disabilities, a comprehensive system-wide approach is needed to create a healthy environment. This can be achieved through resource mapping and identifying factors that promote and protect health [11] [12]. In efforts to support accessibility for people with disabilities, regulations and laws have been enacted, such as Law

Number 8 of 2016, which governs accessibility rights for people with disabilities in various public facilities, including airports [13].

Based on these studies, it is evident that the challenge of providing accessibility for people with disabilities at airports is not a unique issue but is faced by other countries as well. Therefore, this research at Kalimarau Class 1 Airport becomes important in identifying needs and suitable solutions to enhance services for passengers with disabilities. In the context of Kalimarau Airport, efforts to provide accessibility facilities for people with disabilities are in place, such as specialized lifts, accessible restrooms, ramps, priority seating, and assistance [14] [15]. However, there are still deficiencies in the facilities provided, such as the absence of disability restrooms in the baggage check-in area and the lack of priority seating in the departure area [16] [17].

Hence, the aim of this research is to identify the accessibility needs of facilities to improve services for passengers with disabilities at the Kalimarau Class 1 Airport Terminal. Through this study, it is hoped that solutions and recommendations can be found to enhance the inclusivity of service quality and facilities, ensuring that the rights of individuals with disabilities in using air transportation services are optimally fulfilled.

2. METHOD

2.1. Research Design

This research utilized a quantitative research methodology. The selection of the quantitative approach was based on its capacity to generate reliable and relevant data that accurately represent real-life situations. The research framework employed in this study is situated within the domain of quantitative research. Quantitative research constitutes a technique used to accurately measure various factors, often employed to assess customer behaviors, levels of understanding, viewpoints, and inclinations [18].

2.2. Research Setting

The research was conducted at Kalimarau Class 1 Airport. The selection of this location as the research site was due to the ease of obtaining the required data. The research period commenced during the On-The-Job Training on January 9th to March 31st, 2023.

2.3. Population and Sample

A population is an abstraction encompassing particular entities or subjects characterized by specific attributes and traits as defined by the investigator for analysis and drawing subsequent inferences [19]. The process of selecting a sample is implemented to facilitate

research in a more streamlined manner, without having to encompass the entirety of the population. A sample is a subset of the population, meticulously acquired through specific methodologies, possessing distinct and comprehensive attributes that are considered to be indicative of the larger population [19].

In this research, the population consists of 8 customer service personnel, 3 airline personnel who serve as attendants for passengers with disabilities, and 50 passengers with disabilities. The sampling technique employed is the Slovin formula. The Slovin formula is utilized to determine a sample size that aligns with the chosen level of significance.

$$n = \frac{N}{1 + N(e)^2}$$

n : sample size/respondent count N

: population size

e : Allowable margin of error in sample selection accuracy, which can be tolerated at 0.1 (10%) or 0.2 (20%).

By applying the formula, it was determined that the required sample size is 33 individuals, which constitutes passengers with disabilities present at Kalimarau Class 1 Airport in Berau.

2.4. Data Collection Techniques

Data collection techniques are essential steps in the research process to gather the necessary information to address research questions or achieve set objectives [20]. The data collection methods employed by the author aim to facilitate the gathering of information concerning the analysis of accessibility needs to enhance services for passengers with disabilities at Kalimarau Class 1 Airport terminal. The data collection techniques utilized include documentation, observation, interviews, and questionnaires..

2.4.1. Documentation

Documentation is a method used to obtain data and information in the form of books, archives, documents, numerical records, and images, including reports and descriptions that support research [21]. Documentary studies complement the use of observation and interview methods in qualitative research. In this study, the author captured photographic documentation using a mobile phone to serve as a data source that addresses the research questions presented by the author.

2.4.2. Observation

One technique that can be used to understand or investigate non-verbal behavior is through the use of observational techniques. Observation is a data collection technique that possesses specific characteristics compared to other methods [21]. The purpose of the observation carried out by the author is to focus on the accessibility features, facilities, and services provided for passengers with disabilities at Kalimarau Class 1 Airport.

2.4.3. Interview

Interviewing is another technique utilized for data collection in research. Interviews involve two-way communication to gather information from relevant informants [22]. The author conducted interviews intensively, both directly and through communication platforms like WhatsApp, with several interviewees. The aim of these interviews is to gather as much information as possible to form data that can be analyzed and used to draw conclusions and address the issues raised by the author.

2.4.4. Questionnaire

A questionnaire is a data collection technique conducted by providing a set of written questions or statements to respondents for their answers [23]. The questionnaire used in this study consists of statements related to the Analysis of Accessibility Needs for Enhancing Services for Passengers with Disabilities at Kalimarau Class 1 Airport Terminal. The response options in this questionnaire are categorized as SA (Strongly Agree), A (Agree), N (Neutral), DA (Disagree), and SDA (Strongly Disagree). The questionnaire method chosen by the author aims to gather relevant information related to the research focus. Using this questionnaire, the author seeks to explore the perspectives and perceptions of respondents regarding the accessibility of facilities and services at Kalimarau Class 1 Airport in the context of passengers with disabilities [24].

2.5. Data Analysis Technique

2.5.1. Validity

The purpose of conducting validity testing is to assess the extent to which the measuring instrument used in the research, in this case, the questionnaire, possesses validity. Validity refers to the ability of the questions in the questionnaire to accurately measure the intended concept or variable. In this context, the validity of the questionnaire is measured by ensuring that the existing questions can accurately reflect the aspects measured by the questionnaire. For example, if the aim is to measure

Employee Performance, the questions in the questionnaire should accurately capture how the employee's performance is.

Specific criteria are utilized in validity testing. This testing involves the correlation between the scores of each indicator item and the total score of the measured construct. The commonly used significance level is 0.05. The process of validity testing is carried out as follows:

- 1) The null hypothesis (H_0) is accepted if the computed correlation coefficient (r) is greater than the tabulated correlation coefficient (r table) from the distribution table.
- 2) The null hypothesis (H_0) is rejected if the computed correlation coefficient (r) is less than or equal to the tabulated correlation coefficient (r table).

The value of the tabulated correlation coefficient (r table) can be determined using the degrees of freedom (df), which is obtained from the number of respondents involved in the study. For instance, if the number of respondents is 13 and the significance level used is 0.05, then the value of the tabulated correlation coefficient (r table) can be calculated using the formula for df ($13-2$) at a significance level of 0.05.

2.5.2. Reliability

Reliability is an index that measures the extent to which a measuring instrument can be trusted or relied upon. A measuring instrument is considered reliable if it can produce consistent results even when measurements are taken multiple times. The Cronbach's Alpha method is commonly used to test the reliability of research data and questionnaires. This method measures the internal consistency of a set of items or questions within a questionnaire. Using Cronbach's Alpha, researchers can assess how closely the items in the questionnaire are related to each other and measure the same concept. A higher Cronbach's Alpha value indicates a higher level of reliability for the measuring instrument [25].

3. RESULT AND DISCUSSION

3.1. Facility Accessibility Readiness Level

During the implementation of the On-the-Job Training at Kalimarau Airport, I conducted a series of observations and documentation that provided in-depth insights into the readiness of accessibility for passengers with disabilities within the airport terminal. These observations were reinforced by the documented outcomes that vividly depicted the current reality of accessibility conditions. However, within this series of findings, one prominent aspect stood out, which is the

inadequate fulfillment of accessibility in several key areas within the airport.

For instance, a striking issue is the limited toilet facilities in the check-in area that are exclusively designated for general passengers. This poses a significant challenge for passengers with disabilities who feel constrained by their physical condition in using these facilities. This situation forces them to leave the check-in area and search for more suitable restroom facilities in the arrival area. Another issue evident from the documented images is the absence of priority seating near Gate A1 and Gate B1 in the departure area. Yet, priority seating is crucial for passengers with disabilities as a

comfortable resting place. The limited presence of these facilities indicates a mismatch between the provided amenities and the actual needs, potentially undermining their overall travel experience.

In facing these findings, it is essential to recognize the impact they have on the travel experience of passengers with disabilities. Hence, it becomes imperative to take concrete steps to enhance accessibility at Kalimarau Airport. Some recommendations emerging from this include improving appropriate restroom facilities in the check-in area, providing priority seating near Gates A1 and B1, and involving training for airport staff to be more attuned and sensitive to the needs of individuals with disabilities. Through an approach of continuous education and a strong commitment to improvement, Kalimarau Airport has the potential to create a more inclusive and disability-friendly environment. The ultimate goal of these efforts is to ensure that every passenger, regardless of their background and needs, can enjoy their journey comfortably and without unnecessary obstacles..

3.2. Disability Services

During the execution of the On-the-Job Training activities at Kalimarau Airport, my research focus was directed towards the services provided to passengers with disabilities, starting from the moment they enter the terminal to the departure process. These observations were reinforced by the documentation I obtained. From this documentation, it is evident how services for passengers with disabilities have been designed with an inclusive approach. One prominent aspect is the assistance provided to passengers with disabilities throughout their journey within the terminal.

This assistance encompasses various stages, starting from the passenger's arrival at the terminal to the boarding process onto the aircraft. These procedures are aimed at ensuring that passengers with disabilities feel supported and secure throughout their entire journey. It is important to note that this assistance can be arranged when

passengers with disabilities inform the airline during ticket reservation, whether through online or offline channels.

From the documented images I obtained, it is apparent how specialized mobility services are provided for passengers with disabilities. Additionally, the dropoff zone and aircrew drop area are equipped with adequate facilities to facilitate their mobility. However, it should be noted that to improve access to the airside area and the aircraft boarding process, additional facilities such as ramps are needed, which would greatly assist both staff and passengers in overcoming any physical barriers that may arise.

On the whole, these observations indicate the positive steps taken by Kalimarau Airport to enhance services for passengers with disabilities. However, there is still room for improvement, particularly in terms of adding facilities that can further enhance accessibility, especially during the boarding process. It is hoped that these recommendations can be considered by the airport in their efforts to continually enhance inclusive and disability-friendly services for all passengers..

3.3. Availability of Facilities for Passengers with Disabilities

During the implementation of the On-the-Job Training at Kalimarau Airport, I employed various approaches to gather relevant information about the facilities available in the airport terminal. One approach I used was photographic documentation through my mobile phone, aimed at capturing the real conditions of the facilities present at the airport. I also conducted direct field observations to gain a deeper understanding while addressing the questions posed in the research formulation.

The photographic documentation I obtained highlights several noteworthy aspects related to facilities for passengers with disabilities at Kalimarau Airport Terminal. One issue evident through this documentation is the lack of facilities provided for passengers with disabilities. For example, there is a gap in terms of dedicated waiting areas for passengers with disabilities. While the facility exists, it is not yet fully prepared for use by passengers in need of better accessibility.

Furthermore, the photographic documentation also underscores the absence of specific dropzone areas for passengers with disabilities in the airport's arrival zone. This could pose a significant obstacle for passengers with limited mobility who arrive at the airport and intend to continue their journey by car. This deficiency can impede their movement from the arrival area to their vehicles, creating an unexpected hindrance.

Through this photographic documentation, it's evident that real challenges still exist in providing adequate facilities for passengers with disabilities at Kalimarau Airport. The existing facilities do not entirely meet their needs, and there are aspects that require improvement to create a more inclusive and disabilityfriendly environment. It's hoped that these findings can serve as a foundation for future facility enhancements and developments, which will bring greater benefits to all passengers.

3.4. Documentation of Provided Facilities

During the implementation of the On-the-Job Training (OJT) activities at Kalimarau Airport, I took an additional step to collect data in the form of photographic documentation using a mobile phone camera. I meticulously captured various facilities provided by the airport authorities, specifically for passengers with disabilities. These facilities encompass various crucial aspects designed to meet the special needs of these passengers, as depicted in the following images:



Figure 1. Priority Seating

Figure 1 displays priority seating designed for passengers with special needs, granting them improved access and comfort while awaiting their flights



Figure 2. Accessible Toilet

Figure 2 depicts a dedicated accessible toilet, providing improved accessibility for passengers with limited mobility.



Figure 3. Wheelchair

Figure 3 portrays a wheelchair, which is an essential facility to assist the mobility of passengers in need.



Figure 4. Ramp

Figure 4 displays a ramp, crucial for facilitating access for wheelchairs and passengers with limited mobility.



Figure 5. Crutches

Furthermore, Figure 5 showcases walking aids such as crutches, provided to assist passengers requiring support while walking.



Figure 6. Walker

Lastly, Figure 6 illustrates mobility aids like a walker, which can assist passengers in need of walking support.

Although these facilities are already in place and offer clear benefits for passengers with disabilities, I believe that there is still room for improvement. Based on the documentation I have obtained, I conclude that the existing facilities at Kalimarau Airport are quite good, but there is potential to enhance them further. I recommend the addition of facilities such as strategically placed disability facility maps and increased Braille materials in waiting areas for passengers with sensory disabilities. I want to emphasize the importance of addressing various types of disabilities, including intellectual and sensory disabilities, in line with the inclusivity principles mandated in Law Number 8 of 2016 concerning Persons with Disabilities.

In conclusion, while efforts have been made to provide inclusive facilities, there is still potential for improvement and further development to ensure that all passengers with disabilities can access and utilize facilities comfortably and without hindrances.

4. CONCLUSION

Based on the analysis outlined in the previous chapter, several important conclusions can be drawn from this study. First, from the overview obtained, it is clear that the level of readiness for facility accessibility at Kalimarau Airport Terminal is still not fully adequate. Some facilities, such as the accessible toilet in the checkin area and priority seating at gates A1 and B1, still lack in meeting accessibility requirements. Therefore, improvements and enhancements to facilities are needed to ensure that accessibility rights are well fulfilled.

Second, regarding the services provided to passengers with disabilities, the airline has relatively provided good service by offering assistance from the moment passengers arrive at the terminal until the boarding process. By providing information during ticket reservation, the airline has made it easier for passengers with disabilities to obtain the assistance they require. However, infrastructure improvements such as the

addition of ramps in terminal areas are needed to ensure smoother movement.

Third, despite the availability of several facilities for passengers with disabilities at Kalimarau Airport, there is still potential for improvement. Adding facilities such as strategically placed disability facility maps, Braille books in waiting areas for passengers with sensory disabilities, and dedicated drop zones in arrival areas, as well as priority lines, would help more passengers with disabilities access facilities comfortably.

In order to enhance the accessibility of facilities and services for passengers with disabilities, several recommendations can be put forward. First, Kalimarau Airport and the airline need to improve and add accessibility facilities, including accessible toilets and priority seating. Second, more inclusive facility designs should be developed to meet accessibility rights in accordance with relevant laws. Third, specialized training for airport personnel will enhance their understanding and approach to passengers with disabilities.

With these steps, it is expected that the accessibility of facilities and services for passengers with disabilities at Kalimarau Airport Terminal will continue to improve. By upholding the principles of inclusivity and equal rights, we can create a disability-friendly environment and ensure that all passengers can enjoy their journeys comfortably and without hindrances.

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