

The Effectiveness of Information Media as a Means of Educating Passengers About Luggage at Minangkabau International Airport

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Article Info	ABSTRACT
<p>Article History: Submitted: July 18, 2025 Revised: July 23, 2025 Accepted: August 8, 2025</p>	<p><i>Information media within the airport environment play a crucial role in educating passengers about baggage regulations, thereby supporting aviation safety and security. However, the effectiveness of such media still requires evaluation, particularly at Minangkabau International Airport. This study aims to analyze the extent to which information media functions as an educational tool for passengers. The research employed a mixed-methods approach, combining quantitative methods through observation and interviews. Quantitative data were analyzed using SPSS software through validity and reliability tests, simple linear regression, and hypothesis testing. The results show that information media have a significant influence on passengers' understanding of baggage regulations, indicated by a β (beta) value of 0.943 and a significance level of $p < 0.001$. Qualitative findings suggest that the current information media is still suboptimal due to its lack of visual appeal, poor placement, and outdated content. Passengers were more responsive to interactive media such as educational videos and digital infographics. Therefore, a more effective communication strategy is needed by utilizing digital media that is engaging, visual, and easily accessible. This study is expected to serve as a reference in the development of more efficient and educational information media within the airport environment.</i></p>
<p>Keywords: <i>Airport, Information Media, Passenger Education, Baggage Regulations, Aviation Safety</i></p>	

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INTRODUCTION

Air transportation is the most effective and efficient mode of connecting domestic and international areas. Its rapid development demands increased attention to safety and security aspects, one of which is ensuring passenger understanding of the luggage rules [1]. This lack of knowledge can lead to delays in inspection and risks to flight safety [2]. Therefore, communicative and effective information media are needed as a means of education.

Observations at Minangkabau International Airport indicate that passengers still have a limited understanding of the provisions for luggage, as observed during the Safety Security Campaign. Additionally, available information media, such as digital signage, have not provided specific content about luggage. This is not following ICAO Doc 9284 and the government through Minister of Transportation Regulation No. 32 of 2022 concerning Civil Aviation Safety Regulations Part 92 concerning Safety of Transportation of Dangerous Goods by Aircraft Article 26 Paragraph 4 standards, which require the delivery of clear and visual information in check-in areas and waiting rooms [3] [4].

Research on the effectiveness of information media in the context of passenger education at airports remains minimal, particularly regarding the rules for carry-on luggage on planes. Most previous studies have focused on the effectiveness of information media in other sectors, such as research by [5] highlighting the use of social media by PT Angkasa Pura I employees at Juanda International Airport. Although the focus is on work productivity, this study shows the potential of social media as a communication and education tool in the airport environment. Research by [6] discusses how PT Angkasa Pura II at Fatmawati Soekarno Bengkulu Airport utilizes media relations strategies to foster good relations with the media. This research is relevant to understanding how information media at the airport can be effectively used to convey information to the public, including education about luggage.

In comparison, studies at international airports show a more integrated and technology-driven approach in delivering information to passengers. For example, research by Young Joon Yoo entitled "Passengers' Perceptions of Airport Digital Signage and Its Effect on Information Satisfaction and Airport Image" in the journal *Journal of Air Transport Management* showed that the use of interactive digital signage and information videos at Incheon Airport, South Korea, significantly increased information satisfaction and positive perceptions of the airport image. This research confirms that digital media, which is visual, real-time, and easily accessible, is highly effective in conveying important information, including security and luggage requirements [7].

In addition, a study by Schroeder & Penning de Vries (2019) in the article "Enhancing Passenger Experience through Smart Airport Technologies: The Case of Schiphol Airport" published in *Transport Policy Journal*, describes how Schiphol Airport in the Netherlands implemented an innovative technology-based approach to provide personalized and adaptive information to passengers, including through mobile applications and interactive audio-visual systems. The research shows that the effectiveness of information media relies heavily on the integration of relevant content and user-friendly delivery technologies [8].

From this comparison, it can be concluded that international airports tend to integrate digital technology and modern communication strategies more fully for passenger education. This research is expected to contribute to airport managers in improving the quality of information services to passengers.

Based on the background described above, this study formulates the following questions: How effective is the information media at Minangkabau International Airport, and which type of information media is most effective in conveying luggage-related information to passengers? To maintain focus, ensure systematic direction, and account for limitations in knowledge, resources, and infrastructure, this research is limited to examining the effectiveness of information media specifically used to educate passengers about luggage at Minangkabau International Airport.

METHODS

This research uses qualitative and quantitative research methods (mixed methods research). According to Schoonenboom and Johnson, mixed methods research is a type of research in which researchers or research teams integrate elements of qualitative and quantitative research approaches,

such as perspective, data collection, analysis, and inference techniques. The aim is to achieve a comprehensive and in-depth understanding and to conduct broader research [9].

This research employs a mixed-methods approach (combining qualitative and quantitative methods) to gain a deeper understanding of the effectiveness of information media at Minangkabau International Airport. Qualitative methods were initially employed through observation, interviews, and documentation, followed by quantitative methods, which included distributing questionnaires. The focus of the research is on evaluating the effectiveness of information media as a means of educating passengers regarding the luggage rules.

To ensure that the data collection instrument, in the form of a questionnaire, measures variables accurately and consistently, the validity and reliability of the instrument are tested. Validity is tested by calculating the correlation between the score of each question item and the total variable score using the Pearson Product-Moment coefficient. Items are declared valid if the correlation coefficient is statistically significant and greater than the limit value at the 5% significance level. Meanwhile, reliability refers to the internal consistency of the instrument, which is measured using Cronbach's Alpha with a minimum standard value of 0.70. Instruments that meet these requirements are considered capable of producing valid and reliable data for further analysis.[10]

Data collection was conducted among a population comprising passengers, security officers, and airline staff at Minangkabau International Airport, with random sampling used to represent the population. Data analysis was conducted by testing the effect of the independent variable, namely the effectiveness of information media, on the dependent variable, namely the means of passenger education. The analysis process also involved verifying the basic assumptions necessary for the analysis model to be reliable and the results to be statistically valid, so that conclusions about the relationship could be drawn with a high level of confidence.

The research instrument was developed from indicators covering the dimensions of accessibility, information quality, media type, understanding, behavior change, and passenger satisfaction. A Likert scale was used with a range from 1 (strongly disagree) to 5 (strongly agree). Instrument testing was conducted through validity and reliability tests. To ensure that the regression model is free from deviations, classical assumption tests such as normality and heteroscedasticity tests are carried out.

Time of Research

This research was conducted while the author was carrying out job training at Minangkabau International Airport for approximately five months.

1. The research location used to compile this Final Project is Minangkabau International Airport.
2. The research period for preparing this Final Project began in October 2024 and concluded in February 2025.

RESULT AND DISCUSSION

The results of observations and interviews revealed that many passengers at Minangkabau International Airport still bring prohibited items into the aircraft cabin, such as liquids exceeding the limit and sharp objects, indicating a lack of understanding of the luggage rules. The placement of information media is considered less strategic, and the content is less interesting and less interactive, making it challenging to attract the attention of passengers. The existing digital signage only displays general information without in-depth education related to prohibited items. Hence, security officers often have to provide additional explanations that can extend queues and create potential conflicts. Verbal education by officers is considered adequate, but is limited by the number of officers and unable to reach all passengers. As expressed by one security officer, "Passengers still often carry items that are not allowed because they do not understand the information conveyed through the current media." This reinforces the finding that the effectiveness of existing media still needs improvement, particularly in terms of content and media placement. Officers recommend the use of more modern visual media, such as digital infographics and educational videos that can also be published through social media and airport facilities.

Quantitative data from questionnaires distributed to 112 respondents support these findings. Validity and reliability tests demonstrated that all items in the information media and educational

facilities variables were valid and reliable, with Cronbach's Alpha Coefficients of 0.971 and 0.940, respectively. The classical assumption test indicated that the data were normally distributed and free from heteroscedasticity. Simple linear regression results showed a significant effect of information media on passenger understanding, with a regression equation of $Y = 0.590 + 0.964X$, a significance value of <0.001 , and a t-count of 29.862, which is well above the t-table value of 1.658.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.590	.558		1.058	.292
	TOTALX	.964	.032	.943	29.862	<.001

a. Dependent Variable: TOTALY

Figure 1 Simple linear regression analysis test result

Triangulation of qualitative and quantitative data corroborates the findings that interactive digital media such as animated videos and interactive digital signage can convey information more clearly and attract passengers' attention. Although conventional posters and banners still have a role to play, attractive visual designs and clear, concise language are essential to make messages more straightforward to understand. A multimedia approach that utilizes social media is also proposed as a complement to the education that prospective passengers can access before departure, thereby increasing awareness and understanding more broadly.

This finding aligns with the results of research by Ari Prima (2024) and Galang Septiawan (2024), which indicate that the low understanding of passengers at several airports is due to the lack of optimal educational media and information services [11][12]. In addition, Devina Nur Azizah et al. (2024) demonstrated the success of Instagram as a social media platform in increasing public awareness, which can serve as a model for developing educational media at the airport [13]. Interview quotes from security officers also emphasize the need for educational media innovation to reduce violations and simplify the inspection process.

Thus, the effectiveness of information media greatly influences passenger understanding of luggage regulations. Strengthening interactive media and strategic placement is crucial for enhancing education and promoting passenger compliance, while ensuring flight safety in accordance with ICAO standards and national regulations.

CONCLUSION

Based on the results of the study, it can be concluded that the information media currently available at Minangkabau International Airport have not functioned optimally in educating passengers regarding baggage regulations. While quantitative analysis indicates a significant relationship between the effectiveness of information media and passengers' level of understanding, field observations and interviews demonstrate that the media have not been able to fully convey the rules, as evidenced by the relatively high number of violations involving prohibited items. This finding underscores the need for airport management to conduct a comprehensive evaluation and improvement of the information media, including strategic placement, regular content updates, and the use of more engaging and easily comprehensible formats. Moreover, the study highlights that interactive digital media—such as animated educational videos, infographics, and social media platforms—are perceived as more effective in delivering information due to their accessibility, clarity, and ability to attract passengers' attention even prior to departure. Therefore, the research emphasizes the importance of integrating digital media as a key component of passenger education strategies, which should be complemented by direct educational efforts from airport personnel to further enhance compliance with safety regulations.

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This journal can provide benefits and positive contributions to the development of work safety in the airport environment.

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