# Safety Communication and Commitment on Airport Safety Culture: Strategy and Implementation in Improving Safety at Aviation Industry

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**Abstract:**
In the aviation industry, a strong safety culture relies heavily on management commitment. Management committed to safety not only complies with regulations and procedures, but also inspires and motivates all personnel to prioritize safety in every operational aspect. A lack of management commitment can result in the implementation of a weak safety culture, increasing the risk of accidents and incidents. This research focuses on analyzing management commitment to safety culture at airports. The aim of this research is to improve aviation safety through effective strategy and implementation. This research uses a qualitative approach and literature review to collect data and analyze it. The research results show that management commitment to safety culture is very important in improving aviation safety. The strategies used in this research include providing better training, stricter supervision, and the use of more modern technology. Implementation of this strategy is carried out by increasing management awareness and concern for aviation safety, as well as improving the quality of services provided. In conclusion, this research shows that management commitment to safety culture is very important in improving aviation safety. The strategies and implementation used in this research can be a reference for other airports in improving flight safety.

**Keywords**: Safety Culture, Management Commitment, Aviation Safety Management.

## Introduction

Aviation safety is one aspect of every aviation service provider's operation. Creating safety, security and smooth air traffic has become a shared commitment of every aviation industry business player. Aviation safety is a top priority in the world of aviation so it is necessary to have optimal safety standards in accordance with developments in aviation technology (Umar, 2020).

Safety culture is generally viewed as a characteristic of an organization that is reflected in the consistent way it handles critical safety issues. It is hoped that this culture can become an attitude of life and culture that is always carried along in the flow of thinking to always be committed to the best in completing work according to applicable procedures. This commitment must be recorded and can be accounted for which ultimately has one goal, namely reducing accidents for the sake of customer safety and satisfaction (Hendra et al., 2022).

The importance of creating a culture of aviation safety is based on the desires of users who expect to be free from all unwanted things while using aviation services (Nugraha et al., 2022). This can be created from the commitment of aviation service providers by prioritizing organizational

commitment in maintaining a positive safety culture, as well as compliance with aviation safety regulations.

Throughout the 20th century, nearly 11,000 (eleven thousand) aircraft accidents were recorded. Based on aircraft accident statistics, most aircraft experience accidents due to human factors. The human error factor generally often occurs due to several things, such as pilots who lack expertise in flying planes or pilots who are continuously under pressure from airline companies to fly beyond the specified time limit, errors in flight navigation services, and so on. other (Purba, 2017).

In order to reduce the number of accidents in the aviation industry, it is necessary to implement good safety management to create a positive safety culture in all aviation service providers. A strong safety culture relies heavily on management commitment. A lack of management commitment can result in the implementation of a weak safety culture, increasing the risk of accidents and incidents (Riyadi et al., 2021). This generally occurs due to a lack of awareness of various parties starting from airplane passengers, airline companies, airport managers and other related parties to comply with and implement technical regulations related to aviation safety, because in aviation activities each party must apply the zero risk principle to Minimize the occurrence of aviation accidents (Triadmojo & Haryati, 2022).

Based on empirical experience, many writers have difficulty finding supporting articles for their scientific work as previous research or as relevant research. Relevant articles are needed to strengthen the theory being researched, to see the relationship or influence between variables and build hypotheses. This article discusses the influence of Management Commitment on Airport Safety Culture, a literature review study in the field of Safety Management Systems.

## Literature Review

Understanding Safety Culture by Cooper (2000), believes that safety culture is a set of values, norms and behavior accepted by society at airports. Cooper also explained that safety culture influences employee satisfaction and service quality.

Safety Culture and Service Quality by van Nunen (2018), revealed that safety culture has an empirical nature. This means that safety culture is also a result of hypotheses that have been tested using experiments and observations. also explained that safety culture influences service quality and employee satisfaction.

Lindzey in Martadinata (2021) prefer that safety culture is a hypothesis, still in the form of speculation, has not been proven, and the facts are not certain. Lindzey also explained that safety culture affects employee performance and service quality.

Management commitment is a theoretical idea to determine the reasons why variables in a study can be interconnected with statements. They also explained that management commitment influences employee behavior and service quality (Purwanto; et al., 2019).

Management Commitment by Cooper (2000), believes that management commitment is a collection of concepts, variables, propositions and other concepts that are systematically related and whose similarities have been drawn to be able to explain and read a fact. Cooper also explained that management commitment influences employee satisfaction and service quality.

Management and Organizational Culture by Manning on Nugraha (2019), Manning believes that management commitment is a collection of opinions or assumptions that have a logical nature. Theories can also produce conjectures that can be compared with concepts that have been observed. Manning also explained that management commitment influences organizational culture and service quality.

Kneller (1999) revealed that management commitment has an empirical nature. This means that management commitment is also a result of hypotheses that have been tested using experiments and observations. Kneller also explained that management commitment affects service quality and employee satisfaction.

Management Commitment and Employee Performance by Lindzey on Amalia (2019), Lindzey believes that management commitment is a hypothesis, still in the form of speculation, has not been proven, and the facts are not certain. Lindzey also explained that management commitment affects employee performance and service quality.

The Influence of Safety Communication on Safety Performance by Vinodkumar & Bhasi (2010). They argue that safety communication and feedback are part of safety management practices which are measured using safety performance indicators.

Safety communication is very important in implementing the Safety Management System (SMS) at airports. SMS is a series of systematic efforts to achieve an acceptable level of safety for each aviation service provider (Santos-Reyes & Beard, 2002).

The Effect of Safety Communication on Service Quality by Kneller (1999). Kneller revealed that safety communication has an empirical nature and influences service quality. Kneller also explained that safety communication influences employee behavior and employee satisfaction.

## Method

The method for writing this scientific article is qualitative methods and library research. Examining theories and relationships or influences between variables from books and journals both offline in the library and online sourced from Mendeley, Google Scholar and other online media.

In qualitative research, literature reviews must be used consistently with methodological assumptions. This means that it must be used inductively so that it does not direct the questions asked by the researcher. One of the main reasons for conducting qualitative research is that the research is exploratory in nature (Surani, 2019).

In this research, researchers used six research articles related to self-efficacy and self-adjustment which were then analyzed. The data analysis process can start from collecting data sequences that are very relevant, relevant and quite relevant to the topic (Cahyono et al., 2019). This means that the data collected does not have to be exactly the same as the topic that will be discussed but still has a connection. The selection of articles for analysis can take into account the year of publication of the article to be studied starting from the most recent to the older year. (Fajar & Aviani, 2022).

## Results and Discussion

### The Influence of Management Commitment on Airport Safety Culture

Management Commitment influences Airport Safety Culture. A good safety culture will not develop without management commitment. Management must show this determination as a role model. The development of safety culture is implemented in safety attitudes and behavior (Behavior Base Safety, BBS) integrated into the work and habits of workers (Prasuad et al., 2016).

To improve Airport Safety Culture by paying attention to Management Commitments, one of which is the commitment related to implementing the Safety Reporting System. Airplane accident prevention is a complex activity that requires a lot of skill and effort. Effective accident prevention activities increase flight efficiency, as well as improving flight safety. To prevent aircraft accidents, an effective safety reporting system must be established and management must be committed to this (Kim & Song, 2015).

Management Commitment influences Airport Safety Culture, Based on the results of research conducted by Supriadi (2022) While management commitment (X1) has a positive effect on achieving safety performance in an organization (Y), management commitment has the greatest influence on the implementation of safety culture. Every level of leadership in the company must show commitment to safety so that a safety culture is successfully implemented and developed.

Management Commitment influences Airport Safety Culture, this is in line with research conducted by: (Fu & Chan, 2014), (Azari et al., 2022) and (Hadiyan, 2024).

**The Influence of Safety Communication on Airport Safety Culture**

Safety Communication influences Airport Safety Culture. An organization that wants to develop and perfect its safety culture must ensure that there is effective communication in all parts of the organization and related parties, including regulatory bodies. Knowledge and experience must be disseminated to functional groups within the organization so that the learning process accelerates. In this case, it is very important to have good communication channels (Prasuad et al., 2016).

To improve safety culture by paying attention to safety communication, what management must do is build communication and information for workers, where this is something that has a very important and influential role in realizing performance. This can be understood because in every work activity, especially at the operational level, team work must occur to achieve optimal results compared to working individually (Supriadi et al., 2022).

Safety Communication influences Airport Safety Culture. Safety culture is an important element in aviation safety management and can be defined as the extent to which safety is valued and prioritized in an organization. This is based on personnel attitudes, values and beliefs and is manifested in personnel behavior and actions (Amornpipat, 2020). Safety policies and procedures are very important for the successful implementation of a safety management system and with good Safety Communication, all safety policies and procedures will be known and implemented by all lines within the organization.

Safety Communication influences Airport Safety Culture, this is in line with research conducted by: (Nugraha, 2019), (Kim & Song, 2015) and (Yanriatuti et al., 2020).

*Table 1. Relevant previous research*

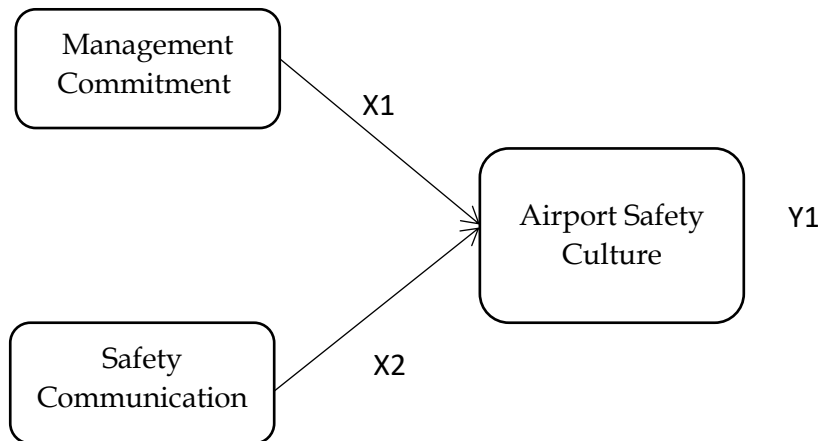| No | Author (year) | Previous research results | Similarities to this article | Differences with this article |
|----|---------------|---------------------------|------------------------------|-------------------------------|
| 1 | Fu & Chan, (2014) | Safety Supervision (Management Commitment), Safety Oriented Work Environment (Safety Communication) and Incentive and Penalty Systems influence the organization's safety culture | Safety Supervision (Management Commitment), Safety Oriented Work Environment (Safety Communication) influence the organization's safety culture | Incentive and Penalty Systems influence an organization's safety culture |
| 2 | Azari et al., (2022) | Management Commitment, Competence and Safety Awareness influence the organization's safety culture | Management commitment influences the organization's safety culture | Competency and Safety Awareness influence an organization's safety culture |
| 3 | Hadiyan (2024) | Management Commitment, Safety | Management Commitment, Safety | Safety Training, Rewards and |

| | | | | |
|---|---|---|---|---|
| | | Accountability, Safety Training, Safety Communication, Awards and Recognition, Safety Investment and Employees influence an organization's safety culture | Communication, influences the organization's safety culture | Recognition, Safety Investment and Employees influence an organization's safety culture |
| 4 | Yanriatuti et al., (2020) | Teamwork, organizational learning, stress levels and workload, openness of communication, response to errors influence an organization's safety culture | Organizational learning (Management Commitment), open communication (Safety Communication), influence the organization's safety culture | Stress levels and workload, responses to errors influence an organization's safety culture |
| 5 | Kim (2015) | Positive learning culture, safety reporting system, fair culture and information delivery system influence the organization's safety culture | The information delivery system influences the organization's safety culture | Positive learning culture, a safety reporting system and a fair culture influence the organization's safety culture |
| 6 | Amornpipat, (2020) | Organizational culture, leadership, safety climate, and safety policies and procedures influence an organization's safety culture | Organizational culture and leadership, safety climate, and safety policies and procedures influence an organization's safety culture | - |

Based on the table of relevant research results, it is reported that the overall research results reviewed show that there is a relationship between Management Commitment and Safety Communication and airport safety culture in a positive correlation direction. Even though the research subjects come from different subject backgrounds, they still show consistency in research results, such as the use of the same expert theory and data analysis techniques. If we look back at the objectives of implementing commitment management and safety communication, we can see various similarities that are also contained in the components of aviation safety culture, especially at airports.

Based on the problem formulation, theoretical studies, relevant previous research and discussion of the influence between variables, the framework of thinking for this article is as follows:

**Picture 1**
*Conceptual Framework*



Based on the conceptual framework image above, Management Commitment and Safety Communication influence Airport Safety Culture. Apart from these three exogenous variables that influence Airport Safety Culture, there are many other variables that influence it, including:
a) Incentive and Penalty System: (Fu & Chan, 2014), (Hadiyan & Dadan, 2024).
b) Competence and Safety Awareness: (Azari et al., 2022), (Yanriatuti et al., 2020).
c) Safety Training: (Hadiyan & Dadan, 2024), (Kim & Song, 2015).
d) Stress levels and workload: (Yanriatuti et al., 2020)
e) Safety Reporting System: (Kim & Song, 2015), (Amornpipat, 2020).

## Conclusion

Based on theory, relevant articles and discussions, a hypothesis can be formulated for further research, namely that it is known that Management Commitment to safety management influences Airport Safety Culture. and good and positive Safety Communication will influence Airport Safety Culture.

Based on the conclusions above, the suggestion in this article is that there are many other factors that influence Airport Safety Culture, apart from Management Commitment and Safety Communication at all types and levels of organizations or companies, therefore further studies are still needed to look for other factors that can influence airport safety culture other than the variables examined in this article. These other factors include Incentive and Penalty Systems, Competency and Safety Awareness, Safety Training, Stress Level and Workload, and Safety Reporting Systems.

## Acknowledgement

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