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endeavors. it helps us

Business, Decision Making



the factors influencing effective airline crew communications and in-flight decision-making. Introduction Communication is so essential to all human endeavors.

It helps us to regulate the achievement or disappointment in accomplishing goals as they are attached to high stakes. There is no doubt that operational in today's aviation industry is a high-risk profession since our lives and costly assets are invested in the industry. As a simple, social-technical structure, communication plays a vital part in achieving objectives, directing entities, and participating responsibilities. Actual communication is a significant procedure in daily life. People need to be able to communicate efficiently with each other on both an individual as well as occupational level. Failures in the communication procedures can lead to misinterpretations, or worse, a major disaster like Pan Am and KLM. In this report I would like to focus on the importance of communication in harmless and effective flight processes, drawing previous aircraft collisions as a result of communication errors.

Throughout its short history, the aviation industry has proven to be a deadly invention due to aircraft failure, human error, weather, sabotage, and others. As a result, the industry invested heavily in understanding and coping with the human factor which is the main cause of today's aircraft accidents (Alcorn, 2010). We understand that human error is something which cannot be eliminated, but we can minimize through learning from previous experience and training staff involved in the aviation. This will prevent future possible human error and reduce the accident rate down. The growth of commercial

aviation has increased since World War II. This also increase the probability of aircraft accident prorata since 1970s.

Following the Tenerife accident in 1977, the aviation industry has recognized the need for the development of Crew Resource management CRM (Goeters, K.-M. 2002). The airline passenger numbers have extremely increased since 1980s; however, the number recorded accident per flight hours has reduced over this period.

We can now statistically assume that flying is safer than any time before. This because of the development of Cockpit Resource management, now known as Crew Resource Management. CRM is aimed to change staff's attitudes towards communication and decision making (ICAO, 1998). CRM has been an overwhelming and widespread implementation to increase in today's aviation safety. Accidents occur for variety reasons, with the most prominent ones being human error. Human Error: Human factors play a vital role in safety in the aviation segment. One minor fault triggered by poor procedures or miscommunication can result in disastrous events as well as the loss of life. As part of Human error, captains sometimes make decision in the presence of an incomplete range of data (Burdekin, S.

2004). This is due to an asymmetric data which may construe different meaning according to the perception of the captain (Flin, R. 2006). This happens when captain is psychologically confronting with an ambiguous situation (Kanki et al., 2010).

Therefore, an effective training is important to recognise early warning signs to avert any accident. This includes situation awareness, communication, Team work and stress management, all of which support for fast, accurate and efficient decision making (Davis, L.(1990).

Situation awareness: is to understand the environmental condition and forestall possible danger that might occur. It is also essential that captain avoid self-satisfaction as s/he watches the system and environmental changes by communicating all staff member involved in the flight operation (Hormann, J., 2001). An awareness to the situation is often influenced by the perception and the stress one can find him/herself in, which is mainly referred to the concept of " Theory of the Situation" that developed by Dr. Lee Bolman, (1979).

The following phases are definitively referred to his theory. Theory Definition Theory of the Situation What one assumes to be true based on his/her perception of the situation at any given time. Reality The situation as it is in reality Theory in Use One's predictable behaviour in a given situation that has been developed since birth. Espoused Theory An individual's account or explanation of his/her behaviour Theory in Practice The set of skills, knowledge, and experience according to one's theory of situation.

One of the reasons for self-disagreement between one's perception and the reality is that a vast function of the human perceptual system reduces his/her decision to respond to the situation appropriately (Hagen, J. 2013). This is because our perception of visual information is consistent. However, our perception of situations which we obtain through our senses is not consistent.

Bolman's theory shows how other factors interact as we attempt to gain an awareness of the situation. Therefore, effective communication skills are vital (Kanki, B et al 2010). Communications means having good skills that enable an open and active participation of all team members. This is also to use clear and effective language when responding or giving feedback particularly in the events of ambiguities (Klein, G.

2001). In the Tenerife disaster, it was clearly evident that a communication ambiguity occurred during the KLM preparation for take-off and even after releasing the brakes. The flight engineer had strong suspicions that Pan America jet was still taxiing on the active runway. He failed to communicate with the captain and make his suspicions aware to the captain.

One of the most important keys to an effective cockpit management is communication among crew members. Information must be offered and exchanged freely to support the captain to make accurate and effective decisions (Alan, D. 1994). In recent CRM training developed there are variety of elements are essential to effective communication.

One more example of obstacles to actual communication can be initiated in the crew joinup process, and precisely the racial differences among crew members. In this world of cultural variety, it is not unusual to have two pilots with a totally different cultural background flying as a crew. Verbal and nonverbal communications may be understood in a different way, and this may have consequences during flight, particularly in high-workload conditions. The following elements, but not limited to, are viewed to be important for airline crew communication.

These include: Inquiry: seeking information and asking for clarifications are the beginning step to decide. Advocacy: is the need to state what you know or believe in a direct way. Listening: Active listening which requires more than passive attention.

Conflict resolution: Conflicts are critical when the disagreement is over how is accurate rather than what is right. Such conflicts can affect the quality of decision making. Team work: is solely on the authoritative response captain as sole skills can result a huge accident as it was evident at time of the KLM flight engineer stresses his suspicions that the Pan America jet was taxiing on the active runway. The disaster occurred due to human error when the captain made a sole decision that runway was clear for take-off without a clear permission from Air Traffic Control. The consequence was a disastrous accident at speed of one B-747 accelerating down the runway collided another B-747 taxiing.

For this instance, a cooperation from all members of cabin crew and the captain is necessary. Decision making: is to be effectively judgmental is often related to the mental process used by the captain to decide based on the availability of relevant information and the expected outcome (Kayes, 2004). With all the above elements in place, the captain can make a reliable decision and avoid decision error. Decision faults can arise within the two main mechanisms of the aviation decision model (Salas, E. et al, 2006): (a) pilots might advance an incorrect clarification of the situation, which can effect to an unfortunate result, or they might form an exact picture of the situation, but indicate an unsuitable course of action.

In addition, they might not properly evaluate the risks inherent in the situation. These aspects are all unignorably while making a decision which affects all. Conclusions: Effective Airline crew's communication is viewed as vital when making decisions. The Tenerife air disaster is found to be an example for failing to act upon when a disaster is fairly predictable by communicating effectively. Airline accidents are due to equipment failures by just three to five percent of its all causes. The remaining accidents are linked with human error in which is mainly attributed to poor human communication.

Pilots and air traffic controllers must know the limits of communications and work toward the common objective of making the skies safer and easier to “understand!” Research studies continue to develop ways to reduce the chances of another Tenerife disaster. References Kanki, B.; Helmreich, R.; Anca, J. (2010): Crew resource management.

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