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Communication as a critical aspect of aviation safety

The essential role of communication in aviation safety is discussed and substantiated. The prospects of the further research as well as components of training for effective communication in aviation safety have been determined.

Communication plays a key role in aviation industry, ensuring safety in the aviation environment. It is essential for organizational and managerial effectiveness. Considerable number of findings [1; 2; 3; 4; 5] note that the critical nature of communication is to prevent incidents and accidents by improving interaction during air carrier operations and maintaining flight safety. Communication enables crew members to interact, collect and share information, plan, direct, make decisions, identify, and manage errors and problems.

English is the international language of aviation, and it can cause misunderstandings in all spheres of aviation operation. Some scholars [1; 2; 3; 4; 5] have pointed out, that even native English speakers often misinterpret other people's messages. Communicating with non-native English speakers further complicates the problem. Therefore, knowledge of the English language is a crucial factor in the aviation safety.

Aviation English (AE) is a special language course in which students show a common interest and motivation to learn. AE training involves a variety of topics covering interpersonal interactions in the aviation field, which are difficult to predict. The course includes speaking, writing, and listening comprehension of English. Learning material usually covers such topics as meteorology, physics, navigation, maps and charts, electronics and avionics, instrumentation, hydraulics, air traffic control, phraseology, general English etc [5].

The aviation industry entities involve airport, air traffic control, regulators, logistics, airline, manufacturing. The communication needs of each group of aviation personnel are different, therefore, AE provides training programs for pilots and air-traffic controllers (ATCs), ground crew, aircraft maintenance, cabin crew, check-in staff etc. But the common goal remains the same for all positions – to ensure proper command of the English language so that the lack of speaking skills will not become the cause of incidents and accidents [5].

Since flight safety relies on effective teamwork, the study of interpersonal communication in the cockpit and interaction between the crew members need to be addressed. Most interesting would be to investigate kinds of communication used by flight attendants and pilots to establish rapport and trust in such teams. Surveying pilots' and flight attendants' choices of certain communication patterns can assist in determining how helpful and positive communication atmosphere could be created [4].

Understudied is the issue of communication in aviation maintenance, which is an area where a lot of jargon and abbreviations are used. According to scientists [2; 4; 5], this factor causes a lot of errors. It would be interesting to investigate the impact of

English proficiency on the aviation safety concerning maintenance and other technical issues.

Joint training of pilots and flight attendants should be an important aspect of the aviation safety training program. Special emphasis should be placed on communication of pilots and ATCs, communication in maintenance. However, numerous studies by scientists [2; 4] do not define the topics and subtopics of interpersonal communication. They do not pay special attention to the development of listening, decision-making, and conflict management skills. Important topics in communication training should include "pre-flight briefings, post incident and accident procedures, sterile cockpit procedures, notifications and pre-flight, pre-landing, and turbulence passenger-handling issues" [4, p. 23].

Learning clear, unambiguous communication, the concept of receiving information, including meaning and jargon, is also essential. The ability to ask feedback questions is an important method of ensuring effective communication. Cabin safety training should deal with distortions of messages and information overload. In terms of interpersonal communication training, more in-depth study is needed in such areas as creating a positive and helpful atmosphere, achieving trust and reliability, developing strong skills of listening and managing conflict. Assertiveness and conflict management training considers the concept of situational perspective, such as when to be assertive or adaptive, and when the other methods of interaction may be acceptable [1; 4; 5].

Cockpit communication training should involve understanding of defensive manner of communication, non-confirmatory messages, and practice of supportive and confirmatory messages. Using defensive and disconfirming messages is related to ignoring others and treating them as if they do not exist or do not matter. Messages of support and affirmation show respect and value to people and their ideas. Another aspect of positive climate is trust that can lead to much greater understanding, unity, and team interaction of the flight crew. Thus, understanding and learning trust messages and behaviors should be an integral part of this aspect of training [1; 4].

Active listening is an important part of aviation safety communication training. The issue may cover the role of listening, the consequences of poor listening, listening practice, problems that hinder effective listening, and methods of improving listening. Obstacles to effective listening include topics such as lack of focus, message bias, making untested suppositions, preparing a response, concentrating on style and delivery, unconscious associating, and the win-lose aspect of listening. Skills of better listening could be obtained by covering the topics of a win-win listening perspective, concentrating, calmness, and asking questions. Practicing such skills as paraphrasing, responding, and giving feedback should be involved. Acquiring active listening skills is critical to create the best communication environment for sharing precise, unambiguous messages minimizing information distortions and overload. Such communication training helps create positive and supportive atmosphere of mutual understanding and trust [4; 5].

In addition to the specific topics required in effective aviation safety communication training, the methods of teaching are also important. They include a lot of interaction, practice and introspection, experiential exercises, role plays, small group and team exercises and discussions, case studies and self-assessment tools, which are

aimed at practicing communication in real aviation situations in cockpit, the aircraft cabin, interactions of the cabin crew with the flight deck etc [2; 3; 4; 5].

Case studies and scenarios that depict real situations of poor and good communication can be used to teach the skills of effective communication and need to be involved into the training process. Numerous reports and situations in which onboard and maintenance personnel could manage to operate properly in emergency or unsafe situations to prevent possible tragedies should be considered [2; 3; 4; 5].

Therefore, effective communication is an important aspect of aviation safety, ensuring coordination of operations of the cockpit, the aircraft cabin, maintenance, and other personnel of the aviation sphere. Communication training is an integral part of aviation safety requirements. While the risk of incidents and accidents cannot be eliminated, it can be minimized by ensuring awareness of the significance of effective communication and its integration into our mind, pursuing proper communication behavior in aviation environment.

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