



FLIGHT SAFETY FOUNDATION

CABIN CREW SAFETY

Vol. 27 No. 6

For Everyone Concerned with the Safety of Flight

November/December 1992

Crew Coordination Problems Persist, Demand New Training Challenges

Despite improved training scenarios and recent studies outlining the dangers inherent in poor crew coordination, much remains to be done to avoid disastrous communication breakdowns.

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by

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Crew coordination problems continue to plague commercial transport aviation, despite increased awareness and the development of new training programs.

More than 10 years ago, Capt. Andy Yates described some of the problems encountered in cockpit/cabin communications in an article published in Flight Safety Foundation's *Cabin Crew Safety Bulletin* [now titled *Cabin Crew Safety*].

As examples of "rude, discourteous" behavior on the part of some captains, he listed barring flight attendants from the flight deck unless specifically called there by the captain; keeping flight attendants in ignorance of the progress of the flight by refusing to pass on information about delays or weather conditions and dismissing the

requests of flight attendants for help in dealing with difficult passengers. He attributed such behavior to a lack of good rapport between captain and flight attendants.

The failure of flight attendants to comply with direct orders from the captain and instances (in his experience) of orders "deliberately disobeyed" were attributed to the organizational separation of flight deck crews from flight attendants, the former reporting to flight operations and the latter to a marketing or passenger service division. This separation was considered by Yates to be a major factor in the perception by some flight attendants that the captain was peripheral to their chain of command.

These situations also can be aggravated by large aircraft

that “create a situation where the flight attendants are distant to the extent that interphone communications are necessary,” Yates noted. [Boeing 747s, for example, can have 20 different calling codes for cabin crew handset stations on the aircraft.]

Yates’ article, based on firsthand experiences, has been followed by several broad-based studies on cockpit/cabin communication issues. These studies identify two major themes: development of good interpersonal relations and recognition of the organizational context within which these interpersonal relations can be encouraged, or modified if necessary.

A U.S. Federal Aviation Administration (FAA) investigation into cockpit and cabin crew coordination conducted in 1988 reported “inadequate crew communication in emergencies, confusion over the sterile cockpit concept, inadequate instruction on the duties of the other crew in training, failure to properly secure the cabin for takeoff and landing, and inadequate support for staffing of the FAA inspector workforce.”

Communication problems in emergency situations were linked to inadequate information from the flight deck concerning all the relevant features of the emergency, particularly the amount of time available for preparation of the cabin and its occupants to meet the emergency.

In nonemergency conditions, flight attendants often had insufficient notice from the cockpit of the time available to prepare the cabin for takeoff and landing, according to the FAA report. Communication problems originating in the cabin included violation of the sterile cockpit rule by requesting nonessential information at an inappropriate time and by not reporting to the flight deck matters that could be important for the safety of the flight.

The FAA report emphasized the need for *timely* and *specific* information to be communicated in each direction. Recommendations for action focused on training and procedures to improve communication and increase the awareness of both captain and flight attendant needs and duties.

“During normal operations each crew needs to have a general idea of what the duties of the other crew are so that they know when that crew is most fully occupied,” the FAA report said. “Such knowledge helps to avoid inappropriate requests and unnecessary friction between the two crews. During emergencies it is imperative that each crew know exactly what to expect from the other crew so that they can work together effectively.”

[The U.S. National Transportation Safety Board (NTSB), in a report published in June 1992, also determined that crew coordination remains a serious problem in emergency situations. The report, which reviewed a broad range of flight attendant performance and training issues, concluded that it was crucial “to ensure accurate communication between cabin and cockpit crew members.”

“The Safety Board is concerned that flight attendant recurrent training does not review terminology that would allow the cockpit and cabin crews to communicate accurately during an emergency,” the NTSB said. “The increase in the number of two-person flight crews decreases considerably the likelihood that a cockpit crew member will be able to enter the cabin to evaluate reported damage during an emergency. This situation places more responsibilities on flight attendants to locate and to accurately describe damage. The Safety Board believes that recurrent training programs should review terminology of major parts of the airplane.”

The NTSB recommended that the FAA require flight attendants to receive crew resource management (CRM) training “that includes group exercises in order to improve crew member coordination and communication.”

Flight attendant training programs should also include “instruction on human performance of crew members (flight attendants and pilots) and passengers under stressful situations and on methods to compensate for such behavior,” the NTSB said.]

Why should crew coordination problems remain so resistant to solution? The answer may be that the solution has not yet been clearly defined. “Crew coordination” appears in U.S. Federal Aviation Regulation (FAR) 121.417 in relation to emergency training, which must provide “instructions in emergency assignments and procedures, including coordination among crew members.”

According to this definition, the regulations do no more than require the coordination of crews in emergencies. They do not include a requirement for coordination under nonemergency circumstances. Moreover, it is not the function of the regulations to describe how this (or indeed any other requirement) may be achieved, nor how its success can be measured.

Training manuals (both operator and aircraft-specific)

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surveyed in the FAA study were found to offer more detail than contained in the FAR, but did little to explain the duties of one group of crew members to the other. Training for coordination was, for the most part, found to be confined to providing verbal instructions rather than providing opportunities for practical exercises. Joint training of flight deck and cabin crews was rare.

“All of the flight attendant manuals examined in this study stated that in the event of an emergency, the flight attendant in charge should ask the captain about the nature of the emergency, the time available to prepare the cabin and special instructions (e.g., what the bracing signal will be),” the FAA report said. “Very little, if any, information is offered on the duties of the flight attendants in the flight operations manuals.”

Another possible reason for the failure to solve this problem can be drawn from the following statement contained in a 1988 FAA advisory circular on the subject. “In certain circumstances it is important for flight crew members and flight attendants to act as one cohesive crew, even though they are trained, scheduled and generally regarded as two independent crews. When it is necessary to act as one crew, the activities of the cockpit and cabin should be coordinated.”

But this is precisely where the problem lies. It is very difficult to “act as one cohesive crew” in “certain circumstances” while for the rest of the time there are “two independent crews.” Furthermore, the circumstances in which coordination is required extend far beyond relatively rare emergency situations. The FAA report emphasized that coordination is required throughout the flight from takeoff through cruise to landing. Thus, it is neither wise nor practical to attempt to confine coordination to one small area.

Organizational Definitions Create Two Crews

The perception of two distinct crews, cooperating only under rare circumstances, is an accurate reflection of reality within some airlines. There are clear organizational differences between the two crews. The flight deck crew reports to the airline’s flight operations department while, typically, the flight attendants do not. The working area of the cabin crew is public; the flight deck crew’s is private. There are differences in status, power and salary that favor the flight deck and that are reinforced by the sex differences between the two groups — most pilots are men and most flight attendants are women.

Pilots are perceived to be dealing with state-of-the-art technology in their working lives while flight attendants are perceived to be dealing largely with what could be considered “domestic” activities — serving food and caring for those who are fearful — indeed, conforming to the stereotyped feminine images of flight attendants that have been used extensively for marketing purposes. Pilots are thus perceived as essentially proactive — they make things happen. Flight attendants are perceived as essentially reactive to an agenda determined by others.

While flight attendants would not be expected to share these perceptions, some flight deck crew members may be prone to accept such stereotypes. “In fact, pilots are often surprised to learn the extent of the flight attendant’s training and responsibilities,” according to the FAA report.

An example deriving from these differences in status might be the reluctance of flight attendants to report to the flight deck any unusual events or difficulties.

They may feel that any contribution they could make may appear to be superfluous because they assume that the flight deck crew already has all the information required. In their own difficulties, they may have problems in realizing when it is necessary to seek assistance. The boundary between persistence in the face of odds and foolhardy refusal to seek help at the appropriate time is usually only evident after the event.

In this context, the failure of some of the attempts at joint exercises noted in the FAA report and their subsequent abandonment is not surprising.

An instruction-based training program aimed at improving communication is often not enough to overcome obstacles in cockpit/cabin crew communication. A different approach is required that involves a major reappraisal of the aircraft as an organizational system.

Task Interpretation Can Foster Problems

Status differences are not the sole barrier to effective communication between flight deck and cabin. The way that the primary task of each group is interpreted also creates difficulties.

If the task of those on the flight deck is regarded only as “flying the plane,” then this is consistent with the view that the fuselage is just “the piece in the middle that keeps the tail on.” Such a view relegates “timely and

The FAA report emphasized that coordination is required throughout the flight from takeoff through cruise to landing.

specific” communication with flight attendants to a low priority.

For flight attendants, it is not so much the interpretation of the task as the perception of the task that is the problem. While the statutory function of the flight attendant is to safeguard passengers, service — not safety — is generally perceived as primary.

This is reinforced by the organizational separation of safety training from service training; by the longer periods of time devoted to service training; and by the image of the flight attendant that emphasizes serving passengers’ needs rather than performing an effective safety role. (The use of a video recording rather than the live cabin crew in the aircraft to deliver the statutory safety briefings may serve to distance flight attendants further from the safety role.)

In this context, safety is regarded as separate from the routine activities of the flight and is concerned solely with unusual events involving emergency drills and equipment. An integration of the service role within the context of safety is needed so that safety permeates all flight attendant activities. This would enhance the professionalism of the job of flight attendant and facilitate communication between the flight deck and the cabin.

These changes in task interpretation would have major implications, not all of which may be welcomed. A greater demand would be placed on the management skills of pilots because of their more direct involvement with the cabin crew. The greater safety awareness developed among flight attendants is likely to lead them to become less tolerant of inadequate or damaged equipment. Above all, such changes would have implications for training and for the relationship between the different organizational functions that provide the training.

It is already recognized that training a pilot to fly an aircraft cannot be restricted to “flying by numbers.” CRM is designed to use all the resources in the cockpit to ensure safe and efficient flight operations.

Training based on this concept is intended to provide pilots with crisis management skills and to enable them to cope with unpredicted events by using all the knowledge and skills available, and to make better, more effective decisions.

Effective decision-making, the primary objective of CRM, depends on the use of all available relevant information.

But it must first be elicited from those who can provide it. The central focus of CRM is therefore on clear and unambiguous communication, on conflict resolution, on self-awareness and awareness of others, and on an integrated team performance.

It is well known that there are many obstacles to effective communication, and CRM addresses them. There is a need for listening skills, which in turn demand authenticity on the part of the listener, and for skills in expressing views that may not be popular, which in turn require assertiveness on the part of the speaker.

CRM training is based on the active participation of trainees in role playing and simulation rather than on passive listening to lectures. The video taping of role playing exercises allows for their subsequent analysis by group members and facilitates the giving and receiving of criticism in a nonthreatening environment. The aim is for the attitudes of openness and assertiveness developed in training to be transferred to the operational context.

CRM cannot be restricted to the management of crisis situations. The ability to perform effectively in a crisis depends on the development of cognitive and affective skills. If CRM training is successful, the attitude change involved will affect all aspects of a pilot’s and cabin crew’s task.

The problem of cabin/cockpit coordination has a long history of neglect, and the 1988 FAA report documented several serious cases. Practical problems of scheduling and disparities in numbers (typically there are far

more cabin crew than flight deck crew) are often cited as reasons for not implementing joint training.

Only five airlines listed in the FAA report had experience in joint training of crews. Two airlines had discontinued the training because the presence of members of the other crew was found to be either disruptive or inhibiting. In three airlines, however, the joint training experience was positive, leading to increased mutual understanding of duties and to the practical benefit of immediate detection of incompatibilities in manuals.

The FAA report noted that the scheduling of joint training is less problematic for smaller airlines than for larger operators, which may have different training sites for crews and different recurrent training cycles.

[The 1992 NTSB report strongly endorsed joint cockpit/cabin training, especially in emergency scenarios. The NTSB said, “Many of the con-

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cepts in CRM programs should be included in flight attendant training.”

“A CRM approach to flight attendant training could stress the need to communicate completely and accurately and ensure that there is a complete communication loop; help ensure that tasks are prioritized and delegated; and help ensure that task focus is transitioned to the task that is appropriate for the situation.”

The report said that CRM should teach pilots to “include flight attendants on their ‘team.’”

The NTSB report concluded: “With the proliferation of two-person cockpit crews, the Safety Board believes that emergency training should jointly involve cockpit and cabin crews in order to develop and practice skills as a team.”]

There is now an opportunity for a paradigm shift. The increasingly sophisticated technology on the flight deck has led to changes in the pilot’s task from the exercise of psychomotor skills to the management of a complex system. These changes have been technologically determined. Therefore, there is a certain lag in the corresponding changes in selection and training, although the adoption of CRM as an important part of pilot training suggests that this situation is improving.

Because the role of a manager as well as a pilot is required on the flight deck, the possibility arises of designing the managerial role in a creative way to take into account all the human resources in the aircraft. This involves integrating the cabin crew within the captain’s sphere of operations.

When trained as a manager, the captain is more effective in exercising his responsibilities both on the flight deck and in the cabin. This does not preclude the continued delegation of some coordination tasks to senior cabin personnel, although the context within which the delegation takes place will have changed.

The advantage of this approach is that the captain’s overall responsibility, already grounded in law, is explicitly recognized in a practical (and safety-directed) way. ♦

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Amsterdam, The Netherlands
March 2-4, 1993

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