Training for Emergencies

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It's very important to have quality instruction but each instructor is different, some are good instructors, some are not as good. Is there any effort in making these really good instructor pilots the instructor for instructor pilots?

> *BB: Some airlines pick the best instructor pilots as check airman. Another idea is peer sharing, instructor pilots sharing ideas with other instructor pilots.*

> *IB: In aviation there is a lot of mentor training. Instructor pilots are not trained trainers; they are aviators who are providing training. When things are not going well, the company says, "They need more training." But, that is the first thing that gets cut when the company needs to meet economic restraints.*

Quality of training could be improved. For example, in the simulator, when the emergency is over, there is a break. How about continuing to deal with the emergency when the airplane gets on the ground, making it more realistic?

> *IB: We should do everything we can do to improve training. What we find in research is that training is aimed to meet the criteria at the end of the training as opposed to long term retention. If we want to train for long term retention, the training needs to be changed.*

"Training to proficiency" is certainly a big issue. You may want to follow up with the economic difficulties faced by airlines, especially when they say that since there are no accidents the training must be good enough.

As an examiner, the quality of the pilot performance goes up when the pilot is being examined by someone who has no vested interest in whether the pilot passes or not. This is mostly easily found in an examiner not being with the company.

> *BB: We haven't seen that being done.*

I would like to address the issue of lack of standards. Is the lack of 'sameness' the same as lack of standards? The goal is that the established procedure is done in the correct order and that it is completed successfully.

> CR: What we are talking about is who will fly, who will do the checklist – this is not in the SOPs. But it is up to the captain. It sounds like to us that there are captains who could use some training about standards so it will help them with decision making.
> BB: Lack of 'sameness' was observed, but it is not questioned – is this good? It varies from airline to airline.

The essence here is decision-making. Is anyone thinking about non-traditional ways of training for abnormals? Is anyone looking at all the abnormals and grouping them into similar groups and then working with one specific abnormal situation (checklist) that relates to that group of similar abnormal checklist?

> BB: Video facilitated discussions with videos from actual incidents. Pilots and instructors would discuss the video and the decision making process. Other airlines have CD-ROM's in which they allow pilots to submerge themselves into an abnormal situation and the decision making process without the stress of being in the simulator under time constraints or pressure. They can do this in the comfort of their own home and digest the information and think through the abnormal situation.

During observations of simulator rides, was there any emphasis about who is in what seat, for example, training with two captains or two new hires. Did you see this having any impact?

> BB: We did see some interesting stuff. We did see two new hires; this was more hampering in the LOFT.

> CR: There was a time impact in certain scenarios. For example, sometimes the captain was not very good, so the instructor spent more time on him so they can get all the boxes checked.

Is there any correlation between training to proficiency for check rides and what is actually being trained? If all we are doing is training to proficiency for check rides, is actual training being done on things that don't have to be checked?

> BB: Training was used to go over the QRH flaws. For example, 'don't miss this' and 'this can be confusing', about pitfalls in a procedure. But, will pilots be able to recall that later on down the line?

Did you see any cases where the crew was presented with abnormal situations where detection was very difficult?

CR: Most of what we see is 'see the light and do the procedure'. We did see some situations where it was difficult to detect, for example, electrical versus engine failure on a descent. The pilots usually figured it out. In some cases they would initially go down the wrong road but they wouldn't get too far before they went down the correct one.

I'm curious about simulator scenarios and how typical they are of emergency situations. These LOFTS are often predetermined, 'canned', with predetermined decision-making. I was wondering, because decision-making is dynamic, has there been any thought about writing simulator scenarios allowing the pilot to make a decision, go down that road and be presented with another scenario. Can this be done?

BB: LOFTs are strictly predetermined. A LOFT is one area that decision-making is being done, however the quality of that decision making is another issue. When there is a four-hour LOFT, you know you will be diverting, so it's difficult to get away from some sort of 'cookbook' LOFT.

I'm interested with the idea of an additional person in the cockpit. Today we are only left with two people in the cockpit. There's no back up, who's going to do what and is there anything being missed? In your investigation, how are you going to address two individuals doing two very important things and maybe sometimes missing procedures?

IB: We are not going to say you need the flight engineer back in the cockpit. The question is can we build smarter systems, smarter decision-making and better support around the pilots and beyond the cockpit.

Did you see any air carriers that graded as a team, not as individuals?

BB: Yes. We ask how do you grade as a team. Some airlines grade strictly as a team. Other airlines grade as a team and as individuals. We did see some interesting differences.

What is the 'driver' of the 'light driven' crew?

CR: We haven't decided 'why'. We are trying to find out, and right now we don't actually know.

IB: Systems are becoming so complicated. It's so common that it's to a point where it's impossible to know everything. There's got to be a balance between "why are you filling my head with all this stuff" and the light driven crew. We are trying to figure that out.