# BRITISH AIRWAYS' PRE-COMMAND TRAINING PROGRAM

Capt. L. F. J. Holdstock*

Some time ago there was a radio program at home known as The Brain Trust. There was a character who used to appear quite regularly by the name of Professor Jode. An interesting man — it didn't matter what question he was asked, he always started off by saying "Well, it depends upon what you mean by ..." and then he would answer about 14 different questions before he got back to the one he was asked.

I feel that way rather about pre-command training because it really depends on what you mean by pre-command. I'm rather old-fashioned in my outlook, and it's my opinion that pre-command training starts on the day you first get into an airplane for instruction. From that day on everything is learning, everything is preparing for command in some form. Maybe it's just command of your first solo, but eventually for the commercial pilot it's command of the multi-crew aircraft.

For the purposes of this paper I just want to explain what we do for our pilots to help them to meet the big day.

Perhaps I ought to break off at this point just to explain our pilot source. In 1958 we suddenly realized that the supply of RAF pilots was dwindling. That the input numbers that we could get compared with what we thought was going to be our growth would not meet demand, and we took steps to meet that deficiency by opening up a college of air training. Into that college we put young men who had never flown an airplane. They were 18 year olds. We had a selection problem, we are still learning, but we put into the college young men and we taught them to fly and, in fact, from that day on, from 1960, we have relied upon the college for our pilot strength.

In the late 1960's we fell a little short because, of course, we always asked planning people to look about 3 years ahead, considering both the selection and the training. They seldom get their numbers right, and there was this period when we had to fall back on military pilots.

So, as far as command is concerned, we had a group of pilots, some of whom were ex-service people. They had usually experienced command in some degree regardless of what aircraft they had come off. We also had young men with a total of 225 hours in whom we had to instill some idea of what we meant by command.

It was something new to nearly all of them. Now, I should say that the instructors at our college are pretty good. The source is changing now, but in the past they have been mainly ex-RAF instructors, and they have had the

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facility of recognizing command potential. I know if we start trying to describe that we're going to get into deep water, but I'm sure that experienced training captains will know what I mean when I say you can sense it, and these people did. So that if we had a young man that we had put into Hamble who the selection people had thought was right, but who along the way showed a total lack of command potential, then it's most unlikely that young man would reach the airline.

I'd like to make one other point here, and that is that it was our experience, right at the beginning, that about a year after these young men arrived with us they relaxed. They had been through their school life, they had been picked up from school, they had been put into our college, and suddenly you could sense that they had a feeling that they had it all made. After a year we had to pick them up, take them back into the school, put them with a training captain and just polish them up, remind them that they had a job to do and make sure that they did it properly.

Having got that out of the way I think we can now look at what we do to try and help this man toward the command.

We have four inputs. We have an initial command potential assessment, and I'll come back to that in a moment. We have a pre-command management studies course, we have a pre-command course, and we have a command course itself.

About 5 years after the young man enters Hamble, that is about 3 years after he joins the fleet and becomes a line copilot, we make this initial command-potential assessment. It's a long-winded name, but that's what we do, so that's what we call it.

What we do is arrange for a period of group flying consisting of a minimum of 12 sectors with a training captain. During this period not only is the copilot checked in his normal duties but he is also checked and assessed in his ability in command. He's being supervised, of course.

Little training is given. What we really want the training captain to do at this stage is to just look at the young man as he is. Not as you can make him, but as he is performing on this day. And at the end of these periods, this period of line sectors, the training captain makes a preliminary assessment as to whether that young man will get a command or not.

In the event that the assessment is unfavorable, then we arrange a course of training. Obviously, the training captain will say where the deficiencies are in his mind, and we arrange a course of training in an effort to eradicate them. If, of course, there are no problems, well, all right, that's straightforward.

Our copilots are upgraded to senior first officer after approximately 8 years. And at that point we make a final assessment as to whether the copilot is command material or not.

It currently takes about 12 years to command in British Airways. The lowest we have ever seen was 8 years, that being 5 or 6 years ago. At the moment it's nearer 15 years. So over the years you can say we have had an average of about 12 years to command.

This command assessment is made in the light of all the material that's available to a board, not just one individual. The flying manager will set up a board. There will be a training manager included in a board of about four or five people to look at these individuals. In the assessment one can feed in the original reports from the ab initio course at Hamble, you can feed in the training captain's assessment which has been made earlier on, the current line record, the training record, and the individuals' qualities.

If satisfactory at this point, then we merely put a note in the training files and the personnel files, and the young man then follows a normal path toward the command course.

If at this stage an unsatisfactory assessment is made — either because the original assessment was never changed, was a poor one then and never upgraded, for personal reasons, or for current operational reasons which have come to light — then we merely tell the young man.

There's no loss of seniority involved. We point out his deficient areas. We don't plan any training for him, but we will give him all the training he needs if he comes to us. We will provide for simulator training, we will provide line training, but it's up to him really to approach us and say, "Well, what can I do, and how can you help me to achieve command?" And if he manages to do something about it, then, of course, he can be recategorized and put into the command stream.

The next step is about 2 years before the anticipated command course. As I said earlier, planners are seldom right, so sometimes we miss. But we aim at about 2 years to give a man a management course. I don't want you to misunderstand that term. We are not teaching him at that stage to be a manager, but we do have a lot of input from managers in various sections, and the objectives of the course are laid down. They are to communicate information on a wide range of activities and systems in our own airline, in the British Airports Authority, Civil Aviation Authority, and any other agencies, safety groups, anyone with whom they are likely to come in contact later on. By close participation in a number of project exercises, they are to give him some experience in managerial functions. And third, they are to create a climate of knowledge and understanding for all concerned.

What we are really trying to do is to relieve this young man of some of the peripheral flight-deck problems. If he has an insight of the work of his airline and what's going on around him, he's less likely to be taken by surprise when problems do occur. The course itself lasts for 2 weeks. It's residential apart from the middle weekend. And like most workshops there's quite a lot of evening work. We divide the course into syndicates of four or five people depending on the number.

We usually have 16 to 18 in the course. During the 2 weeks, we have lectures and talks by representatives of flight operations, fire service, cabin crew, medical service, ramp services, corporate planning, public relations, operations planning, customer relations, security, personnel, and our computer services. This gives a pretty broad picture of the airline. Flight managers make evening trips to the hotel, and we then have periods of informal discussion with them.

The course also includes visits to our main London passenger terminal, the engineering base and the air traffic controller center for the London area. Our own general training staff gives lectures on law as it affects the pilot, and on manpower effectiveness.

There are some talks on management styles and some help with project preparation. We always ask the pilots to fill in a questionnaire afterwards, so we are constantly changing the content of the course in the light of the feedback. We also ask for free and honest opinions, and generally it's very well received.

When we first tried the course we did it immediately before the command course, and it wasn't well received. The young man knew that just around the corner was a command course, and what he wanted to do was get in the left-hand seat, get four rings on his arm and get flying the airplane. He didn't want to know about anything else. But by giving it to him about 2 years ahead we find the interest is there. He's not really thinking about command, and you can instill in him some of these little bits and pieces just to help.

The third input we make is just before the command course, therefore named pre-command. The length of the course is tailored to the individual. If you've got a good operator, his checks have been good, his standard is known to be good, line flying when he's been acting in command under supervision is good, then you don't need to give the young man very much.

On the other hand, if he is trailing a little then we brief the training captain, we brief the planners, and we give him a slightly extended course. One has to be careful about this, of course, because if you give one chap 2 days and another one 3 weeks, then immediately they start assessing themselves.

At any rate, we know a fair amount about the chap. The course itself is not mandatory and has no bearing on the command course. We never fail a man at this stage. The training captain is briefed that he is there to help, he's there to guide.

All the training is carried out with the young man in the right-hand seat. It's carried out during revenue flights, and both the training captain and the trainee are encouraged to talk. Now, don't get me wrong, I don't want them to talk about the night out they had the previous night and the football results. I want them to talk about the operation.

We want them to progress with the flight, to think about the flight. Where they are, what's beneath them, what the weather is like, what the destination weather is like, what they're going to do if it does turn nasty. We like to involve them in passenger problems, to remind that they do have people behind them paying their wages, and they ought to be looking after them. They need to look after the cabin crew. So we need him to consider these commercial aspects.

On the other hand, obviously the operational aspects of the flight are the most important, and we just foster this awareness all the way through the operation. Even the handling of the aircraft is of secondary importance, because the command course itself is going to check his flying ability. Also, it could well be that the pre-command course is being given in an aircraft that he won't operate, because we are cursed with a number of aircraft types, and, therefore, there's a fair amount of switching goes on. But it doesn't matter — you can give a pre-command course on any aircraft, and give the command course on the aircraft he's going to operate.

Now, I will move on to the command course. I'm not going to go into it in depth because I note someone is following me talking about command courses, and I know from the returns that there are no really major differences between the upgrading training in the major airlines. But it is possible that perhaps one or two of our policies and philosophies are different and, therefore, I would like to just mention them.

One thing about which I am absolutely insistent, and that is that any course must be as realistic as possible. I am opposed to people playing musical chairs, sitting in on details, pretending they are something other than that which they are. And when a trainee is trying to learn, I think the least we can do is give him the benefit of qualified crew members in the other seats.

Apart from one or two periods on the simulator when we are really familiarizing the young man with the aircraft drills and emergency procedures, the whole of the simulator service is planned on a real-time basis. The trainee is constantly aware that the aircraft is being operated between two points, and the flight has to progress regardless of the problems. Obviously, there's a freeze switch, and it is used, but the use of it is not encouraged. When discussion is necessary, we insist that someone has to be looking after the shop. I think the expression used earlier was "the store."

We are well placed in respect to planning of details because we have a number of sectors — London-Paris, London-Brussels — all of which take about an hour in normal time. So that one can plan one of these details into a 1-hour session.

Normally we do 2-hour sessions in the simulator, so it's the easiest thing in the world to start building in diversions and utilizing the 2-hour period. I don't think any flight is normal, I'm talking now about training flights in the simulator. Weather and technical problems are constantly

being faced, but at no time is it suggested that we are trying to overload the pilot. I think one can load him up to a point, but there is a limit.

We occasionally build in exercises from our knowledge of incidents in other airlines and our own airline, but we only build these incidents in if we are able to show that the incident could have been avoided. The last thing we want to do is to demonstrate an incident that finishes up with an accident, and then pat him on the back and say, "But you couldn't have done anything anyway." That's only going to ruin his confidence, and at this stage, of course, that's the one thing you don't want to destroy.

We encourage our training captains to think about this young man as someone who has had fairly good training, periodically assessed, and by the time he gets to a command course he should be able to become a captain. If he's not looking good, then the first thing the training captain does is look at himself and make sure that he's all right, that he is not the problem. Then if all is well, obviously, the young man will succeed.

From what I've said it looks as though we are going out of our way to insure that everyone passes. That's not true; we do have a failure rate, albeit a very small one. Amongst the Hamble cadets we have, in fact, a failure rate on the command course itself of 1 percent. That figure might be misleading because I'm talking about the command course itself. We may have lost quite a lot along the way because of the various assessments we have made and the courses we have given, but on the command course itself 1 percent.

With the military pilots that we had to take in the 1960s, their failure rate, having been given the same facilities, was much higher. In fact, we lost about 7 percent there. The Hamble cadets are not just pushed on to the lighter aircraft. It may be of interest to know that these young men who went into the school in 1958 or 1960, they now have ... well, we have an ex-Hamble trained pilot in command of all aircraft in our fleets including Concorde. Admittedly only one, but one young man has made Concorde.

In concluding, can I just say a few words about the failures. Because we do, as I've tried to explain, a tremendous amount to make sure we don't get failures. The point has already been made that it's worth about $250,000 in costs. It is interesting that we came out with exactly the same figure when we were looking at it a while ago. The only difference is we were talking in pounds.

But when I talk about these failures I think it comes into the area in which we are going to be spending a lot of time in the next few days. It's a topic in which I have a lot of interest but very little knowledge, because the prime factor in the failures we have had is the inability of perfectly good pilots to manage as well as fly. They become overloaded. And to use an expression that as I say, we're going to hear a lot about, they seem to have no ability to lead. They have no leadership at all.

I know that there are widely divergent views on this matter from those who consider that leadership is born in people, and there are those who think that it can be trained into people. I would agree that some people do appear to be natural leaders, and some quickly acquire the ability when given the opportunity. But when we have a failure in this area, I'm sure that it's too late for training to help.

I don't think you can teach leadership in a week. I think you've got to pick up this lack of leadership as early as you possibly can in a young man's career. Given time, yes, I think you can encourage it. I'm not convinced that if the man is completely lacking in that ability that you can put it in. I don't know, time will tell. And I'm not too sure what I really mean by leadership. I think we all know what we mean by the military leaders, history is full of them. We know too about leaders in management, and I think some of this can be taught — certainly there are very successful management courses. But I think our leader falls somewhere between these two. We are looking for a young man who can extract the maximum skill from the other members of his crew, who has the ability to influence them, and who quite naturally earns their respect through his ability. I'm sure this can't be taught quickly. It must be fostered, encouraged, and eventually, I think, you will find it in most of the people who are pilots. After all, we are a big-headed group. Most of us are confident and given the help I think that confidence can be used.

Just to end, I think we are probably doing all we can to assist our pilots to become captains, commanders, aircraft managers, call them what you will. If we're falling down, I think it's because we have yet to find out how to teach leadership.

We have tried; I'm not sure that we're successful. Thank you.

## DISCUSSION

MR. FELL, FAA: In the portion you showed on initial command training, the very first portion on training, you divided it into 8 or 12 what you called sectors. Is that what I'm thinking of as a flight leg?

CAPT. HOLDSTOCK: That's right, a leg from A to B.

MR. FELL: Is all that training conducted under the supervision of one pilot-training captain, or are there various....

CAPT. HOLDSTOCK: We try to confine it to a maximum of two. It's almost a minimum and a maximum because if you only involve one person, you can always have a personality clash. You can have a young man whose career was totally ruined because he had more success on the night stop with somebody or other. These things happen in life, so it would be wrong to ask one training captain to really assess a young man for the rest of his life.

But on the other hand, you don't need to involve too many. If you get too many people involved the recipient gets fed up, he's not sure what's going on, and, also, you could well get conflicting assessments. But if we can involve two people, we find they usually get together and they talk, and what goes into the file is an initial assessment, an agreed assessment of two people.

MR. FELL: Are these sectors given over a specified period of time?

CAPT. HOLDSTOCK: No, but once you start they are continuous. You'll work for 2 or 3 weeks just to complete them.

DR. BILLINGS, NASA: Is the young man always aware on the first go at this that this is a pre-command assessment, I believe you called it?

CAPT. HOLDSTOCK: Yes, he knows. When they first come to the airline we tell them what we're going to do, what their career structure is. They are aware that these things will happen and as each one comes up, of course, he's thoroughly briefed so he knows what it's all about.

MR. DANAHER, NTSB: Would you address selection criteria for entry into Hamble?

CAPT. HOLDSTOCK: Yes. We have two selection teams. We have some trained selectors based at Hamble. They are ex-RAF people, people who have spent years doing RAF selection, finished their period in the service, and then we take some of them on.

Very briefly, we get about 12,000 applications a year. We're looking for about 120 on average. Those people at Hamble are responsible for whittling down the 12,000 to something like 600 to 700 who are looked at, and the selectors at Hamble look at them and reduce the number by about a half. So you are then down to, say 350, perhaps 400 likely individuals. The selectors at Hamble are then joined by two airline people who have been trained in selection, and there is a board then of three people, one from Hamble, two from the airline. They spend the day with these young men and at the end of the day you come out with an assessment, make or break, looking for about 120 out of the original 12,000. To go through the actual criteria of how's and when's would take a long time, I'm afraid, but I'll give you some time afterwards.

MR. DANAHER, NTSB: What is the disposition of the very few, the 1 percent or so, that fails the command course?

CAPT. HOLDSTOCK: They go down one of two roads. We find occasionally — we'll write and a young man will shrug his shoulders and say "Well, I knew I should never have made it anyway," and he'll go back to running the bank or the garden or what have you. In fact, there are three types. Others will say "There's room for me in the outside world. If you won't have me as a captain, I know I'll convince someone else," and they

disappear. Or, they become permanent copilots, and one or two of those people who have become permanent copilots have finished up by being excellent training people. Don't ask me why, but they have.

UNIDENTIFIED: We have an expression, those that can do and those that can't instruct.

CAPT. HOLDSTOCK: Well, I'll go one further, those that can't instruct, instruct instructors.

UNIDENTIFIED: Regarding the individual who becomes a career first officer — I've heard comment that there's a concern about the legal implications in our fail-safe crew concept. That is, if that individual who has been rejected in the command course now becomes a permanent or career first officer, and now you have an incapacitated captain and the airplane comes under the command of this rejected commander, as to what the legal implications are for the company?

CAPT. HOLDSTOCK: Yes, I see the problem. It's one that hasn't been suggested to us.

UNIDENTIFIED: This is the up-and-out or fall-back question and the implications to it.

CAPT. HOLDSTOCK: You wouldn't like to keep that problem on your side of the water, would you?

UNIDENTIFIED: How do you handle your flight engineer situation? Do you have professional flight engineers, career flight engineers, or pilot engineers?

CAPT. HOLDSTOCK: I'm a short-haul man and have been. My background was BEA, and in BEA we did not have flight engineers. The three-crew aircraft we had, like the Trident and the 1011, we flew with three pilots but not with one of them confined to the systems panel. We trained the copilots as copilots in the right-hand seat; we also trained them as systems panel operators, and they changed around the whole of the time. Now, on long haul, the old BOAC, they had professional flight engineers. And I say, they really are professional engineers and there's no upgrading; they're not pilots.

MR. SMITH, ALPA: Could you expand on your pre-command management study course or program on what you call project exercises?

CAPT. HOLDSTOCK: Yes. What we do at the beginning of the 2-week course, is divide them up into syndicates, and we face them with the project that they're going to have. It could be, if you like, command training. It could be something that is on the commercial side. But we give them a problem, and give them 2 weeks to sort it out and prepare a presentation for

the end of the 2 weeks. The last day is devoted purely to project presentations, and as a group they come up with their answers, their conclusions, their recommendations, and they can do what they like to make this presentation. If they want to use visual aids or films or anything we encourage them.

MR. SMITH: If I could just continue, it would appear that the system that you have placed this "command" thing before the pilot group, throughout their entire career. In other words, they think in terms of command on a very re-occurring basis. Can you indicate what the pilot reaction to this system is? Like, for example, the captain versus the copilot. Can you give us any feel for how the pilots in general react to the system where your copilots are being trained as managers or captains and so on all the way through, and they're interacting on the line with captains who have already gone through the command course?

CAPT. HOLDSTOCK: This we find is no problem at all. The average captain is only too glad to tell other people how good he is and to impart his knowledge and to help. I would think really about 50 percent of our captains take pride in sharing the operation and talking about it and saying what they would do under certain circumstances, helping the young man make decisions. There are some, of course, who just come in, take the money and go home. We all know about those. But the copilots are not flying in a crew way; they're constantly flying with different people so they get amongst the good ones which is the important thing.

MR. SMITH: Do you stress a certain captain requirement to be a training captain?

CAPT. HOLDSTOCK: No, but what we do say is that this young man flying in the other seat could well save your life. The more he knows about the operation the better.

CAPT. JOHANNESSEN, Scandinavian Airlines: Do you recruit new flight engineers for your long-haul operations?

CAPT. HOLDSTOCK: We haven't had any in the last year, but we were still recruiting last year, early 1978.

CAPT. JOHANNESSEN: So you are not specific to three-pilot operation?

CAPT. HOLDSTOCK: Sorry, I didn't hear that question.

CAPT. JOHANNESSEN: How many training captains do you have and are they simulator captains?

CAPT. HOLDSTOCK: We have three types of training captains. When a man does become a training captain the only place we use him is on the line, first of all in doing the job that he knows. Then if he is successful we

start using him in the simulator as well as on the line, and if that is successful, then he graduates to all aspects of training. That is, any aircraft conversion training that's necessary plus the simulator plus the line work. At the moment we have something like 150 training captains.

MR. COHEN, FAA: Do I get the idea that a considerable amount of the three steps of your training is on one's own initiative. This is not a duty status, pay status thing? Is a considerable amount of this training voluntary?

CAPT. HOLDSTOCK: Some of it's voluntary. Really, the only voluntary training is where a man is deficient. The actual planning of the three stages is done by us, and in that sense it is mandatory. But you also have to remember that we are not, at the moment on a full bid-line system. We don't have any worries about who does what, where, or when. What's going to happen when we do go on a bid-line system I'm not quite sure.

MR. TURLINGTON, Pan Am: I'm curious about that look at the personal qualities by that board of four or five that comes after about 8 years, could you elaborate on that?

CAPT. HOLDSTOCK: Well, all the time our line captains are providing reports on copilots. Nothing secret about this, they're all countersigned by the copilot, but if a couple fly together for 4 or 5 days the captain usually puts in a report. But somehow the flight managers, they get to know their staff, they get to know the problems, they get to know the ones who are taking the various bars apart in various parts of Europe. Maybe they do over here, I don't know. But you know the ones who are having problems at home. I'm not talking now about odd instances where one has a wife who's ill or family problems. I'm talking about long-term problems, people who are constantly in trouble. And really, history tells us that those people don't make good commanders. Because on the day that they're having most trouble, that's the day they make a silly decision.