

Aeromedical Aspects of Flying Training with Special Reference to Instructor Pupil Relationship

GP CAPT B. A. COELHO*

Introduction

ONCE man leaves the ground, he is operating in an entirely different environment. A number of aeromedical factors affect his body and mind, like air sickness, fear of unknown, fear of height, decompression sickness, hypoxia, disorientation etc. Hence it is important that the aircrew is properly indoctrinated with the aeromedical aspects of flying. As far as the pupil pilot is concerned. It will be his instructor who will introduce him, may be for the first time, to this new environment. Pupil pilots quite often experience air sickness fear of flying and fear of heights. How easily and quickly a pupil pilot overcomes the physiological and psychological problems during flying training, will largely depend on instructor-pupil relationship.

The efficiency of training depends not only on what training is given, but also on the manner in which the flying training is imparted and received. Further, it depends on the relationship and rapport between the teacher and the taught. In other words, the efficiency and safety in flying training depends on the content of training, the methods of training and the instructor pupil relationship.

Flying is a skill, and flying training is action orientated, based on the realistic or near realistic demonstrations and practice and not merely verbal instructions. The flying skill is perfected only by constant practice and experience. A complex skill like flying is learnt better when there is a good relationship existing between the teacher and the taught. It is more so since the pupil is learning this skill in an entirely different environment for which his body is not designed. The training is

most productive when the pupil is relaxed, comfortable and feels at home in the cockpit with his instructor.

Pupils may have various motives in joining a flying career. Their initial motivation for flying may be strong in some cases and weak in others. Flying has its positive attractions like the thrill of achieving a virtually unknown and awe inspiring skill.

It could also be a sense of exhilaration in the act of flying both as an achievement as well as an experience. On the other hand there are some negative points like dangers and discomforts of flying. These may lead to reduction in the motivation to fly in some cases. An instructor must ensure right kind and degree of motivation towards flying among his pupils. The instructor should make his pupil feel a wanted member of the team by showing genuine affection and concern for him. Flying stress is always more on the pupil and should not be further increased by shouting or scaring him. A pupil should be dealt with sympathy and understanding, with the right degree of firmness. An instructor must use a judicious combination of praise and occasional reproof with a view to guide the pupil. He must find out what motivates him the most, what are the dominant needs of his pupil, and utilise them. An instructor should give a timely, feed back of results and let the pupil know how he is progressing. On the whole, an instructor must make flying an enjoyable experience for the pupil where he will get a sense of progress and achievement.

* Chief Instructor, Air Force Academy, Hyderabad.

Next to the parents, a flying instructor may be the most important person in a young pupil pilot's life. From birth a child has implicit faith and trust in his parents of their ability to care for him. He now comes across a flying instructor, a person virtually unknown to him in whom he must place the same trust. The pupil implicitly believes that his instructor must be a master of the aircraft and the medium. It is imperative that this faith is allowed to grow, nurtured by the confidence of manner, deportment and the apparently simple approach to the subject.

An instructor not only imparts skill and knowledge but also shapes the pupil's entire personality as a pilot. He shapes his motivation, attitude and emotional stability essential for the profession. This, the instructor does when the pupil is at his formative stage of life and professional career. The quality of the training and the pilot produced will depend considerably on the instructor-pupil relationship not as the instructor sees it, but as the pupil sees it. The relationship, therefore must not only be congenial but also must appear so to the pupil.

Affection

Most pupil pilots are in their late adolescence. This is a stage when a person presents a curious mixture of urge for independence, identity and personal worth, coupled with need for affection. In the olden days the parent-child relationship was authoritarian and based on fear. Today it is relatively more democratic and based on mutual respect, understanding and acceptance. However, the role of parental affection remains unchanged. An instructor is a substitute father-figure to the pupil who has been weaned from his family. Open manifestation of mature affection, concern and respect for the pupil will help a great deal in building up the proper instructor-pupil relationship. This relationship depends broadly on three factors. Firstly, on how well the instructor understands himself, his own powers, limitations and faults, secondly, his pupil as an individual, and thirdly on how skillfully he deals with him with the background of this pre-knowledge.

Flying Discipline and Airmanship

Correct attitude to flying discipline and airmanship is as much a part of professionalism in flying as knowledge and skill. Flying discipline is an intangible thing which is more 'caught' than 'taught'. An instructor is a model to his pupil. The pupil emulates the manner and attitude of his instructor. The more

impressive an instructor, the more likely are his pupils to acquire this attitude. An instructor must therefore, be careful in his words and deeds which must, without exception, reveal a thoroughly professional attitude and respect for flying discipline. The foundations of the correct professional attitude are laid down at the training stage. For that, the instructor plays the greatest role by explaining the purpose and reasons behind each rule, standard operating procedure, or briefing, in a convincing manner. He should also enlighten the pupil about probabilities and consequences in over-riding the mandates of flying discipline. He should create a social climate where professionalism is admired as the supreme value. He should make the pupils aware of the common human frailties and ask them to be on guard against them while flying.

Stress and Emotional Stability

Stress is inherent in flying. New aircraft, exercise or manoeuvres add to this stress, particularly for a pupil. Emergency situations aggravate the stress. Human skills and mental capacities tend to suffer under stress and the consequent emotional upset. Emotional stability and resistance to stress is, therefore, an essential requirement in safe and efficient flying. Flying training must develop these traits in the pupil pilots so that they can handle stresses and emergencies with poise and correct action. An instructor must make his pupil understand the value of emotional stability and do his best to instil it in the pupil. An instructor himself, must set an example in emotional stability, maturity and control. A jittery, tense, excitable or an angry instructor can never instil composure in his pupils. Only a mature instructor can produce a mature pupil.

The instructor should familiarise the pupil with the fear producing situations, should give a thorough and systematic emergency training and emphasise composure and relaxation while flying. Anger on part of the instructor and fear on part of the pupil is an unholy combination for the safety and efficiency of flying training.

Firmness and Objective Views

Although an instructor must have and show affection and concern for his pupil he must not get emotionally involved in his pupil. After having done his best, he must take a dispassionate view of the pupil's progress and assess it, in a thoroughly objective manner. At times an instructor has to be firm

and sometimes unpleasant with his pupil. He should not hesitate to be so but he must do that in a cool manner, without getting angry or emotionally upset, and must ensure that the pupil understands, appreciates and accepts the purpose behind what the instructor says or does to the pupil.

Pupil as an Individual

Learning of a skill like flying, requires greater individual attention and greater individualization of instruction than learning of academic subjects. Each individual pupil is a unique entity. He has his own pattern of abilities and aptitudes, background, interests, pattern for needs and emotional make up. Each one has his own rate and pattern of progress in learning flying. An instructor must, therefore, try and understand the strengths and weaknesses of his pupil, his stage of learning and the pattern of his progress. He must gather sufficient information about his pupil's family and scholastic background, achievements, hobbies, interests and problems. He must try to understand what motivated the pupil to join a flying career. This will help him to establish a better rapport with the pupil and to keep his motivation moving along right lines. The instructor should try to get a correct and objective appraisal of the pupil's capabilities. He must study the entire panorama of the pupil's previous training performance. He should note the individual characteristics in terms of his rate of progress, style of learning, strength and weakness and the relatively weaker areas of his performance. The instructor must tailor his instruction according to the background, characteristics and needs of the pupil. Characteristic and repetitive faults, and weak areas in a pupil's performance must be discerned. Over-learning, special attention, special briefings in those areas must be adapted to the rate of progress of the pupil. Instruction must be individualised as far as possible.

Handling of the Pupil

Instructor-pupil relationship develops by and by, and it depends on how the instructor handles the pupil or deals with him. Correct degree of self-confidence is essential in a flier. An instructor must ensure that he does not undermine the pupil's confidence by words or deeds. He must carry out the instruction in graded steps, each mastered well at a time and thus by training the pupil to succeed in it and by giving the pupil a taste of success.

Difficulties in establishing good Instructor-Pupil Relationship

Continuity of having the same instructor is crucial to a pupil once he has established a proper relationship. But invariably it is found that Temporary Duties (Operational Training, Courses and Ferries) outstation Courts of Inquiry, untimely postings and attachments due to shortages elsewhere, have made in-roads into this relationship, to the extent of undermining it.

Role of Psychologists/Aviation Medicine Specialists

The role of the psychologists is to highlight proper Instructor-pupil relationship in lectures conducted at the Flying Instructors School, and subsequently following up a feed back interrogation from the same instructors at flying training institutions.

The Aviation Medicine specialist at a flying unit has the most important and most difficult role of establishing the confidence of both the pupils and instructors in his reliability as a confidant, as also his expertise in diagnosis and treatment both in medical and aviation medicine. To do this, he has not only to attend the various briefings at various phases, but has to involve himself physically and mentally in every facet of activity and simultaneously to keep a watchful eye on the medical and mental health, and the inter relationships of both the pupils and instructors. In this task, he would not only have to fly occasionally, but he would have to be glib in the flying jargon, so as to exude fellowship, as well as understand the difficulties being faced by his proteges. Outside working hours, would have to involve himself in their extra curricular activities to the extent possible, and should so cause them to relax in his presence that they not only voluntarily come to him with their problems both medical and otherwise, but he should be able to anticipate the requirement of help before an obvious situation arises.

"Know Each Other" Programme :

At Air Force Academy, bachelor instructors by rotation are required to live in the Cadets and Trainee Officers' mess for a period of six months where they come into close contact with all the trainees of the Academy. This opportunity affords them a deeper insight into the Cadet's background and to see the trainee while he is relaxing. Instructors and trainees meet each other at the games field often, and the competitive spirit of inter-squadron rivalry

has achieved a greater sense of harmony, relaxation and understanding.

Recommendations and Suggestions :

Pilots having the aptitudes and qualities stated above should be permitted to qualify as Flying Instructors. Currently, officers having qualitative requirements from the point of view of categorisation

and achievements are selected. The special aptitude comes into focus during or after the instructor's course, which may be too late in many cases.

Social activities between the instructors and pupils should be permitted outside working hours to the extent that both can relax in each others company, and thereby appreciate each others nature.