

## GENERAL METHODS OF TEACHING SCOUT PILOTS.

This Squadron has been temporarily transformed into a school for teaching the methods of instruction in flying which are set forth below. Some may think them heterodox, but most, it is thought, will consider them quite normal, and indeed rather old-fashioned.

The chief thing is dual control. Dual control has been employed here to teach every possible manœuvre, including flying in a wind, landing and getting off across wind, spinning, etc.

The next and most important thing is that quite half the dual control that is given is administered after the pupil has gone off alone, as unless a learner has practised doing a given thing, such as turning a good deal, he will not appreciate the details that are shown him.

In this way, bad habits are corrected before they have time to get fixed.

The next thing is that as far as possible advanced pupils have been allowed to fly exactly as they chose, their experiments being limited only by the state of their own nerve. This has not been found to increase the number of casualties.

The instructors have been teaching always from the passenger's seat, so that the pupil has not had to experience an embarrassing change of seat either just before his first solo or at any other time.

In this way the instructor has, of course, been deprived of instruments, but I take it that a flyer who could not do without instruments would have less to teach than to learn.

The object in view throughout has been to teach pupils how to get out of all the various difficulties which one may get into in flying, by means of dual control. The object has been not to prevent flyers from getting into difficulties or dangers, but to show them how to get out of them satisfactorily, and having done so, to make them go and repeat the process alone. If the pupil considers this dangerous, let him find some other employment as, whatever risks I ask him to run here, he will have to run a hundred times as much when he gets to France. How can a young officer be expected to do very much in France if, during the whole of his training in England he has been told of nothing but what it is considered dangerous to do in flying? As most of the supposed dangers are not dangerous at all, but both easy and pleasant, it would seem a simple matter for the pupil to be taught, chiefly by example, to be frightened of nothing connected with flying on this side of the lines.







2. An enormous diminution in smashes and the almost entire elimination of smashes on types of machines on which dual control can be done. I think it is certain that if these principles were carried out conscientiously everywhere, there would not be half the smashes that there are at present.

3. Though the weather may be too bad to do repeated landings, instruction of some sort can be carried out in practically any weather in which the instructor himself is able to fly.

The advantage of this is twofold, it gives the pupil confidence as regards the weather, and it enables an instructional squadron or flight to shut down at set times so that the men and everybody else know with a fair amount of certainty when they are likely to get away. I believe that this advantage is much greater than it appears at first sight, and that the quality of work done is incomparably better if all ranks, especially the men, know that they can get away, say, in the evening. As both officers and men prefer to have the evenings free to say other part of the day, it has been made a rule here during the summer months to shut down every evening unless absolutely unavoidable, and do the flying that required calm weather in the early morning.

4. Officers unlikely to make good pilots can be eliminated without being given the opportunity of breaking machines.

#### FLIGHTS AS UNITS.

This plan was adopted with much hesitation. Its advantages and disadvantages are obvious.

1. Instructors have the same pupils from find to finish, so that they can take more interest in them.

2. Many pupils are good on one type and bad on another, thus there is a good percentage which does well on Avros and Sopwiths but never seems to get particularly good on a Bristol. The question then arises whether to recommend them for two seater fighters, or merely to say that they are not good enough for scouts, in which case they will probably go to B.E.2's. An instructor who has had to watch his pupils on each machine can settle this point, which would probably otherwise remain unsettled. Thus the question of a bad pupil's suitability is decided without delay or smash.

3. A certain amount of competition arises between the flights, so that the standard remains that of the best flight.

4. There is the same amount of work for instructors in each flight.

5. It enables the Flight Commander to judge for himself whether he can shut down flying or not without reference to the Squadron Commander. If the pupils whom he intends to get ready by the end of the month are well advanced, his efforts may be somewhat relaxed; if they are not special efforts may be needed.

If each flight had only one type of machine all this would have to be settled by the Squadron Commander, and unless he were continually in consultation with his Flight Commanders, to an extent which would be almost to interference, staff would be frequently wasted or misplaced, as in getting pupils off solo who are due in a day or two for a machine gun course.

The disadvantages are equally obvious:—

1. If a machine is put out of action, it is apt to hold up an entire flight. True, but for the same reason the flight makes special efforts to get it going again, and it was found that the percentage of unserviceable machines was very largely reduced directly the plan was started. Besides, a machine could generally be borrowed from another flight.

2. There are several types of machine, and perhaps also of engine in one flight. This does not matter much; to a great extent, one engine-man or rigger sticks to one machine—the man in this instance is the unit, not the flight. I have not had a single complaint on this account. In any case, the variety of machines gives the men far better training.

If each flight had its own stores, there would be a real difficulty, but this is not so.

I scarcely expected this scheme to be a success when I started this experiment, but it has been found to be a great improvement on the old one, to which everyone here would be very sorry to return.

Considerable attention has been paid to preventing the pupils from having to hang about the sheds without getting any flying. It has been found that this makes them stale and disinterested—a bad attitude of mind to learn.

It is, of course, much easier for instructors to have all their pupils at hand the whole time they are at the sheds themselves, but a very few moments' thought and arrangement each morning are found to be sufficient to save a great deal of this hanging about, and to enable officers to get a good deal more technical instruction.