

NZGA Instructor's Handbook

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Introduction

There are obvious advantages in the adoption of standard procedures and methods of teaching gliding throughout all Associations and Gliding clubs affiliated with the NZGA.

The contents of this Handbook are the product of many years of development by the Gliding Federation of Australia and the whole gliding movement in New Zealand.

The procedures have been designed to be logical, sensible and safe and are the result of practical application, and evaluation within gliding clubs. However, this does not mean that the handbook is to be regarded as an inflexible and final doctrine of gliding instruction. No doubt as time goes on changes and improvements will be introduced, particularly as future Instructors seminars review current training policies and the development of training methods.

At all instructor training courses the procedures herein will be the standard basis of teaching, and are to be followed in detail.

Wherever safety is involved the NZGA is obliged to require that the set standards and procedures be rigidly adhered to; but in other matters, methods of teaching, minor details of sequence, how much should be taught at each stage, etc, a more flexible approach is permissible. The inexperienced instructor is advised to follow the recommended methods in every detail, but within reasonable limits it is left to the more experienced instructor to decide to what extent he should follow the recommended methods in every detail, or whether he should modify them to suit his own personality and ways of teaching.

Should an organisation or an individual instructor consider that a better method of teaching or carrying out certain procedures in order, then the NZGA Technical Committee should be advised about it. Any recommendations for additions or alterations to the handbook should be forwarded to the NZGA Technical Committee Chairman.

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NZGA Instructor's Handbook

Part 1

The Task of Instructor Training

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The Task of Instructor Training

The learning process—the acquisition of skill. The instructional task is twofold—

Firstly, to provide **PILOT EDUCATION** as a background for making **FLEXIBLE** responses.

Secondly, to provide **PILOT TRAINING** as a background for making **CONDITIONED** responses.

In this handbook, the generic term ‘Training’ may be assumed to encompass both concepts referred to above.

This leads to two requirements -

1. The aims and objectives of the training must be clearly defined, not only as a complete syllabus of training but also at each stage of the syllabus.
2. The instructor’s knowledge and ability in the subject matter of the syllabus, in theory and practice, must be of the very highest quality. Without knowledge, nothing can be provided to the trainee.

The aims and objectives of the NZGA training syllabus are defined as follows:-

To produce glider pilots with a high degree of ability, understanding, initiative and safety consciousness, leading in turn to safe, efficient and competent cross-country gliding. The syllabus of training to achieve this aim is set out in Part 2 of this Handbook.

It is the purpose of Part 1 of this Handbook to provide the candidate for instructor training with the knowledge and ability necessary to use the training syllabus to the best advantage.

If it is true that experience is the only true teacher, why is an instructor necessary? It is certainly true to say that a person can indeed learn to fly without any positive instruction, by trial and error if you like. It used to be done that way in gliding many years ago, before two-seat training gliders were available to clubs. Although the single seat, trial and error training method did work after a fashion, and many pilots were trained that way, the accident rate during training was terrible. Several quite major crashes PER DAY were considered normal, and people took a very long time to become skilled. Nevertheless it does prove the point that ‘hands on’ experience is essential to the acquisition of skill as a glider pilot, and no instructor should ever forget it.

Nowadays of course, with two-seat trainers available to every club and a known syllabus to work to, we can speed up the training process considerably and cut the training accident rate to zero. This is what we are aiming for—to carry out high quality gliding training in maximum safety with minimum wastage of time. A high degree of flying ability and a positive attitude towards safety in the air are known prerequisites for an instructor training candidate. We are concerned here with putting these two prerequisites together with an understanding of human learning in limitations. In this way we achieve the maximum effect as instructors.

Before we do that, there is something important we should all keep in mind.

Much instructing is ineffective because it is merely factual and descriptive. It appeals to the memory and not to the reasoning powers of the trainees. Facts and descriptions are necessary and good in their place, but it is our fundamental duty to instruct our trainees to think and to reason. This is much more difficult and demands much more thought and effort than does the exercise of their memory. It is not our business to do for our trainees what they can do for themselves. This is the easier way and it seems quicker, but it leads to failure and disappointment.

We should be probing their minds constantly, stirring them to thoughtful activity. We are instructors and not text-books. Trainees can get many facts and descriptions from text-books, but they cannot get from them the mental stimulus and the training in reason which we ought to be giving them. The question ‘Why?’ should be more often on our lips than the questions ‘What?’ and ‘How?’ The ultimate test of our instruction is not how much we have told them, but how much we have exercised their minds and strengthened their reasoning powers.

It has already been stated that people learn only from experience. When providing this experience for a trainee, an instructor needs to keep in mind several human limitations which are stumbling blocks in the acquisition of a new skill. These can best be summed up by considering the stages of memory through which knowledge and experience need to pass before they are thoroughly learned. A basic understanding of the mechanism of each stage is fundamental to being a successful gliding instructor.

Most skills can be thought of as information processing skills. Man receives information from the environment through his senses; this information is processed and results finally in some type of behaviour. One of the basic questions about how we process information is whether man is a single or multiple channel processor. That is, does he process stimuli from various senses simultaneously, or does each signal get cleared through the channel one at a time? Some researchers believe that man is a multiple channel system. We can drive a car, smoke a cigarette and carry on a conversation at the 'same time' for example. Evidence is accumulating, however, that at least for higher order mental processing, man has a single channel and this channel has a fairly limited capacity.

The ability to perform several actions at once can be explained by two concepts:

- (a) rapid time sharing, where the person alternates between information sources; and/or
- (b) the automation of sub-routines of responses through practice.

According to one view of human information processing the nervous system is hierarchical in organisation. (Fitts and Posner, 1971). There are higher 'executive' levels and lower 'carry out instructions' centres. Each level has certain responsibilities or functions. Yet some autonomy is retained in the lower levels. For example, reflexes can occur without involving the higher centres. Early in learning, the higher centres are involved. Then as response patterns are learned, they may be initiated by the higher centre but carried on automatically by the lower centres, with only occasional monitoring and supervision by the higher centres.

Short term memory

If you have ever looked up a telephone number, been distracted and discovered you have to look the number up again because you have forgotten it, you have experienced the limitations of short term memory (STM). This ability is important in most continuing tasks. While STM is limited to a capacity of 8 to 10 items, it is not greatly influenced by the type of information. Information is rapidly forgotten if not given sustained attention. Continuous attention and rehearsal seem to be necessary for new information to be placed in the long term store, but this rehearsal occupies the central processor and limits the processing of other information. If information exceeds the capacity of the system, then some of it is lost, even if no interruption occurs. Note that any information lost from short-term memory is totally lost and there is no possibility of recall. This accounts for why trainee pilots often deny having been told something, when the instructor is quite certain that the information has been given. Instructors must keep this point in mind when, for example, another instructor is being criticised for an apparent failure to put an important point across. (See also 'reinforcement techniques').

Input selector

The manner in which the input selector (focuser of attention) operates is probably the single most important difference between the skilled and unskilled operator (Reason, 1974). As a result of experience and training, the skilled operator learns that much of the incoming information is neither new nor important and can be ignored. Guided by the information stored in long-term memory the input selector sifts and orders the incoming information to maximise vital information flow through the limited capacity system. Once useless or redundant information can be filtered out, the skilled operator may have time to anticipate future actions which can further reduce load.

Computer

In contrast to a modern digital computer, man's 'computer' is very slow. For simple tasks, the maximum processing rate is approximately 2 to 3 decisions per second. Even in continuous tracking tasks, the human computer performs intermittently, not continuously. The output may look smooth, but the processing is intermittent. If the task becomes more complex, processing time increases. Reaction time to the onset of a light when the person is expecting it, for example, may take about 0.3 seconds. Increasing the number of alternative lights that may go on increases reaction time. Rate of processing is a function of the amount of information in the stimulus sequence (Posner & Fitts, 1967). Simulator studies have found that the average time from engine failure to brake application in an aborted takeoff situation was 4.45 seconds (Kentley, 1975).

Uncertainty can also increase the time required to make a decision. One study of decision making by drivers in overtaking and passing another car on a busy two-lane highway found that decision time increased significantly when the available space was reduced. In other words, when there was a greater need for speedy action, the delay was increased. As a result, drivers were advised not to pass if there is any doubt to safety.

Of course if a particular situation is anticipated and highly practised, speed can be greatly increased. Typists, telegraphers, piano players and other skilled workers can make many discrete responses extremely quickly.

Several things such as anticipation, pre-programming and automating make this possible. A skilled telegrapher's attention, for example, may be as many as 15 or 20 letters ahead of what he is keying at that instant (chunking is probably at work). Piano players and typists are able to develop patterns of finger movements that require, after years of practice, no higher mental involvement. Responses have become a pattern and occur automatically. In computer language, they are subroutines under loose executive control. Once a decision is made to type 'the', the response patterning and timing occur without further attention. Sometimes the lower level programme gets fouled up and the typist, despite her best efforts, repeatedly types 'hte'. She can't consciously control the errant fingers. This fact suggests these lower-order programmes are autonomous. They do not occupy the central processor.

Long term memory

With repeated attention and practice an action, or set of actions which originally required central processing, becomes more automatic. Something like an automatic programme has been placed in long term storage. It is analogous to computer executive programmes and sub-routines. The executive programme defines the goal to be achieved and determines the general plan of individual actions. Sub-routines consist of relatively unchanging sequences of movements which are called into play at appropriate stages.

Although slow and often difficult to acquire, some skills can be lost quickly if not practised. A study found that instrument flying skills were reduced approximately 20 per cent after 4 months without practice. Procedures were the most affected. Skills of holding heading, altitude and speed suffered a smaller loss. time required to relearn the skills was **DIRECTLY RELATED TO THE AMOUNT OF ORIGINAL TRAINING.** (Mengilko, Adams & Gainer, 1971).

Each sub-routine was probably once an executive programme. Skilled tasks are learned by isolating one phase, learning it, and letting other parts be poorly performed. When spare capacity becomes available on first sub-tasks, experimentation with the second may start. An example of this is illustrated in a study reported by Reason (1974). In learning to drive a car, speed control and direction control are separate sub-tasks. Novice drivers worked very hard at steering but didn't vary speed, maintaining it at a very slow rate. As they progressed, steering variation was reduced, but speed control varied from very slow to very fast. Only in the final stages of learning did the two sub-tasks become integrated. This has a clear parallel in the learning of primary effects of controls. Each control is learned in isolation, then later integrated into, for example, smoothly coordinated turns.

An experienced instructor knows that rushing these basic exercises is a grave mistake, as it removes one of the fundamental 'building blocks' to learning to fly.

There is evidence to indicate that something once learned or experienced is never really lost from the long term store. Problems of long term memory may be matters of retrieval rather than storage. Skills once learned are more quickly relearned even after long periods of disuse. Electrical stimulation of brain areas during operations often arouse vivid memories of events that occurred 20 to 30 years earlier. Everyone has had the experience of not being able to remember the name of a familiar friend. Words are often 'on the tip of the tongue'. Memory studies have found great differences in our ability to recognise information and recall information. Although the information may never be entirely lost, evidence suggest that skill is a relatively fragile thing and readily degrades if not practised. The degradation can be subtle and not noticed.

Feed back loops

Very little if any learning takes place without knowledge of results, a process known as feedback. The essential information conveyed by feedback is the discrepancy between what was intended and what actually resulted. Feedback allows the individual to eliminate ineffective responses and to 'fine tune' the response patterns. In initial phases of learning, feedback is obtained primarily through the visual and auditory (or sometimes pain) channels. The trainee sees or is told by the instructor the consequences of his previous actions, together with the advice necessary to correct the situation. This is known as **EXTERNAL** feedback and it takes up some of the information-processing capacity of the single-channel limited-capacity processor. As learning progresses, however, some of the feedback can be obtained through the **INTERNAL** feedback loops, a process generally known in gliding as developing a 'feel' for whether the glider is flying correctly or not. This uses much less of the information-processing capacity of the trainee and is essential to the development of **ANTICIPATION** of the glider's reactions. It is obvious that maximum use of internal feedback cannot be obtained if the instructor is reluctant to let the trainee fly the glider.

It is easy to forget the importance of feedback but not only is it essential to learning, it acts as a powerful motivator as well. The sooner the feedback can be received, the greater its influence on behaviour. Memory, with its limitations, will play a greater role when feedback is delayed.

Reinforcement techniques

There are limitations to the capacity of human memory. However, there are several ways in which the instructor can reinforce the learning process by making use of some well established techniques.

Repetition—this is a well known method of getting information absorbed into the long-term memory. Its use varies from the straightforward 'by rote' learning which is typically employed in remembering cockpit checks and similar information, to the more sophisticated techniques used later in training. A typical example of the latter case might be in the teaching of secondary effects of controls. Rather than approach secondary effects dead cold, as it were, it is much better to refer back to primary effects as a starting point ('you recall that the primary effect of rudder is yaw in the direction you move the control...'). Thus, as well as introducing the secondary effect the trainee is just about to see demonstrated, the primary effects of rudder is at the same time subtly reinforced by repetition.

Recency effect—nowhere is the fragility of human memory better demonstrated than information fading from grasp after a period of time. The instructor can usefully capitalise on items learned recently by the simple expedient of sensible repetition while the information is fresh in a trainees mind. The recency effect combined with repetition is a very powerful aid in ensuring that information is successfully transferred from short-term to long-term memory.

Strategies of information processing

Emphasis has been placed on the theory that man has only a limited capacity for processing information. Yet his senses are receiving a continuous flow of massive amounts of information. The ability to react effectively to one thing may be incompatible with reacting effectively to something else. Attention can be devoted to only part of the information. For tasks which have not become 'automatic' there is a trade-off between speed and accuracy. Man can perform almost any task at different rates. His accuracy depends upon the number of information samples required to reach a given level of confidence about whether an event has occurred. For tasks involving multiple stimuli there is a need to consider a variety of signals which limits the frequency of sampling (receiving information) of any one stimulus. When emphasis is placed on speed, errors are increased. When emphasis is placed on accuracy, time is increased. When stimuli become uncertain, occur unexpectedly, or are difficult to discriminate, more samples need to be received to reach a given level of confidence that a given response should be made.

Thus the instructions provided (either implicitly or explicitly) will influence the way information is processed. Faced with a situation involving a large amount of information which cannot be processed in the available time, man may use several strategies to avoid undue pressure. One such strategy is to discard information merely because it fails to possess this feature. This is possible when all relevant stimuli have at least one characteristic in common. All other stimuli can be ignored and only those stimuli having the sought after characteristic will be considered. All of the information in the chosen stimuli may then be processed. This may explain why pilots,

having got themselves low in the circuit and approach, may land with the undercarriage up **IN SPITE OF THE WARNING HORN BLOWING LOUDLY.**

Decision making

The end purpose of all the information processing is to reach a decision of some kind: should an action be taken? If so, what sort of action? A decision is made when:

- (a) some element of choice exists,
- (b) alternative choices (actions) have consequences of some type, and
- (c) outcomes have value to the decision maker (Sime & White, 1971).

The research performed so far into decision making is limited in its applicability. One thing that has been determined, however, and that seems relevant to our interest, is that people tend to be conservative.

A useful analogy here might be the pilot who joins the circuit for a landing, and the wind has changed considerably since he took off. He sets off on a circuit to suit his original take-off direction ('preliminary guess') and in spite of noting the wind change part-way down the downwind leg (additional information presented sequentially) he is reluctant to change his mind until it is too late. At a **VERY** late stage, he does change his mind, but it is too late and an accident results.

The relevance of central processing to gliding

It has been shown that the only ways the basic characteristics of man can be altered are through selection and training. In gliding we are not in a position to conduct selection processes on people who wish to take up the sport. This leaves training as our only possibility.

Pilot training has traditionally emphasised motor-skills and procedures. If information processing skills are responsible for accidents, as the evidence indicates, perhaps special instruction in specific skills, using some of the information presented here will help reduce the accident rate.

Stress

Stress is defined as the demand the work environment places on an individual. Included within stress are workload, boredom, anxiety, heat, noise, low humidity and other similar factors and conditions.

Work overload

Considerable attention has already been given to the effects of overload. If the concept of the limited capacity single channel information processing system is accepted, it is not surprising that man's ability can be saturated by modern vehicles on occasion.

Two types of overload are recognised. One is speed stress. Speed stress occurs when the rate at which signals occur is excessive. The second type, load stress, results from having a number of different sources of information. The strategy for handling these stresses was briefly referred to earlier. Additional results or methods of coping with information over load are provided in the following table.

Methods of coping with information overload

- Omission Ignore some signals (or responsibilities)
- Error Process information incorrectly
- Queuing Delay responses during peak loads, catch up during lulls.
- Filtering Systematic omission of certain categories of information according to some priority scheme.
- Approximation Make a less precise response.
- Escape Give up: pray.

One characteristic of humans is that they tend to degrade gradually. Even when faced with excessively high requirements, the human can keep going.

Work underload

The effects of overload are dramatic, those of underload are not as immediately apparent. But underload can be as dangerous as overload. Adverse effects like illusions and hallucinations become apparent only after some time. Literally hundreds of studies indicate that performance rapidly degrades on tasks such as monitoring radar displays (in which the appearance of a target cannot be predicted and occurs infrequently). Degraded performance takes place within a half hour, and probably within 10 minutes or so.

The effects are not a simple function of motivation. Monetary inducements can improve performance but do not return performance to its initial level. (Gabriel, 1965)

It is probable that the effects of a boring task are related to basic brain characteristics. (The Reticular Arousal System).

A gliding instructor may have to go from low-load to high-load conditions almost immediately. A good example of this is flying with a pilot who turns in quite a reasonable performance during a training flight, but fails to round out for the landing. The relaxed (underloaded) instructor lacking any kind of 'warm-up period' to accustom him to the demands of the **OVERLOAD** situation now confronting him, will be unlikely to respond quickly to prevent a heavy landing.

The law of primacy

Primacy means simply to be first. In terms of gliding instruction it means that is very important that whatever is taught to the trainee must be right the first time. Part of the instructional process is the formation of habits which will be relied on in a person's later flying life. It therefore follows that the habits instilled in the trainee must be good, safe habits.

From a trainee's viewpoint, it is much easier to learn something properly and correctly in the first place, rather than have to unlearn it and then re-learn it afresh. The same principle applies to the instructor—train properly in the first place and it will not be necessary to undo all the work already put in in order to do it all over again.

If correct and **SAFE** habits are not instilled into a trainee right at the beginning, **THEY WILL NOT BE ACQUIRED LATER**. The importance of the instructor's influence over a trainee's early experiences will therefore be recognised.

Important instructor characteristics

Example

The tendency of a trainee to emulate what the instructor does has already been mentioned—indeed it is an important part of the training process. It follows that every aspect of the instructor's work must be of the highest quality—flying skill, airmanship, adherence to airspace restrictions, regard for placarded flight limitations, to name but a few.

On the other hand an instructor flying sloppily will be copied, as will an instructor who adopts a 'she'll be right' attitude towards, for example, airspace restrictions or the requirements of the Visual Flight Rules. Perversely, it seems much easier for trainees to adopt bad habits than to adopt good ones—probably one of Mr Murphy's laws at work—and the instructor must put continual effort into ensuring that the examples set are good ones.

Einstein once remarked '*Example is not the finest way to influence people, it is the only way*'. How true.

Self discipline

This is the logical follow-on from the need to set a good example. There is no point in expecting people to exercise self discipline when the instructor is not prepared to do so himself.

In a self-regulatory sport like ours, everyone should take pride in adhering to the rules which we all play a part in formulating. This is especially true of instructors.

Integrity

An instructor must show consistency and impartiality throughout all instructional work. Nothing undermines the reputation and authority of an instructor as much as failing to adhere to these two basic qualities. One only has to think back to school days to remember the adverse effect of favouritism towards one pupil on the class as a whole.

Empathy

This can be defined as imagining what might be going through the trainee's mind during a training sequence. Alternatively it could be thought of as putting yourself in the other person's shoes and imagining how you would respond under similar circumstances. It is of great benefit to an instructor to have a high degree of empathy, even to the extent of remembering what it was like when you were yourself a trainee pilot struggling to learn to fly.

It goes without saying that, hand in hand with the quality of empathy, an instructor must at all times respect the trainee as an individual and must never indulge in tactics such as ridiculing, belittling or assertion of unnecessary authority.

Knowledge and ability

It is imperative that an instructor maintains a high level of skill and competency in every aspect of instructional activities. As well as maintaining currency on all gliders in the club fleet (how can an instructor convert a pilot into a new type if he has not flown it in living memory?), an instructor should know his limitations in knowledge of theory subjects and in all NZGA and club rules, regulations and procedures.

The worst thing an instructor can do is try to bluff a trainee. If a question is asked to which the instructor does not know the answer, there is no shame in admitting this and making every effort to find out the answer. It is vitally important that the required research is in fact carried out and that the instructor takes pains to locate the trainee and clear the matter up beyond doubt. If this is not done the instructor's credibility is seriously eroded.

Instructing assets

Assuming the foregoing characteristics are in place, the instructor must use them in the practical art of improving performance. Having acquired the knowledge, it is important that the instructor's personality overrides the way in which information is passed to the trainee. Knowledge can be learned and lost. It can be re-learned and updated. However, our personalities have been developed over many years and will take just as many to change. There is no correct blueprint for a successful instructor, but it is known that most of them have some of the characteristics listed in the diagram overleaf. Go through the list, be as honest with yourself as you can, and check off your own characteristics as you see them.

Principles of gliding instruction

Bearing in mind all that has so far been written in this Handbook on the learning process and the acquisition of skill, the main principles of gliding instruction may be listed under the following headings:

- Responsibility
- Communication
- Orientation
- Skill
- Safety

Responsibility

Many of the instructor's duties are clarified when it is realised that the process of gliding instruction consists of a gradual transfer of responsibility from instructor to trainee.

This is demonstrated by the fact that, on a trainee's first flight, the instructor is taking 100% responsibility for the glider and its occupants while, at the end of pre-solo training, this responsibility has been assumed by the trainee. During training, therefore, there has been a complete transfer of responsibility from instructor to trainee.

Two main rules arise from this:

1. It is the instructor's task to transfer responsibility **AT A RATE AT WHICH THE TRAINEE CAN COPE**.
2. It should be absolutely clear to the trainee **AT ALL TIMES** exactly where his field of responsibility lies—eg what controls he is responsible for, when he must fly and when the instructor will fly, what decisions are up to him, and so forth.

Early in training there will be a rapid switch of responsibility from instructor to trainee and back again, as air lessons develop from demonstration to practice. There must be no confusion as to who is doing what, and when.

Throughout training, the trainee learns to exercise the increasing degree of responsibility he is given but is always clear in his mind that the instructor has the **OVERRIDING RESPONSIBILITY**.

The instructor must never hesitate to take back responsibility for any good reason, but when he does he **SHOULD TAKE IT ALL**. In the earlier stages, particularly, the trainee will be made bolder and more confident if he knows someone is going to say '*I have control*', and take over responsibility if trouble comes up.

Having given responsibility, the instructor, within the indicated limits, should let the trainee exercise this responsibility. If the trainee feels the instructor is on the controls in his supposed area of responsibility he will know he isn't really being given responsibility and he simply will not be responsible in that area. If the instructor feels he has to stay on the controls, however lightly, he can take this as a clear indication that something is wrong with the previous training. He should go back, teach that part again until the trainee checks out satisfactorily—because the first rule requires that the trainee be given responsibility at a rate with which he can cope.

Checking the trainee's ability to handle what he has been given is a constant process, and one of the most important in the whole instructional field. One thing not properly learned can confuse future work completely.

Therefore, no advance is made until the instructor is quite certain of the trainee's understanding up to that stage. This involves demonstration by the trainee to the instructor, not only of an ability to perform the exercise in question, but also an understanding of it. This requires really good communication **BOTH WAYS**—information and questions from the instructor—questions, answers, and comments from the trainee.

The trainee's ability to handle the responsibility given him is an important requirement throughout, but at the stage of first solo it is vital. At this stage the instructor is checking for a complete transfer of flying responsibility, and whether the trainee has the ability to handle it. A useful mental exercise for the instructor might be to ask himself whether he would be happy to fly bound and gagged with the particular trainee at his particular stage of ability.

It should be clearly understood that, regardless of responsibility handed over for the purposes of training, the instructor takes the ultimate responsibility (or blame) for anything that happens on any flight under his instructional supervision.

Communication

During training the instructor is faced with the problem of communicating to the trainee all the knowledge and information he will require when he assumes the full responsibility of solo flight.

It is a primary principle that where any concept or fact has to be transferred from one person to another there is always a communication problem of greater or lesser degree. In every day life we seldom allow for this.

Where the transfer of data is essential, as it is in gliding instruction, it follows that the instructor is required to recognise that communication difficulties always exist and that an important part of his task is to reduce these difficulties as far as it is humanly possible.

Certain rules may be applied to this task. The intelligent and thoughtful instructor, accepting the existence of communication difficulties, will work out his own rules from experience. As a guide, a summary of several basic rules follows, though this is not by any means exhaustive.

Firstly to be effective, communication has to work both ways. Comments and questions for the trainee, as well as being invaluable in the assessment of the trainee's understanding, allow the trainee to participate in the act of communication, instead of being on the receiving end of one-way communication.

Because of the way the human mind and temperament operate, 'one-way' communication in general is not only ineffective, but in some cases can lead to resentment, boredom, or confusion, to such a degree that real communication becomes impossible.

Such a situation may be termed a 'communication block'. This may be a far more common situation than is usually recognised. Social custom and upbringing train us all to disguise lack of interest out of politeness, and this makes it difficult to recognise the existence of a communication block—which is, put simply, a situation where a person who has a look of interest on his face is really making no effort whatever to understand what is being said to him. (Check this against the way you sometimes act yourself.)

By encouraging the trainee to participate in the communication the instructor will not only be able to recognise communication blocks, but will also be able to do much to remove them.

Communication can also be affected adversely when too much information is 'poured' into the trainee without intervals of quietness in which he can consider what has been said. This is particularly important during flying. It should be recognised that a definite 'lag' exists between the message and the trainee's understanding of what he has been told. It will be found that this lag will be of seconds or minutes, but in extreme cases it may extend over days or even weeks.

Constant assessment of the trainee's real understanding is therefore of the greatest importance, as calculated repetition is often the only way in which the lag of understanding may be overcome. As this assessment can only come from the trainee's participation, he should be encouraged to talk, if this is necessary.

Another factor to remember is that in all persons the period of full attention is quite short, and in some cases will be very short. The importance of dealing concisely and clearly with the main points under consideration will be obvious.

All people forget a fairly fixed percentage of any new information within a very short time of receiving it. Once again assessment by question and comment will show what has been forgotten and fix the areas where repetition is necessary.

In gliding instruction communication of information is not done only by talking; it is achieved most effectively by clear demonstration in the air. In effect, from a good demonstration, the trainee will find out something for himself and this is the way people learn best.

Talking a trainee through a demonstration or exercise is a very real art which can only be perfected by thought and practice.

The instructor's thoughts should be so well organised that only essential information is given, and this information should be exactly synchronised with what the glider is doing. However, on no account should the information distract the trainee from full attention to what is being demonstrated. This leads to the provision that if something is going to happen very quickly the instructor may have to give verbal indication or warning just before, and then be silent as it actually happens, but again drawing attention after it has happened. Finally, to put it simply, the instructor usually does too much talking, and the trainee not enough.

It is not the instructor's task to tell the trainee everything the instructor knows in as much detail as possible, it is not to demonstrate how knowledgeable the instructor is, it is not to go through a programme of set exercises and standard patter. The instructor's real task is how to make quite certain, by one means or another, that the trainee really knows the relatively few important facts he simply has to know.

Notwithstanding what has been said above about the desirability of two way communication, it must be appreciated that there are occasions when one way communication is the only effective way to drive home a point about which the instructor is not inviting discussion or argument at that particular time.

Orientation

In dealing with a trainee who has never flown before, the instructor should bear in mind that, until now, all his experience has been in two dimensions. He handles all movements by instinctive measurements of relative change between points around him on the surface of the earth.

When the trainee is being introduced to the third dimension (height) he has to develop new habits by which he can locate himself in three dimensional space.

As the pupil will have no reference points the instructor must give him some right from the start. Unless this is done, the pupil, on his early flights at least, will tend to 'locate' himself inside the glider, thus reducing the area around him to one he can handle by two dimensional means. His attention needs to be directed outside the glider by the instructor.

This is a very simple principle and all that is required is that the instructor remember, throughout the training process, that it is a most important one. Thus orientation should be provided and checked throughout training.

We may include, under the general heading of orientation, the direction of the trainee's attention during demonstration, correction, and practice. After a few flights it is easy for the instructor to assume the trainee knows where to look. He may not—and in any case a few words such as '*Look at the horizon ahead*', or, '*Notice we are flying towards that point*', can sharpen the trainee's attention. This need for directing of attention continues throughout training and becomes rather critical when, for example, simulated launch failures and circuit planning are being undertaken.

Skill

In all forms of training, time must be allowed for the development, by practice, of the physical and mental skills called for by the particular activity being taught.

In gliding, a good understanding of the requirements of flight is desirable, but this in itself is not sufficient to turn a trainee into a pilot. Adequate time must be allowed for certain skills to be developed.

It follows from this that flight time should be used to the best advantage, and this means that the trainee should be doing as much as possible of the actual flying on each flight.

On the other hand, the trainee should not be confused by the instructor trying to put too much teaching into any one flight. No flight should involve more than one thing being taught at a time, and in every case the particular teaching exercise of the flight should be clearly indicated and understood. As much as is feasible of the remainder of the flight should be used to practise things taught previously.

Thus, for example, at a certain stage, the trainee could fly the 'Full Climb' stage of the winch launch under the monitoring of the instructor. 'Polishing Turns' could be the teaching task in the exercise area, and in the circuit, the trainee could be getting some practice in 'flying to a point and 'turning'.

The instructor should take pains to plan each circuit to the maximum advantage of training, always allowing for a smooth transition to the 'break-off' for normal circuit and landing procedure.

One aspect of skill is the ability to apply principles of action to a wide variety of situations. One important use of this ability is the prediction of trends, so that action may be started in time to meet a predicted event.

Training should involve the teaching of these principles. Though many of them will be absorbed unconsciously from an experienced instructor, there is room for a more conscious approach to this aspect of training. The instructor who analyses his own flying and who is aware of the principles he applies by habit to differing situations, will be better able to pass on this knowledge to his trainees.

Learning by doing is a more effective method of training than a method which requires the following of complex instructions.

Most effective of all is the situation which allows the trainee to set his own pace.

Again, something the trainee can see for himself is of more value than any judgement the instructor might make of his performance.

Safety

It will be evident that the main intention of the principles expounded so far is that they should be used to train pilots who will not fly 'mechanically', but who will think for themselves and bring an analytical attitude to bear on their own flying, in all respects.

The principle now to be discussed has the opposite intention. It suggests that a number of unbreakable **habits of safety** should be formed by the trainee during instruction.

For example, by solo stage, the pilot should have developed the habit of maintaining a 'safe speed near the ground' so strongly that throughout his flying career he should feel acutely uncomfortable if for any reason his speed falls below a safe margin of speed near the ground. 'Near the ground' means any height below the height needed to recover from the effects of any sharp reduction or loss of flying speed. 'Safe speed near the ground' means—glider basic stall speed, plus 10 knots, plus half the wind strength. This one habit is the best safety insurance the instructor can provide for the trainee.

All possible steps should be taken to form habits of coolness and confidence in the trainee to proof him as far as possible against the effects of panic, which may be defined as a sudden and complete loss of confidence in an emergency. The trainee should have confidence in his own ability, confidence in the glider and a clear knowledge of training in the standard emergency procedures. He should be convinced that in any emergency situation calmness and ability will bring him safely through.

It will be found that in almost every exception to this, some habit of safety that the pilot should have developed during training has been ignored or broken.

For example, overstressing of the structure—the habit of observing placard speeds and limitations should have been developed during training. Ignoring placard speeds on the launch or on gusty days, for example, will lead to a contempt for such restrictions. Collision—the habit broken here is the main habit of airmanship, keeping a good lookout at all times. Spinning too low for recovery—the habit broken here is probably the basic one of keeping to a 'safe speed near the ground'.

The thoughtful instructor will become aware by experience of these aspects of gliding which should be covered by fixed habits of safety (which it is the instructors **DUTY** to instil in the trainee) and those aspects where, under initial guidance, the trainee should become thoroughly competent to think for himself.

Methods of Gliding Instruction

This involves breaking down any particular exercise in the training syllabus into a series of steps. It is suggested that after the first reading of this section, instructors compare the routine with actual sequences from Part 2, identifying the steps as they do so. The steps are as follows:

- Pre flight briefing
- Airborne demonstration and patter
- Handover/takeover procedure
- Trainee practice and feedback
- Fault analysis and prompting
- Post flight debriefing

Pre-flight briefing

This is a vital part of gliding instruction and must **NEVER** be omitted. A successful pre-flight briefing consists of careful analysis of the task to be performed, along the following lines:

What stage has the trainee reached? What is the next stage to be attempted? How do I teach it? How do I link it with the previous stage? How do I know when I have taught it?

The pre-flight briefing should be kept short and to the point. It is not a lecture. Diagrams should be used where necessary, and it should not be forgotten that the glider itself is a perfect 'tool' for illustrating things like the effect of control movement on the camber of main services, etc. It is a mistake to get too technical at the pre-flight briefing stage—if technical detail needs to be entered into it is better done after the flight than before it.

The prime objectives of the pre-flight briefing are to **DEFINE** the objective of the flight, **DESCRIBE** briefly what the objective consists of and **ALLOCATE RESPONSIBILITY** for who does what.

Airborne demonstrations and patter

The importance of this part of instruction should not be underestimated. Instructors must be able to give clear demonstrations. A brief but accurate description of exactly what is happening, synchronised with the glider actually doing what the instructor said it would is extremely effective. Once again it needs practice, but it is well worth the effort. Instructors are cautioned against trying to simply repeat the pre-flight briefing during the airborne demonstration. The briefing and the 'patter during demonstration' are two entirely different things.

The general pattern of instructor demonstrations will be as follows -

- Name the exercise and describe the effects(s) to be observed.
- Pause
- Ensure the glider is established as a stable platform.
- Demonstrate clearly the nominated exercise, synchronising the demonstrations with the patter.
- Then...

Handover/takeover procedure

Many problems are caused by one or both pilots being unsure who has control of the glider. Most instructors have at least one hairy story to relate on this subject. It is vital to develop a clear, unmistakable handover/takeover procedure to eliminate confusion. One useful expression is '*You have control*', to which the reply must be '*I have control*' when the pupil assumes control. The procedure must be clear and unambiguous, and must receive a response.

The exception to the above is when an instructor needs to assume control without any delay, to prevent a hazardous situation developing. An obvious example of this is failure to flare during the landing approach. Such a situation is ample reason to take control without comment and catch up with the formalities later.

Not only is it hazardous to be unsure if anyone is actually in control of the glider, it can also be very confusing and unsettling for a trainee if the instructor says he is handing over control but does not in fact take his hands and feet off. After the very first demonstrations where it might be acceptable to use the technique of '*come on the controls with me*' as a confidence builder, the instructor must ensure that on all occasions where he says '*you have control*' he does in fact relinquish control to the trainee. Trainees definitely know when an instructor is riding the controls. There is only one occasion, other than the introductory one already mentioned, where it is acceptable for an instructor to be on the controls at the same time as the trainee. This will be covered in the section on 'Fault analysis and prompting'.

Trainee practice and feed back

When control of the glider has been handed over to the trainee, the instructor observes the results of his own briefing, demonstration and patter. Usually the success of the trainee's understanding of the exercise is in direct proportion to the quality of the instructor's performance. Trainees vary in their approach to taking over control; some are tentative and nervous, others aggressive and rough. The instructor must be ready to offer comments

appropriate to the results he sees. The difficulty here is that the controls should not be interfered with by the instructor unless absolutely necessary.

The main feedback for an instructor is the success or otherwise of the trainee's emulation of a demonstration. It may be that another demonstration, perhaps with changed pattern to suit the trainee's style, will provide the answer to a trainee who does not seem to have understood what the instructor is trying to say.

Fault analysis and prompting

Faults in a trainee's flying may be in the areas of skill, judgement or airmanship. Instructors should remember that trainees must be allowed to make mistakes and it is observation of these mistakes which provides the feedback necessary to positive instruction. It should also be remembered that no instructor will be required to retrieve any situation which is allowed to get out of hand. There should be no hesitation in taking control to prevent a hazardous situation developing.

It may be that the trainee has the basic idea right, but is having trouble with the exact amount of control to use. A good example of this is coordination of the rudder with the aileron—most trainees do not use enough rudder and their progress into turns and trying to fly straight and level is erratic and discouraging to them. It is quite in order for the instructor to assist on the controls momentarily with the trainee to emphasise a point—'not quite enough rudder with the aileron; feel how much rudder I am using', for example. This drives the message home, but it is imperative to get off the controls again as soon as the assistance is no longer needed.

Post-flight debriefing

The de-briefing should consist of an accurate analysis of faults, without nit-picking, and is a good opportunity to offer praise for the parts of the flight which were well handled. It is essential that the debriefing looks forward to the next exercises in the sequence and the trainee should be advised what to expect on the next flight.

Remember 'recency effect'. The trainee will remember most vividly those parts of the flight which have only just happened, ie the approach and landing. If there are other parts of the flight which need comment from the instructor, and there usually will be, the trainee will need help in recalling those items in order to absorb a debriefing. The instructor is not immune from recency effect either. Carry a small notebook in the shirt pocket or in the glider—brief memory jogs can be jotted down in the air for recall later on the ground. Do not rely on the frailties of human memory.

The debriefing will normally be augmented by suitable endorsement of the training card/logbook.

Summary

To summarise Methods of Gliding Instruction, keep the following points in mind.

1. Keep briefings brief and to the point, otherwise confusion may result.
2. Relate each exercise to the syllabus as a whole, beware of instructing any given exercise in isolation.
3. When demonstrating, start from and return to the stable platform. Ensure that the trainee does the same.
4. Do not fall into the trap of believing that once an exercise has been taught it will necessarily be remembered for all time. Remember the frailties of human learning capacity and keep in mind that constant practice and recapitulation are necessary to adequately develop pilot skills during, and after, initial training.
5. The training syllabus breaks the process of pilot training down into simple and clearly identifiable steps. It is a mistake to try and jump any of these steps and to push a trainee faster than he is able to cope. Each step is a building block for the next one, and any attempt to seriously disrupt the sequence risks a major misunderstanding which will at best hinder progress and at worst put a pilot at risk at a later stage.
6. Let the trainee make mistakes. There is no substitute for actual experience.
7. When you do hand over control to the trainee, **STAY OFF THE CONTROLS.**

8. Remember that application of the Methods of Gliding Instruction depends on a sound understanding of Principles of Instruction and of Skill Acquisition. Remember also that instructors are susceptible to the same human frailties as their trainees.
9. Carry a notebook and **USE IT**.

Instructor/trainee relations

The biggest failing of the pilot training system in gliding is that a trainee often has to fly with a wide variety of instructors before going solo. It might be argued that this is really not a problem and that exposure to a wide variety of instructional styles results in a better and more flexible pilot. There is no evidence to support this contention, but there is plenty of evidence that adherence to such practices prolongs training unnecessarily, sometimes forces incompatible people to fly together, and still risks missing something major out of the syllabus on the way to solo.

The best relationship between instructor and trainee is established when the trainee flies with, at most, two or three instructors in a club, (this assumes a largish club with an Instructor Panel of between 10 and 20). The individuals get to know each other and establish a rapport which means that progress is made quite rapidly. It should be remembered that trainees very often have doubts and even fears about the sport they have got themselves into. Expression of these doubts and fears comes more easily to a person they have got to know, rather than be confronted with a succession of complete strangers exhibiting styles ranging from sympathetic to downright intimidating.

Although it is a well recognised fact that disillusionment with the effectiveness of the club training system is a major factor in the high dropout rate during training, there is a reluctance in most clubs to take any action to change a system which has become traditional. With this in mind, strategies need to be worked out to ensure that trainees receive the best possible standard of instruction within the self-imposed limitations of our system and that instructors make every effort to establish a relationship which achieves that end.

There are some specific points in instructor/trainee relations which are important enough to isolate:

Criticism

Although criticism is an essential part of any kind of training, instructors must remember that it is destructive if carried to excess. To some kinds of personalities, it is enough to cause them to drift away from gliding. This is not to say that an instructor must not criticise—far from it—but do make sure that it is relevant, justified and positive. The biggest trap to fall into is to criticise someone for doing something that was actually quite acceptable, but doesn't happen to be the way you would choose to do it yourself. This is sometimes quite a difficult course to steer, but an instructor must keep it constantly in mind.

Praise

This is a positive side of instructional work which has the capacity to improve a trainee's performance considerably if applied carefully and judiciously. Everyone knows the effect that praise has on human performance, but there is one point which should be watched carefully. Beware of false praise of any tendency to try and use praise to lift a trainee's game when the problem lies further beneath the surface than you are able to see. If a trainee has worries or fears and the instructor brushes them off with a flippant remark designed to build confidence, this will have the opposite effect when the trainee eventually realises that the instructor has not put the amount of thought or effort that he should have into an analysis of the trainee's problem. In short, the trainee has been 'conned'. Once again the result can be an unnecessary loss to gliding.

Respect

An instructor must have the respect of the trainee if any progress is to be made. This means that the instructor must in turn respect the trainee as a person and endeavour to understand as much as possible about that person's needs, aspirations and concerns.

Progress

Trainees need to know the instructor's opinions on the progress being made. The instructor must therefore be conscientious about completion of the trainee's logbook at each stage of the syllabus. Comments written are for the benefit of both the trainee and the next instructor. They must therefore be brief, to the point and above all truthful. The last thing a trainee needs is a false impression of progress.

Standardisation

This is a particular problem when a trainee has a number of instructors. Each individual has personal foibles which can confuse the trainee and cause frustration. Instructors are urged to adhere closely to the Principles and Methods outlined in Part 1 of this handbook and to carry out their instruction according to the syllabus in Part 2.

The C Category Instructor Rating

Prerequisites

Club pilots selected for 'C' Category Instructor training must meet the requirements of CASO17, Part 4, section 2 (see NZGA Manual of Approved Procedures, Section 4-1-1).

In addition to the above, candidates should have no basic flying faults, should have the approval of their CFI or Chairman of the Instructors Panel and require a good working knowledge of the following subjects:

- The NZGA Instructor's Handbook, Parts 1 & 2
- Basic Meteorology
- Basic Theory of Flight
- Rules of the Air
- Basic Airworthiness Requirements

The 'C' Category instructor privileges and limitations

A 'C' category Instructor may only give instruction under the supervision of a qualified instructor. He is not authorised to approve initial solo flight.

The A or B Category Instructor Rating

Applicant must also meet the requirements of CASO 17, Section 2

Human Relations

Leadership, supervision and discipline

The nature of the sport of gliding brings about a situation where many people are for the first time in their lives accepting responsibilities as club instructors without any previous background in instructing techniques or the art of handling people. It is with the latter subject that this section is mainly concerned.

Inherent in the art of instructing is the need to direct or supervise. In other words all instructors are to some degree supervisors, more so in the case of 'A' or 'B' category instructors than 'C' category instructors.

A person holding an 'A' or 'B' Instructor rating is authorised to take complete charge of a gliding operation on any given day, and to act in the capacity of 'Duty Instructor'. Since the Duty Instructor is effectively the CFI's delegate for the day, it is clear that the position carries considerable responsibility for the safe and efficient conduct of all aspects of the operation.

Recognition of the supervisory factor in instructing is of prime importance because every supervisor, or instructor, as we will now refer to him, has obligations which differ greatly in degree from those of other club members. Let us look at these obligations. What are they?

They may be briefly summed up as:

- Responsibility for the performance of others
- Responsibility for the maintenance of standards, especially those relating to safety; and
- Responsibility for the protection and care of equipment.

In brief we may say that the instructor is primarily responsible for making things happen through the efforts of people. His job therefore is essentially one involving the art of human relations in managing people, guiding them in the direction of getting things done and of achieving the desired objectives with maximum efficiency, with due regard for the interests of all concerned. This demands judgement and leadership of a high order. To instruct efficiently calls for the building of morale, the development of co-operation, the use of proper instructional methods, the ability to discipline wisely and above all **A SOUND KNOWLEDGE OF HUMAN NATURE.**

For any club to be strong and efficient it is therefore necessary that those entrusted with supervisory responsibilities should exhibit marked qualities of leadership. Most of us are not naturally endowed with these qualities but in many cases they can be acquired with conscious effort. It is impossible to list those personal qualities which combine to make for good leadership but there are some which cannot be overlooked. A few of them have already been considered in the section on 'Important Instructor Characteristics', others are looked at for the first time here. In any case they are important enough to be reviewed time and time again in instructional work.

Self discipline

A number of the problems of bad discipline arise because of our own inability to discipline ourselves—to set a good example and to make it quite clear to those who we supervise what is expected, and that by our example we mean what we say.

It is no use expecting people to be amenable to discipline if we ourselves cannot be so. This is most important. In fact if we are not prepared to be honest with ourselves in this matter we will never gain the real respect of members. We are all inclined to think at times that a set of rules is made for someone else, but certainly not for ourselves,

We are at all times under the critical eyes of all club members. Being human, they are quick to notice and mentally criticise us if we break the rules we expect them to keep. Every time this happens our authority or ability to maintain discipline is lessened, whether we like it or not. The force of example is a very potent factor in creating a suitable climate for effective discipline, so the first thing an instructor must learn to do is to discipline himself, to train himself to abide by the rules laid down by his organisation and to set an example which cannot be criticised by the people with whom he associates in his capacity as an instructor.

Will power

Instructors should have sufficient strength of character to take and adhere to the right decision in the face of pressure and adverse criticism. They should be strong enough to place the qualities of duty and self respect above the desire for popularity and self interest. An instructor should not however confuse will-power with foolish obstinacy once he realises he has made a wrong decision.

Intelligence

This is an essential leadership quality without which an instructor cannot hope to win the support and confidence of the ordinary member.

Integrity

To be successful an instructor must establish a reputation for honest dealing and reliability, which can only be developed by consistent and impartial behaviour towards those with whom he associates as an instructor.

Ability to inspire confidence

Unless members have confidence in the instructor's ability, know how, judgement, impartiality and sincerity it will not be possible to inspire enthusiasm or interest in them.

Technical knowledge

An instructor must have a sound knowledge of his duties and be capable at all times of advising members on all matters affecting his particular responsibilities. He should have a comprehensive knowledge of NZGA and club policy and procedures and any relevant regulatory requirements.

Decisiveness

An instructor must be prepared to make and accept responsibility for his decisions. He must not be guilty of unwarranted procrastination in this direction. Failure to accept the responsibility for making decisions can only be construed by the member as weakness and lack of instructing knowledge. However, instructors should never allow themselves to be stampeded into giving a decision without being in possession of all relevant facts. Once a concession has been made it is difficult to rescind without causing dissatisfaction, even if it transpires that the original decision was based on insufficient information or a misinterpretation of the facts available.

Enthusiasm

Unless an instructor is able to exhibit a sincere enthusiasm towards his task, it is unlikely members will show a better response.

Fairness

The need for this quality is so obvious that there is no need to comment further.

The attributes referred to are all positive qualities and are directed to the stimulation and interest of persons under the instructors control. Although the use of disciplinary action is sometimes necessary in certain cases, this is a negative approach to the question of leadership, and can be better described as driving rather than leading.

Discipline

Having raised this question of discipline it becomes necessary to discuss this term as the duty of maintaining discipline in a club is a major responsibility of every instructor and one which cannot be avoided.

In considering the meaning of 'discipline' we find that the use of this word sometimes raises a feeling of resentment in the average person because in the past the term has often been associated with unpleasant consequences. In the minds of some people the words 'discipline' and 'punishment' have become synonymous and it is not unusual to hear people use the expression '*You will have to discipline him*' when they mean the person concerned should be punished.

It is unfortunate this stigma has become attached to the word as, in reality, no such construction is justified and every effort should be made to overcome any prejudice arising from the use of this expression.

The proper use of the word '*discipline*' is '*training to comply with the rules and regulations of the organisation*'. Note the intentional use of the word '*training*'.

Most people recognise and accept the need for rules and regulations to control the activities of any human agency, and will readily admit that without defined rules, direction and control would be impossible.

When people join a gliding club it is usually one of the conditions of their acceptance that they agree to submit to the rules laid down by their club. Proper rules and regulations minimise direct supervision giving stability and security to the club and its individual members. However, unless written rules are orally and intelligently interpreted and the spirit behind them is clearly defined, too often they will be observed to the letter of the rules in situations where judgment should prevail. In general, the fewer the rules consistent with safety, the better. It is important to remember that rules which are too rigid or arbitrary invite members to find a way around them. Individuals will not obey rules if they feel they are unreasonable or unfair. In other words, any rules should be 'good' rules.

In considering the question of discipline we may say there are two recognisable types:

- Positive discipline (Sometimes referred to as internal discipline).

This encourages the member to comply with the rules of the organisation because he realises that compliance with these rules was one of the conditions of his membership. Usually where a member is happy and contented it is because he feels his interests and those of the club are identical and he has confidence in the officials of the club. He thus falls within the positive discipline group.

- Negative (or external discipline).

This relies on the fear of consequences to force the subject to comply with the rules of the organisation. The use of negative discipline is undesirable generally and should only be used as a last resort when it is clear that the person concerned is not amenable to those influences which are productive of positive discipline.

Of course the important thing in controlling discipline on the flying field is the respect, not fear, that members have for their instructor. This respect and control is only achieved by the instructor's attitude to personnel under their control. Our members will respect us only if they know that we mean what we say, that we are firm, yet fair, uniform and consistent.

The quality of discipline in any gliding club is usually a reflection of the efficiency of its instructors. If they are efficient with good personal qualities they can induce voluntary discipline in the club. If they are deficient or fail to direct some conscious effort to this end the club will be inefficient and the use of negative discipline common.

We can therefore see that the morale of a club—which can be defined as the desire of a group to discipline itself—is closely allied to discipline and the efficiency of club instructors. To illustrate this point we must understand that an organisation is created when number of people band together to achieve a common objective. It is only while their activities are directed towards this mutual purpose through a high standard of discipline that they can be correctly termed an organisation. Once they abandon the common object they revert to a group of individuals, and as such it is impossible to make effective use of their collective efforts.

Every instructor should regard himself as a two way channel of communication between the Committee and members. He should correctly interpret club instructions and policy to members and at the same time keep club officials informed of any grievances, complaints, dissatisfaction or other factors affecting the morale of the club which manifest itself in members under his control. Incipient dissatisfaction, if detected early, can often be remedied by appropriate action to remove or modify the cause of complaint.

The creation of good morale requires the ability to recognise the temperamental differences existing in different types and formulating an approach to get the best from them. The instructor must recognise that although there may be marked differences in the mental and emotional outlook of club members, they should all conform to a reasonably common standard of behaviour.

Correcting members, particularly trainees, is part of the everyday duties of a club instructor.

There is no one right way to make corrections, but there are many wrong ways. Certain general guides are useful in changing behaviour and to get members to accept recommendations without resentment:

- Consider the personality and attitudes of the member before you correct him. Wait a while if he is upset.
- Be sure your attitude is one of general helpfulness. If you are criticising only to show your authority you will make few improvements. Instead you will build up a persona resentment against yourself. **NEVER CORRECT IN ANGER.** Always allow yourself time to calm down and think coolly.
- Get the facts first. If possible find the cause of the behaviour or error before you talk to the person concerned. Many an instructor has been seriously embarrassed and has lost the respect of members because he reprimanded before he was sure of the facts.
- Errors are sometimes due to factors beyond the control of the individual. Blaming a member under such circumstances means loss of prestige for the instructor who gets the reputation for being unfair.
- In getting the facts don't make snap judgments. Give a member a fair hearing and let him tell his side of the story fully.

- Be a good listener. Don't interrupt the person unless you need to clarify some points. Careful attention to the story may bring out important facts that you might otherwise overlook.
- Share the responsibility for an error. Many instructors have learnt the value of letting people save face when they point out errors. They don't insist that a person admit mistakes; rather they shoulder part of the blame.
- Advice is given in a friendly manner. The instructor says, '*Bill, maybe I didn't make it quite clear that you are supposed to do it this way*'. Contrast the possible reaction to this when compared with a statement such as '*What the were you trying to do?*'
- Don't belittle the member. Personal abuse offends, so that the member won't listen to your suggestions with an open mind. Such criticism is apt to frustrate.
- Be tactful without emotion. Show patience and goodwill. Never use sarcasm or ridicule. People respond much better if they believe the instructor has faith in them and think they have the ability and intelligence to carry out the exercise correctly.
- Don't blame the member. Seek together the cause of the error. Be sure the member understands the cause of the trouble and explain the right way to eliminate it and substitute the correct action.
- Explain how and why a particular thing must be done. Treat the person as an adult and appeal to his intelligence.
- Criticise constructively. Point out how improvement can be accomplished. Offer praise for what has been done right, and build in the person a desire to do better by showing him the advantage of using the right methods.
- Ask—don't demand. Whenever possible, give your order as a suggestion, not as a command. Suggestions can be phrased in many ways. eg '*how about helping with this?*' '*Do you think we can do this?*', etc. An order phrased as a suggestion is not a weak order. It carries just as much authority as a command but there is a great difference in the way it is received. Use your authority sparingly. Always put yourself in the other persons place before you give an order. If you do this, you will make the instructions acceptable.
- The wisest course for the instructor to follow is to get the facts first, determine the real cause for the lapse, then apply appropriate measures in accordance with the gravity of the offence.

We have spoken of the factors involved in correcting members. How often do we hear an instructor praise a member for good flying or operating procedure? Praise is one of the strongest motivating forces at the instructor's command, but we rarely hear it on our flying fields.

Some people believe that praising a person makes him conceited and too self satisfied and that perhaps lives or club equipment might be jeopardised as a result. An industrial survey taken on this subject revealed that 87.5% of the people coming under the scope of the survey improved their work when they were praised for their efforts. Some thought could well be given by instructors to the use of judicious praise where it is deserving.

If instructors give thought to their attitude to members, morale in the club will be higher and dissension largely avoided, for if the club has good morale, its members recognise the fairness of the rules and help the instructor to enforce them by exercising pressure on a wayward member.

There are occasions when a breach of discipline does, however, warrant relatively severe action being taken. The question as to how much power an instructor should have in such situations is a contentious one.

Generally it should be limited and largely left in the hands of the executive committee. Obviously, the instructor must have some power to take effective action where this is clearly necessary. Usually this is accomplished by giving the instructor power to ground a member.

This power is often used indiscriminately by instructors, mainly because of the failure to realise that good discipline has three faces; individual correction, reward and finally punishment, **IF NO OTHER COURSE IS**

OPEN, to achieve the desired objective. Many instructors do not realise that disciplining for an infraction involves more than one person. What happens to one person under given conditions indicates to others what they may expect for themselves under the same conditions. Disciplining occurs after some failure. It concentrates on the present, the results of past events and future consequences. Important emotional tensions are caused and often involve far reaching consequences upon the group as a whole.

An instructor's power in respect to punishment should be limited to that sufficient to prevent a member endangering his own safety or that of others and club equipment. In the case of an infraction of rules by a member where the instructor considers disciplinary action necessary by way of punishment, then full particulars should be placed before the Instructor's panel and thence the club committee by the instructor as soon as possible.

This has obvious advantages and should ensure fairness to the member. If the initial decision of the instructor is right it will be backed by the club and his authority strengthened. It will somewhat remove the personal aspect between the instructor and member and it will ensure the club management is aware (as it should be) of any infringement of club rules by members. Last but not least it will avoid a hurried decision, perhaps; under stress, and avoid the rather common situation where an instructor appears to be rule a unto himself. Too often discipline is thought of only in terms of restraints and penalties. Effective discipline is educational and punitive.

Where leadership qualities are high in an organisation the following points will manifest themselves:

- Good discipline
- Loyalty to the instructors and the organisation
- Ready cooperation
- Interest in the activities of the club
- Interest in the activities of the club
- Pride in the organisation

It is possible for an observer to gauge the state of morale, of which the most important are:

- Clearly defined objectives
- Proper division of work into clearly stated tasks
- Effective oral and written expression
- Keeping members informed on matters which concern them
- Delegating responsibility and authority where appropriate
- Fair and firm discipline
- Dealing promptly with complaints and grievances
- Developing understudies for all club executive positions
- Giving clear and adequate instructions.

Those actions which can destroy morale are of course a direct negative of the above morale building factors. Some of the most common morale breaking methods are:

- Favouritism amongst individuals
- Uncontrolled temper
- Unkept promises
- Prejudice and bias in making decisions
- Belittling of the club's management
- Too much display of authority
- The spreading of unsettling rumours.

The task of maintaining good discipline and morale is inherent in the duties of every instructor and is a continuing responsibility against which there can be no relaxation if the club is to progress.

Supervision of early solo flying

The period immediately following first solo is a very crucial period and is a time of consolidation and review, as well as a gradual building of ability and confidence towards the stage where a pilot is able to accept increasing amounts of command responsibility.

Although a pilot is not permitted to be sent on the first solo by anyone holding less than a 'B' rating, it is permissible for a 'C' instructor to check this pilot on subsequent flying days to assess whether he is still suitable to fly solo. In addition to the purely checking function of such flights, sufficient post-solo consolidation and review work needs to be incorporated into the task to ensure that the aims are being met. Traditionally this has not been the case and the post solo area has become the weak link in the chain of pilot training.

It stands to reason that a pilot at an early and vulnerable stage of post-solo development needs a competent and preferably experienced hand to guide him. There is a discouragingly high drop-out rate in the post-solo area, and it is useful to examine why this is so. This in turn may lead us to some effective guidelines for post-solo supervision.

Before solo, pilots have been very closely and carefully supervised. This is obvious, because all flights up to the first solo have had an instructor on board. After the first solo, or at least the first few solos, this supervision tends to drop off rapidly and this can lead to nagging doubts creeping into the pilot's mind, doubts which can escalate into real worries and erode the pilot's confidence to the extent that he gives up. A good example of this is the simple case of an early solo pilot who does a landing which, while not exactly heavy, is perhaps a bit bumpy. Suppose no instructor saw it, or if it was seen it was not commented upon. The pilot would go home that night feeling under-confident in his ability to land. Will the same thing happen next time he flies? Will something worse happen? Think about it, think back to your own training days. How did you feel when you did something like that and nobody seemed to care.?

An instructor is a guide and mentor for a long time after the first solo has taken place. The first two dozen solos are crucial to the confidence building phase of the pilot's development. If anything occurs to create a setback during this phase, the pilot's confidence will be undermined and he will almost certainly drop out. It is the instructor's **DUTY** to keep an eye on as many solo flights as possible and offer appropriate comments on each one. For advice on exactly how to go about this, see the section on Human Relations.

The main point of all this is the fact that the Qualified Instructor on duty on any given day is responsible for the overall supervision of the flying that takes place. This includes planning for who is going to fly with whom—it is no use putting an inexperienced 'C' instructor to fly with an inexperienced and under confident pilot. The blind will be leading the blind. Supervise the instructors sharing your duty day with you.

But above all, keep a careful supervisory eye on as much of the early solo flying as you can, within the limitations of your own flying duties for the day. The immediate post solo period should be a period of increasing confidence for the trainee pilot. If you have a pilot whose confidence you feel is a bit shaky, make sure you observe the critical parts of the flight and comment appropriately. It can make all the difference between keeping him and losing him.

Chief Flying Instructor (CFI)

CFI responsibility

(Extract from MOAP 4.3.1)

Operationally, each club or organisation has a Chief Flying Instructor (CFI) or an Instructors Panel, or some combination of the two. In the case of an Instructors panel, the Chairman of the Panel has the same responsibilities as a CFI.

A CFI or Chairman of an Instructors Panel is directly responsible to a club committee for ensuring that all flying operations are carried out in a safe and proper manner. Furthermore, the CFI may be considered as the **MANAGER** of the Instructors Panel.

Relationship of instructors panel to club committee

(Extract from MOAP 4.3.1/2)

Considering now the case of the long established club, which has an effective Instructors Panel working in an atmosphere of goodwill and agreement (a situation which exists in a large number of clubs), we might briefly look at how such a Panel works. Firstly, the panel gives due consideration to the sometimes delicate balance between its own rights and the rights of the Club committee. The Committee will, and even should, include members who have been elected more for their enthusiasm and general ability than for their detailed knowledge and experience of gliding.

Therefore, while honestly considering Committee views, the Panel will not normally accept any undue interference on technical matters of instruction, training and operations.

In this field the Committee should be guided by the Panel and not vice versa.

In other matters the panel should be prepared to accept cheerfully, committee guidance. There is no use pretending that this is not sometimes a delicate balance, but certain traditional courtesies will make matters run smoothly,

The committee is the ruling body of the club, but it should be careful not to attempt to rule on matters outside its technical competence.

The panel, on the other hand, should be careful to refer to the Committee for ratification (usually a formality) those matters on which it feels obliged to make decisions, and which it might seem to come somewhere on the borderline between Panel and Committee rights and functions.

The spirit in which this relationship is carried on is more important than the details.

Instructor panel management

When adding from time to time to its numbers, the Panel should give due consideration to the temperamental suitability of proposed new instructors. A sorehead or troublemaker (and these are rationed between all clubs, by some freak of nature, at the rate of at least one per club) can play absolute havoc with the smooth functioning of an Instructors Panel. Instructors should be very conscious of the seriousness and the possible dangers of their craft; they should never be distracted by avoidable tribal warfare.

For this reason, it is sometimes customary for new members to be added to the Panel only by invitation, with the decision to issue such an invitation requiring a unanimous panel vote.

Such an invitation is universally regarded as a tribute to the capabilities and character of the pilot concerned, and apart from the satisfaction of the instructional task itself, the honour of having this tribute paid to him is the instructor's only reward.

A further aspect of Instructor Panel management (and stressing the role of the CFI as a Manager of Panel), is the supervision and guidance of the less-experienced members of the panel, especially newly-trained 'C' category Instructors. Such instructors are often thrown in at the deep end and left to fend for themselves. The 'C' category Instructor rating is very much a licence to learn the trade and careful supervision is essential if maximum performance is to be obtained from these valuable people. This is a much neglected aspect of Instructor Panel work.