TRAINING MANUAL

AIR CADET GLIDING PROGRAM
FLYING INSTRUCTOR GUIDE

(ENGLISH)

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FOREWORD

1. A-CR-CCP-303 Air Cadet Gliding Program Flying Instructor Guide is issued on authority of the Commander 2 Canadian Air Division.

2. This publication is effective on receipt.

3. Comments and suggestions should be forwarded through the appropriate Region Chain of Command to the NCA OPS O at DIRECTOR CADETS AND JUNIOR CANADIAN RANGERS - NDHQ, info 2 CDN AIR DIV / OC ACGP SET. See ACGP Manual for Amendment form.
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CHAPTER ONE
THE QUALIFIED FLYING INSTRUCTOR

Section 1 - Instructional Theory 1

Introduction

Instructional theory provides us with the foundation upon which all of our instructional techniques are based. To assist in reaching our full potential as Flight Instructors, it is beneficial to be aware of this theory, and to reflect on its application in both a classroom and a flight environment. It is critical to remember that the simpler you are in your approach to flying instruction the more effective you will be in its delivery. There is no reason to make any part of it unnecessarily complicated. Being a flying instructor is about communicating and simple clear communication is always effective.

Section Objectives

Upon completion of this section, the Flight Instructor should be able to:

- Describe the role of a flight instructor;
- Describe the attitudes of a good flight instructor;
- Describe the instructor-student relationship;
- Identify individual personality traits;
- Recognize key body language;
- Identify emotional escape mechanisms; and
- Describe how to deal with student behaviours.

1.1 The Role of the Flight Instructor

1.1.1 General

The instructor is accountable to the Commanding Officer (CO) for the training of personnel in order to meet the Performance Objectives (POs) as defined in the course Training Plan (TP). The instructor’s goal is to ensure that as many students as possible acquire the necessary knowledge, skills, and attitude to achieve these objectives.

In general, your terms of accountability will include:

- Providing an example of professionalism for the student to emulate through mastery of the subject material;
- Planning instruction to meet Training Plan (TP) requirements and to maximize student learning;
- Instructing students;
- Monitoring student progress;
- Performing administrative duties associated with instruction; and
- Providing advice and input directed towards improving the instruction, i.e., quality control.

1.1.2 The Roles

The degree to which learning occurs depends to a great extent on the way students interact with instructors and learning materials. The instructor ensures that learning takes place through a three-way interaction between the student, the instructor and the learning materials. At various times you will be required to undertake the following roles: instructor, leader, tutor, coach, mentor, quality assurance person, and course management supervisor.
1.1.2.1 Instructor

Naturally, the instructional role is central. Since this role is expanded on throughout this Flight Instructor Guide we are not going to dwell on it. Suffice it to say, this role comprises the planning and delivery of instruction while employing the learning theory to be discussed in the next section.

1.1.2.2 Leader

This is arguably your most important role as a Flight Instructor. In addition to being highly skilled in your occupation, you must also be a leader. Instructors are placed in prime positions to influence students within the Air Cadet Gliding Program (ACGP). Students will look to you as an example of leadership. At times, you will be required to make hard decisions as to the disposition of students with difficulties or discipline problems. Your professional attitude will be closely monitored by students. This includes your expertise in the subject matter and your demeanour towards superiors, subordinates, and the organization in general.

1.1.2.3 Tutorials

Tutorials are one-to-one instruction. While tutorials are generally an inefficient form of instruction in that only one student at a time is being taught, in some cases it is justified and sometimes it is essential. All airborne instruction within the ACGP must be conducted on a one-to-one basis. At other times, you may be required to give extra attention to students who are experiencing difficulties. A student who fails an examination or is not grasping certain concepts or skills may require extra tutoring separate from the class.

1.1.2.4 Coach

The instructor has much in common with the coach. The coach explains, demonstrates, evaluates and critiques. The objective of instruction, like coaching, is to improve performance. Coaching, like instruction, may be one-on-one or one-to-many.

1.1.2.5 Mentor

A mentor is an experienced and trusted advisor. Often the instructor may be called upon to act as a mentor to the younger, less experienced students. Students, especially cadets, are likely to come to you seeking either professional or personal advice. They may also come to you with personal, professional or medical problems. Students must be able to trust you. While you have an obligation to meet that trust, both yourself and your students must be aware that you also have an obligation to the Canadian Armed Forces (CAF) and the Canadian Cadet Organization (CCO) and that certain issues must be brought forward. You also have to understand that there are some issues you are not competent enough, or even permitted, to deal with. This can be a heavy responsibility.

1.1.2.6 Assessor

The instructor is continuously being called upon to assess student learning and progress throughout the course. For the most part, you should be conducting “formative evaluation.” Formative evaluation is concerned with: analyzing performance, identifying strong performance, “diagnosing” deficiencies, and “prescribing” methods to correct any deficiencies. In some cases, you may also be called upon to provide “summative evaluation” input into decisions on student disposition. In simple terms, summative evaluation is about making Pass/Fail and Continue with Training or Cease Training decisions regarding students.

1.1.2.7 Course Management

Not all of your time will be spent in the classroom. There are always administrative functions to fulfil, as well as the supervision of student learning activities. Course management is an important part of an instructor’s functions.

1.1.2.8 Quality Assurance

The instructor is on the front line in the training system. As an instructor, you are often the first to know if there is a problem with the instruction or whether there are opportunities for improvement in instruction. Changes in
instructional methods, scheduling, or improvement of training aids, are all areas where you can have a major impact on the quality of the course.

1.2 Instructor Attitudes

1.2.1 General

It is imperative that you portray a positive attitude towards yourself, your profession, your school and your students. If you are to succeed in this vital role as an instructor, you must have the proper attitude toward it. Instructors can only progress smoothly through their objectives when their efforts are “terminal” (aimed at the objective) and problems are “balanced” by a proper and positive attitude.

1.2.2 Instructor Attitudes

The instructors’ attitudes towards themselves influence all their other attitudes. To begin with, superior instructors are proud of the role they play. They look upon their position as an opportunity for service, not just another job. They realize the importance of the mission they support. History shows that many instructors have influenced the affairs of men and women. Good instructors realize that they exert an influence on the personalities and attitudes of their students. Instructors’ pride in their work is always reflected in the quality of their performance.

The mechanics of instruction can be taught, but only the instructor can determine his/her own attitudes:

- Good instructors recognize their own shortcomings and inadequacies and work hard to overcome them. If they do not know the answer to a question, they say so and seek out the answer. They acknowledge their own mistakes.
- An instructor’s function is not only to teach, but to also set a high standard of knowledge and ability. They are enthusiastic!
- Good instructors take a sincere interest in their students. They are familiar with the students’ backgrounds, successes, problems and progress.
- Instructors should not be hasty to judge. The instructor should avoid stereotypical thinking based on intellectual, gender, cultural or geographical groups.
- Instructors should be friendly and accessible, but not necessarily friends. They are aware that there are times when firmness and frankness are in the best interest of the student and the organization.
- They maintain an impartial environment. They treat students fairly in terms of workload. They do not play favourites.
- They encourage initiative, self-reliance, ideas and suggestions. In other words, they teach students to reason for themselves instead of maintaining rigid conformity. However, they stress that there are certain boundaries that must not be overstepped.
- They never bluff.
- They are loyal to Air Cadet Gliding Program policies, superiors, and students.
- They are decisive. They weigh all the factors necessary to make decisions, and act with conviction.
- They respect their students’ rights, and when correcting mistakes do so in a straightforward manner, never using sarcasm as a correction method.
- They use humour. Appropriate humour creates goodwill and can be used to teach difficult subject material. But they do not become so humorous that the business at hand becomes secondary.
- They delegate extra duties fairly, so that no one student does more than his or her share.
- They provide guidance to students about the best way to spend their flight-line time when they are not flying. When a feeling of antipathy develops and persists between themselves and a student, they take action to have the student transferred to another instructor.
- If they doubt a student’s progress or motivation, they arrange for an independent check.
- They realize that they may be wasting instructional time on an unsuitable student.
They are aware that the use of cockpit intercommunication demands suitable phrasing, speed level, clarity, and discipline.

They teach students to have mastery over the aircraft; to fly with verve and spirit within the limit of the aircraft's capabilities; to know what they can and cannot do, but draw a very definite distinction between intelligent confidence and stupid foolhardiness.

They understand that it is important to plan all solo lessons well. They give students thorough pre-flight and post-flight briefings, and make sure that they clearly understand the requirements and aims of the exercises. Thorough debriefings allow them to find out about difficulties that they may not hear about otherwise. To the student, failure to debrief is evidence of a lack of interest on the instructor's part.

They are always present when students are being debriefed after tests. They know they will find out points that they may have missed while flying with students and will certainly get details in a verbal debriefing that will not be included in a written report.

They realize that there will be many problems relating to the instructor-student relationship. Common sense and the flight commander's guidance provide sufficient direction for them to cope with any student.

1.3 The Instructor/Student Relationship

1.3.1 Friendly vs. Familiar

The position of instructors as leaders places the primary responsibility for establishing a favourable student-instructor relationship on them. This relationship with students must accomplish two things. First, a sound relationship must maintain discipline and respect for you as the instructor. Students must obey your directions and strive to carry out your suggestions for improvement. In other words, you cannot guide learning without discipline and the student's respect. Second, the relationship must maintain a professional distance. Professional distance can best be defined as being friendly without being familiar. Although you should be friendly with students, you must always maintain a certain amount of reserve. While a relaxed and cooperative atmosphere is often desirable, there must never be any doubt as to who is in control of the situation. The relationship will, of course, vary as to the type of training being conducted. Qualified aircrew undergoing re-certification training are unlikely to be treated as rigidly as members undergoing basic training; however, the instructor-student relationship must still apply to a certain degree.

1.3.2 Disciplinarian vs. "Laissez Faire"

Maintaining a balance between these two seemingly opposite extremes is difficult to do. Strict disciplinarians may find that students are afraid to come to them with their problems and that they will try to hide mistakes instead of asking for help. On the other hand, instructors who are too friendly or display a "laissez faire" attitude may lose the respect of the students and find themselves in uncomfortable situations. The trick is to place yourself somewhere in the middle, depending on the circumstances.

1.3.3 Dealing with Student Problems

The desire to help the students solve their problems is an important part in student-instructor relations. An obvious willingness to help the student with problems will do more than anything else to hold the student's respect, loyalty and cooperation. Informal counselling, which is a continual process, takes place any time an attempt is made to help students with problems concerning their training, career, or personal life. You will need to use more formal counselling techniques in cases of unsatisfactory progress, poor attitude or serious personal problems. Instructors should be careful when venturing into unfamiliar territory and counselling students on complicated issues. At a certain point (dictated by good judgement), you should become aware that you are not equipped to deal with a particular situation and be prepared to forward the student to an expert in that area, such as a senior supervisor, medical personnel, a social worker or padre, or the military police. Actions to be taken in these cases will be covered in Chapter 3 Section 1 — Interviewing and Counselling Students.
1.3.4 Summary

Instructors want their teaching to result in students who are able to use the initiative, judgement and skill they have gained throughout the course. If students are to respect rather than fear or resent authority, you must be fair, firm and friendly.

1.4 Individual Personality Traits

1.4.1 General

You must be aware that there are differences in aptitude, personality and emotions among students, and understand the necessity to treat each student as an individual. Coping with differences among students is perhaps the greatest challenge of instruction. Finding the correct approach for each student is essential to the training process. Good teaching recognizes individual differences. We sometimes categorize people as, slow, average or fast learners. Other categorizations may be related to age; emotional, social, physical and spiritual states, aesthetics and morality. In reality, the possible combinations are endless. We should be careful about categorizing students. While we are going to present you with some of our own categorizations in order to provide you with a starting point, you will have to approach each person as an individual with his/her own unique character. With regard to individuals and instruction, good instructors will adapt - **to a point** - the methods, activities, assignments and advice to each student based on an understanding of that individual’s characteristics. Students, however, must also adapt to the organization’s training environment and to their instructors. Through all this you must keep in mind that an Air Cadet may have been living a very different life the week before he or she arrived at the training establishment. They may have been involved with high school examinations, helping on the family farm, heavily involved in a competitive sport, working to help support the family, or a number of other possibilities. Their primary motivation for taking the course may vary from a strong desire to learn to fly, to the achievement of social status, the opportunity to enhance their resume, or because it is important to their family that they achieve in difficult tasks. What they want to achieve from the course may impact how they approach the course. During the training, their motivation to complete the course may change. The Air Cadet who thought they wanted to become a pilot may discover they do not like flying. They may be motivated to finish the course so when they return to the squadron in the fall they are not seen as a failure but any lesson that sets them up for success in aviation after the course will not be motivating because they have no intention of flying after the course is complete. It is unlikely this student will ever tell you that they never want to fly again but what they feel is much stronger than what they say. Conversely, there are students who came to the course for the status of wearing wings on their uniform and discover they have a true passion for flying and are now highly motivated to continue. So what lit a fire on day one may not be as effective just before their first solo. The point is that you should remain flexible enough to approach students as individuals, and try to solve problems whenever possible.

1.4.2 Individual Personality Traits

Some student traits are fairly common, and can be recognized easily. These are discussed in the following paragraphs:

1.4.2.1 Nervous or Under-confident

Student nervousness or under-confidence is a trait that may or may not disappear with time and experience. They may not have absorbed what has been covered. Repeating the basic fundamentals and ensuring that they have absorbed them will often alleviate this condition. You must ensure that this type of student receives deserved praise whenever possible. Harsh rebukes should be avoided. Patience is very necessary when dealing with a student of this nature. Overly nervous students may be so apprehensive that they may not be suitable for some types of training.

1.4.2.2 Over-confident or Conceited

You must first ensure that over-confident or conceited students have the ability to match their confidence. If they have, set them more difficult tasks that require greater accuracy. If students have little ability, they may require serious counselling. Any signs of familiarity must be discouraged.
1.4.2.3 Forgetful of Instruction

At the beginning of training, students may forget previous instruction. Students with this problem require a great deal of patience and probably need more review than the average student needs. Extra time spent in briefing and debriefing them and more study on the student’s part should be rewarding.

1.4.2.4 Inconsistent

Many students, at one time or another throughout the course, appear to lack consistency. There may be many reasons for this and you must try to find the one that fits their student. Are there personal, financial or family problems? Most students have good and bad days, but one who suffers large fluctuations in proficiency is probably a weak student and may not be acceptable for further training.

1.4.2.5 Slow Starter

Slow starters are students who may take longer to learn tasks initially than their peers. However, they sometimes learn things very well and do not forget things once learned. They may even surpass initially faster learners over time. Patience should be rewarded. Progress may be initially slow, but encouragement and deliberateness help.

1.4.2.6 Fast Starter

Fast starters are usually students with previous experience who quickly grasp the initial exercises. You should not omit the usual training and should watch for signs of weakness when new work is introduced. This type of student usually slows down to the level of the other students on course. A high degree of proficiency throughout the course should not be anticipated unless the student has above average ability.

1.4.2.7 Immature

A wide range of maturity is possible among students because of age difference. You must not be too harsh with students who appear immature because they will find that, within a short time in the training environment, they will attain a greater degree of maturity. Your attitude is of prime importance in setting the example, and you must encourage and assist the students whenever possible.

1.4.2.8 Learning Curve Graph

The amount learned in a period of time can vary greatly from student to student depending on the difficulty of the material, as well as the capability and motivation of the student. It must be kept in mind that the amount of learning that has occurred, by the end of the course, is more important than the rate of learning. Remember that slow starters may end up doing as well, or better than fast starters. Others may learn at slower rate but once they master a task they rarely forget. In the end, the important considerations are: “Is the student progressing? And will the student meet the Training Standard by the end of the course?”

1.4.2.9 Learning Plateau

One learning consideration instructional staff should be aware of are “Learning Plateaus”. Plateaus are common in cognitive or academic training, as well as in psychomotor or physical skills. A “Plateau” is a point where, despite all effort, a trainee just seems to have levelled off and is no longer making progress. Athletes often experience this in endeavours such as weightlifting and running. A plateau can be a frustrating experience; however, this is a natural and temporary phenomenon. It is similar to a resting period, and often students and athletes will make a great deal of progress following a period of little or no gain. Experienced instructors may begin to notice that plateaus will come at the same points in a course time after time, although plateaus may vary somewhat, and arrive at different points for individual students.
1.5 Body Language

1.5.1 Introduction

One of the most important attributes of a good instructor is the ability to “read” the physical responses of his/her students – either body language or facial expression. There is no reason for a good instructor not to be aware that students are, or are not, understanding the lesson at hand. A student is not likely to come out and say that he or she is bored, that the lesson is confusing, or that thoughts of the upcoming weekend are more interesting than an aircraft’s dimensions. However, you should be able to determine the student’s reaction to the lesson from student body language and facial expression. You must be watching the student for reaction to the instruction, whether in the classroom or on the ground. How the students are reacting to the instruction should determine how you proceed with the lesson. In the classroom, you should be continuously monitoring students to ensure that they are attentive and understand the lesson. The same goes for one on one tutorial instruction in the air or practical lessons on the ground. It is, of course, the look of rapt attention and complete understanding that we, as instructors, hope to see on our students. When this is occurring there is no problem. However, this is not always the case. Other body or facial expressions, which may identify problems with the instruction, are as follows:

1.5.2 Inattentive

Students should not be loudly snoring before you realize that you have lost their attention. Gazing at the ceiling, eyes glazed over (the thousand-yard stare), yawning, head nodding (the atomic head bob), talking amongst themselves, lack of response or errors to questioning, errors of performance, etc., may all indicate lack of attentiveness on the part of the student. This may be due to the fact that the instructor is not doing his/her part to make the lesson interesting. It may also be no fault of the instructor whatsoever. For example, it is notoriously difficult to maintain interest in the last lesson on Friday PM. The topic may be incredibly difficult to make interesting. The student may already know the material or the student may not be doing his/her part to participate. Not every lesson can be on WWII Victoria Cross winners, and sometimes both the instructor and the student must make an effort for some topics which are perhaps less interesting, i.e., airspace classification. If you notice the student(s) becoming inattentive, you can attempt to liven up the lesson, change your voice tone, become more active in the classroom or, if all else fails, improve the lesson plan or seek a scheduling change.

1.5.3 Confused

Confusion should be readily apparent. You will soon learn to recognize the indications of confusion, such as frowning, intense concentration or glazed eyes. The easiest way to deal with confusion is usually to stop, ask if the student understands or what is not being understood, and where the student was lost. You can then review the confusing item. If the student denies there is a problem but continues to look confused, you may ask some confirmatory questions to ensure that the student is on the right track.

1.5.4 Frustrated

You should be aware of signs of student frustration. Normally this will indicate that the students do not understand the lesson or perhaps that they are getting conflicting or controversial information. It may also indicate that the student, are getting overloaded - “Too Much Data!” Whatever the reason, you should not overlook this expression. While confusion is undoubtedly a large contributor to frustration, frustration likely indicates a more serious problem because it tends to indicate that the students are feeling they are not getting acceptable or fair instruction. They are putting in the effort, but do not seem to be getting it. If a large number in a class exhibit frustration with a lesson, then you would be wise to stop, determine where the problem is occurring, and re-teach or review if necessary in order to get the class back on track. If an individual is having problems, it might be necessary for some one-on-one instruction. You must also be aware that when training Air Cadets, the rank difference between yourself and your students is likely to result in frustration and may not be overtly demonstrated. You should be aware of signs such as fidgeting, tenseness and facial expressions that indicate held back frustration.

1.5.5 Off-task

This behaviour may come in a variety of forms, but what it comes down to is a student, or students, who are not properly focused on the task at hand. For example, a student who is surreptitiously studying for an exam in the next period, rather than listening to your lecture on cloud development, is off-task. Off-task behaviour can be
quickly recognized by the attentive instructor as the student will not be paying attention to the task at hand. Good questioning techniques are valuable tools for keeping students on task.

1.5.6 Summary

Whatever the reason, you must first become aware, through the body language or facial expressions that there is a problem. Second, you must analyze the situation to see where the problem lies and thirdly, if possible, determine a solution to the problem. If one or two students are showing these signs then your concern should be directed to those students. However, if the majority of the class is demonstrating these signs, then you had best take note and start looking at the instruction as the possible problem. In addition, remember that just because the instructor may have a personal interest in the intricacies of aircraft documentation or the memorization of various lapse rates, the students are more likely tuned into radio station WIIFM (What's In It For Me). In other words, “What does this information have to do with what I have to know and do, and how can I use it to improve my flying?” The best way to avoid these problems is through proper employment of the Principles of Instruction.

1.6 Emotional Escape Mechanisms

1.6.1 Introduction

Emotions play an important part, both positively and negatively, in the training of a student. Students who are progressing well and meeting the course objectives are likely to have positive emotions regarding the course, the instructors, other students, etc. On the other hand, students who are experiencing difficulties may develop strong negative emotions towards the course. It is easy for course members to become frustrated in certain learning situations. If these emotions start to effect the learning environment, either for the individual student or for other members of the course, you must deal with them. Emotional escape mechanisms are most often seen during intense events such as debriefing and counselling. It is during such events that the individual feels most on the defensive.

Emotions may vary in degree from mild to overpowering. Students often find themselves in unfamiliar situations with accelerated pressures to perform placed on them for extended periods of time. Thus the learning situation tends to intensify students’ emotional problems more than we would expect in everyday life. People cannot tolerate strong emotional tension over an extended length of time. It makes them extremely nervous, irritable, and unable to perform properly. It may interfere with normal eating and sleeping habits, and can make individuals generally miserable. Everyone, either consciously or unconsciously, tries to relieve prolonged emotional tension. You can recognize problems and attempt to overcome the problem.

There are many ways of attempting to relieve emotional stress. Some are not harmful and may, in fact be beneficial, such as exercising, or studying, or working harder. If on the other hand, the student tries to reduce the tension, by avoiding the real problem, the student is using an emotional escape mechanism. Students may resort to escape mechanisms to soften feelings of failure and to protect self-esteem, or to alleviate feelings of guilt. In the end, emotional escape mechanisms will usually exacerbate the problem.

Definition: Emotional escape mechanisms are subconscious methods of dealing with emotionally threatening behaviour and trying to avoid responsibility for actions or performance.

The key words here are subconscious and avoid responsibility. The student may not realize he/she is reacting somewhat irrationally in order to avoid admitting to a fault, error or inability to perform in some way. The student will have convinced himself/herself that he/she is not at fault. While we all may practise some form of emotional defence occasionally, consistent or irrational use of these escape mechanisms to the extent that the individual's training or personal life is suffering is clearly harmful to the student and the organization and must be dealt with immediately. You must therefore learn to identify the symptoms that indicate students are using escape mechanisms. The next step is to ensure that the student does not have valid complaints. Then you should take action to correct the situation before the emotional situation escalates to an unreasonable degree. If a student cannot acknowledge his/her responsibilities then further review action may be necessary, perhaps even a Progress Review Board.

1.6.2 Descriptions

Students, young and old, will often use the following types of escape mechanisms:
 Projection. Transferring the blame from oneself to someone or something else. For example, a student who is angry because he is failing may transfer this emotion by convincing himself that he is failing because the instructor is against him.

 Rationalization. Finding a reasonable or believable excuse for one's behaviour, actions or failures. Trying to justify unjustifiable behaviour. “The end justifies the means”. “Everyone else is taking steroids, so I have to in order to compete!”

 Resignation. Becoming resigned to the situation. A student in this situation may give up the effort to pass the course.

 Flight. Physically or mentally removing oneself from the tension producing situation. Excessive drinking might be an example of flight or development of an injury or sickness.

 Aggression. Taking one's tension out on another person or something else by becoming belligerent or argumentative.

 Denial. Refusing to acknowledge the reality of a situation or one's responsibility for it. For example, a student inappropriately refusing to acknowledge he/she was in error in a specific situation.

1.7 Dealing with Student Behaviour

Ultimately, student behaviour is influenced by their personality traits and their environment. To be able to effectively deal with student behaviour, the instructor must understand what can be changed or influenced and what cannot. There is very little an instructor can do to change the ambient noise level within the aircraft but greater flexibility exists during the debrief. So, trying to deal with student behaviour by changing the amount of noise in the aircraft is nearly impossible but finding a quiet place to debrief can have a significant impact on how the student reacts to the instruction.

As you become familiar with different students you will see their personality traits come through and you can tailor the instruction to them. You need to see what they are bringing to the lesson through their body language and individual personality traits and try to emphasize the strengths while minimizing the weaknesses. If a student is easily distracted then flying when the traffic is less dense may make it easier for the student to focus on the lesson at hand. Breaking the airborne lessons into manageable blocks may result in less new work at once, hopefully reducing forgetfulness of instruction. As you can see, there are many combinations and permutations that you have to deal with and in the end each student is an individual and will bring their unique combination of qualities and traits to the less. You, as the instructor must be mindful of this and adapt to it.

1.8 Conclusion

There are various roles of the flight instructor including:

- Instructor;
- Leader;
- Tutor;
- Coach;
- Mentor;
- Assessor;
- Course Management; and
- Quality Assurance.

Good flight instructors always portray a positive attitude towards yourself, your profession, and your organization.

The Instructor/Student Relationship must be balances between friendly and familiar. The Instructor must balance his approach between the disciplinarian and laissez faire.
Students have individual personality traits including:

- Nervous or Under-confident;
- Over-confident or Conceited;
- Forgetful of Instruction;
- Inconsistent;
- Slow Starter;
- Fast Starter;
- Immature; and
- The Learning Curve Graph.

Body Language can display a lot about a student’s current disposition, including:

- Inattentive;
- Frustrated; or
- Off-Task.

Students may display various emotional escape mechanisms including:

- Projection;
- Rationalization;
- Resignation;
- Flight;
- Aggression; or
- Denial.

When dealing with students all these items must be considered as each student is an individual and will bring a unique combination of traits and behaviours to the lesson.
Section 2 – Instructional Theory 2

Introduction
One outstanding human characteristic is that we are all learners. We learn continually from the time we are born until the time we die. Instructors should understand the learning process. They need to know what happens to students when they learn, and what they can do to make the students’ learning more effective and efficient.

“Learning is not compulsory, but neither is survival.”
W. Edwards Deming

In order to contribute to the learning process, instructors must first know what learning is. Learning has been defined in many ways, but all definitions and schools of thought have one idea in common: learning is active. It is not a passive process by which students automatically absorb knowledge. Learners may expand their knowledge, alter their response to a certain stimulus, acquire a new skill, gain a new insight, or change their behaviour in some other way. But whatever they learn, they undergo change when they learn it. You must understand the changes that make up learning and define, observe, measure and evaluate them. More important, you must know how to bring them about. To induce a desired change in the students, to help them learn, you need to understand what constitutes a good learning environment, why some students learn more readily than others, what makes some lessons effective while others are not, and why one technique fails where others succeed.

Section Objectives
Upon completion of this section, the Flight Instructor should be able to:

- Explain how each Principal of Instruction contributes to successful achievement of lesson objectives (ICEPAC);
- Describe the various forms of verbal support (CREST);
- Describe the qualities of good questioning technique;
- Describe the four patterns of learning (GRAT);
- Describe the seven laws of learning (PERRIER);
- Explain the concepts of learning styles; and
- Explain motivational effects on learning.

2.1 Principles of Instruction (ICEPAC)

2.1.1 General

The Principles of Instruction are the core of the instructional process and can be referred to as the “bread and butter” of effective instruction. It is essential that you consider and utilize the Principles of Instruction in order to maximize effectiveness and efficiency. If you employ these principles, both in the classroom and out, you will have gone a long way towards becoming an outstanding instructor. All of the Principles of Instruction are equally important and inter-related. Most of the issues addressed here are very straightforward. Those individuals we sometimes refer to as “natural” instructors use many of these principles without being aware of them. In fact, a lesson would be very boring if it consisted only of straight facts and did not incorporate any of the Principles of Instruction. The employment of the Principles of Instruction will increase the effectiveness of instruction and enhance the learning environment.

2.1.2 ICEPAC

The first letter of each of the Principles of Instruction helps form the acronym ICEPAC.

The six principles are as follows:

- Interest;
- Comprehension;
Emphasis; Participation; Accomplishment; and Confirmation.

2.1.2.1 Interest

Instruction must create and maintain student interest. People learn best when they are interested in the material or skills to be learned. Instruction must arouse, create and maintain student interest. You should employ imaginative means to invoke your students’ curiosity, while taking into account their experience and interests.

Methods of creating student interest include:

- **Purpose.** Let the students know why something is being taught. Inform them of the purpose of the lesson and the advantages this new skill or knowledge will give them.

- **Realism.** Make instruction as realistic as possible. Move away from the classroom and conduct training under realistic conditions. For example, take students to actual locations to observe the jobs they are being trained for.

- **Competition.** Use speed or ability competitions or games to reinforce learning towards lesson objectives.

- **Curiosity.** This is a powerful tool. Keeping training aids covered until required, or asking leading questions to arrive at a conclusion, are examples of how one could peak student curiosity.

- **Enthusiasm.** Remember, this is contagious. If you do not reflect some level of enthusiasm for the subject material, it is harder to motivate the students. Remember to keep the material at the level the students require.

- **Variety.** Students should have the opportunity to see and learn from more than one instructor (team teaching). Also use a variety of teaching aids.

2.1.2.2 Comprehension

Students learn best when instruction starts at the level of their understanding and proceeds at the rate of their comprehension.

The following procedures can be used to ensure that instruction begins at the students’ level of understanding:

- Examine the course program to determine what the students have already learned;

- Discuss student progress with previous instructor(s); and

- Run a threshold knowledge test or ask review questions at the beginning of the class to ensure students are at the required level.

Once you have an idea of the students’ level of understanding, the following techniques can be used to ensure that they comprehend the material throughout the training:

- **Currency.** Ensure your knowledge is up to date.

- **Logic.** Organize the lessons into a logical order. Proceed from the known to the unknown, from the simple to the more complex.

- **Questions.** Ask review questions throughout the lesson to assess student comprehension. Student questions also provide an indication of their comprehension.

- **Progression.** Proceed at the rate of the majority of the class.
Observations. Watch for unusual expressions such as confusion, boredom, etc. Watch students when performing a task to help them correct errors as they occur.

Assignments. Give out assignments and review the next day.

Teaching/Learning Aids. Use clearly worded explanations and verbal aids, as well as clear and supportive training aids (covered in Section 4). If you follow the above techniques, you will increase the chance of student comprehension. Other actions, including liaison with instructors who deal with student performance and teach other subjects, should also be considered. You might also consider counselling those students experiencing difficulty.

2.1.2.3 Emphasis

Students learn most effectively when instruction emphasizes and supports the teaching points. The students’ retention of the teaching points, derived from the objectives found in the TP, is enhanced through instructor repetition and emphasis. Instruction must emphasize and support teaching points so that the student can identify them.

Generally, the important parts of the subject matter can be emphasized by the following process:

- Teach the material in a step-by-step fashion;
- Recap each area and stress key points;
- Clearly word objectives so that the vital parts are recognized;
- Spend the most time on the important parts of the lesson;
- Skill lessons – get students involved early and often;
- Use oral emphasis, e.g., “This is important because…!”;
- Use training aids to try to appeal to as many of the five (5) senses as possible and appropriate;
- Have students take notes or provide handouts;
- Provide assignments on the important material;
- Conduct a review test on the important parts; and
- Teach by stages and test the stages.

2.1.2.4 Participation

Instruction must provide meaningful mental and/or physical student participation. People learn best when they have an opportunity to participate actively in the learning process. One example of this is found in the common observation that, “people learn by doing.” Effective instruction provides for a variety of ways to ensure meaningful student participation.

With instruction of a skill (performance):

- Practice early and often;
- Stress importance of doing it right the first time;
- Ensure sufficient equipment and supplies are available;
- Correct mistakes as they occur; and
- Make what the student is doing “meaningful.”

With knowledge instruction:

- Prepare thought-provoking questions in advance of the class in order to make your students think;
Encourage students to provide answers to the questions by reasoning with them, and develop as much of the lesson material as possible;

Assign student presentations to be prepared outside class;

Use guided discussions; and

Use the proper questioning technique.

2.1.2.5 Accomplishment

Instruction must provide the student with a sense of accomplishment. Students learn most effectively when their performance results in a sense of accomplishment. Effective instruction provides opportunities for the student to feel a sense of accomplishment regarding his/her performance. Students should know what they are expected to achieve, be informed of progress, and then realize satisfaction in achieving it. This implies that the training is both challenging and attainable. The key to this principle is feedback on performance. Students must be told how they are doing – what they are doing well and what they are doing not so well or incorrectly. The object is to "reinforce" desired performance and "extinguish" undesired performance.

Tell the students what you expect them to achieve. This way they know exactly what is expected of them;

Ensure each step is completed successfully before moving on. Students will learn more easily, which creates satisfaction (as opposed to frustration);

Provide feedback and keep students informed of their progress. Students take responsibility for their own learning and will build on strengths and improve weaknesses;

Praise good work. This will encourage the students to continue doing work the right way;

Correct failing students; and

Look for ways to improve.

2.1.2.6 Confirmation

Instruction must provide a confirmation of student learning. Learning is most complete and enduring when instruction provides for confirmation that learning has occurred and has been retained. Confirming that student learning meets established standards ensures that job performance will be competent. Many of the techniques that can help students comprehend the subject matter and participate actively in the training can also confirm for you that learning has occurred. Confirmation has three roles. First, the instructor confirms that the student has learned the lesson. A second but important role is that the action of confirmation in itself will assist in emphasizing important points. If they have not already picked out the important teaching points from instruction, the instructor’s review and quizzes should make the students aware of pertinent information. A fact heard once may not make a strong enough impression to stick; a fact heard three times and then written down will make a lasting impression. “Repetition is the mother of memory.” In addition, it is during this confirmation process that it may become apparent to you that either the lesson itself or the delivery of the teaching points is inadequate. This confirmation process will then lend itself to improving the process for future use to strengthen weak areas.

Below are some techniques that will assist in ensuring and confirming student comprehension:

Ask review questions at the beginning of each lesson, at the end of each lesson or at the end of each stage;

Present the lesson (and lessons) in logical stages and confirm each stage before progressing to the next;

Check the student’s knowledge through questions, problems, quizzes, written/practical tests, etc.; and

Check the student’s capabilities through assignments, progress tests, enabling checks (EC) and performance checks (PC).
2.2 Verbal Support (CREST)

2.2.1 General

When presenting material it is a good practice to have some sort of support for the information that you are presenting. Verbal support is the idea of having extra information to authenticate the information. Verbal support is often used without conscious effort, especially for a well prepared instructor.

2.2.2 CREST

The types of verbal support are listed below, with the first letter of each word forming the acronym CREST.

- Comparison;
- Reason;
- Example;
- Statistic; and
- Testimony.

2.2.2.1 Comparison

Bridges the gap between present knowledge and that which is to be learned. Unfamiliar aircraft can be explained by comparing them to familiar versions.

2.2.2.2 Reason

Satisfies students' natural desire to know "why". Makes teaching points easier to accept.

\textbf{e.q.}: Teaching Point - Use full spoilers on final approach when you are above the ideal glide path. Reason - Otherwise the glider will not return to the glide path and will end up landing beyond the intended touchdown point.

2.2.2.3 Example

Verbal illustrations are used to back up a statement or to clarify an idea. Can be real or created, but must be believable.

\textbf{e.q.}: In discussing the need to observe safety precautions with a piece of equipment, the instructor may relate an example of how failure to observe precautions resulted in an accident.

2.2.2.4 Statistic

Used as support for the emphasis that a figure provides.

\textbf{e.q.}: On average, tutored students score better than 98% of their classroom taught counterparts.

2.2.2.5 Testimony

Quotes from subject matter experts are used to add credibility to teaching points - should be short, relevant. Ideally, the expert is someone most students can identify with

\textbf{e.q.}: If the instructor is reviewing the procedures employed in a given tactic, he/she may cite personal experience, emphasizing the importance of doing these procedures correctly.

2.3 Questioning Technique

Questions are the easiest way to achieve the Principles of Instruction. When you think about it, they create interest, assist in comprehension, emphasize main teaching points (since the questions should evolve around them), induce participation, give the students a sense of accomplishment when responded to correctly, and provide you with confirmation of whether the students are learning. When the questions are used to draw the teaching points out of the students, i.e., leading them to the desired conclusion, we have also accomplished
developmental teaching. For these reasons, questions are probably the most valuable technique in the instructor's toolbox. Questions shift the focus from instructor to learner. Research compared classes where no developmental questions were used, to classes that did use them. In the classes that used developmental questions, the students were more apt to pay attention, asked higher quality questions themselves, appeared to have a better understanding of the concepts, and did better in tests. The students also reported that they enjoyed the class more.

Consider these points when **asking questions** in the classroom:

- **Pose, Pause, Pounce.** Pose a thought provoking question. Pause and give them all a chance to think about a response, then choose an individual to answer. If you pick out an individual first, i.e., "Randy, if the glider release system fails, what is your first action?", you have effectively let everyone else "off the hook." The aim is to get them all thinking of the response, since you may choose any of them for an answer;
- **Ensure you ask questions of all students.** The 80/20 rule likely applies to classroom conduct as well, with 80% of classroom discussion coming from 20% of the students. Questioning allows you to even out the contribution by directing questions to, what would otherwise be, the less participative students;
- **Try to begin questions with “what”, “why”, “how” and “when”**. This will force you into wording the question more appropriately and let the students know it is a question. Do not ambush the students. For example, "The glider wheel brake is actuated by...which handle?" In this case the students are caught off guard; let them know it is a question right away;
- **Ask questions that cannot be answered in one word**;
- **Redirect questions.** "That's a very good question, let's see if someone else has a response to it.” Let the students “show what they know.” This allows more participation and again focuses the learning away from you onto the students.
- **Practise role reversal.** One questioning technique is to have the student teach the point to you (and the others) as the student. “I may be a bit slow, but could you please explain...” Let them get out of their seats and point things out and explain things on the slide, training aid, etc. This will prompt the students to think carefully and simplify the message. Again, this increases student participation and gives them a sense of accomplishment.
- **Paraphrase questions.** Similar to the above, this technique calls on the student to paraphrase or summarize what you have just said. Ask Lt. Bloggins to summarize the main things to remember about the teaching point, and then ask the others to help out if he/she is having difficulty. This is a far better check than simply asking if they understand everything.
- **Ensure your questions are “clean.”** Students should know exactly what is being asked. They should not be ambiguous, nor unyieldly. They should be clear and specific.
- **Use end of class questions.** You should have set aside time at the end of the class for questions. If there are no questions, either have some for them or have more material, but do not let them go early, otherwise you have provided them with an incentive to not ask questions.

Consider these points when **dealing with student responses** in the classroom:

- **Incorrect responses.** If a student provides an incorrect answer to your question, it may indicate others are also having difficulty with the point. It is unlikely that you just happened to pick the only one who is confused. One technique is to check the group. “What do the rest of you think about Tony’s response?” Get the group involved and thinking it through.
- **Nil responses.** Once a question is posed, you are defeating its purpose by answering it yourself. Prior to doing that, wait five to ten seconds. It may seem like an eternity at the time, and many instructors are embarrassed when nobody answers. If you wait it out, the students will feel just as uncomfortable and someone will attempt a response. Other ideas are to wait a few seconds and rephrase the question, ask if they understand what it is you are asking, or ask why they are having difficulty with the question.
Consider these points when dealing with questions from the students:

- **Repeat the question.** Although not always necessary, you will want to do this when you are not sure everyone heard the question, or if the question was not asked clearly. It allows you to rephrase the question more clearly to get everyone thinking about it. You can then handle it yourself or redirect it.

- **Confirm the answer.** After responding to a question, it is a good idea to check to see if the students understood your response. They may be asking because they were not clear on what was said initially, leading us to suspect they may not understand it a second time. The fact that you know what you are saying, does not guarantee the students do. “Did that answer your question?” “Did I say enough about that to make our discussion?” are examples.

- **Irrelevant questions.** If you think a question is not related to what it is being discussed, ask the student to make it relevant, i.e., “Randy, I am having a problem relating your question to our discussion. Can you make the link for us?” If the question is completely off topic, then you should tell the student that you do not have time to address it in class, but you will discuss it with him afterwards.

- **Opinionated questions.** Often when students want to make a point, they will do so in the form of a question. For example, “Don't you think a better way of employing that tactic would be to…?” In this case, recognize the question for what it truly is and turn it around and throw it back at him/her, allowing the student to discuss it through. “That’s a good question, Sue. Why do you think that is the case?”

- **Hard questions.** If students ask questions which you do not know the answers to, the last thing you should do is bluff. Simply say you do not know and that you will find out. You will not lose credibility if it happens once, but you should not find yourself saying this repeatedly. You should always be reading and talking to experts so that you can claim to be an SME (Subject Matter Expert) and address all questions, even the hard ones. One other point, if you say you will get back to a student, then do so. If you do not, then you will certainly lose credibility.

- **Handle the questions properly.** Do not be abrupt, unencouraging, make participants feel they are not welcome to ask questions or, worse, foolish for doing so. When dealing with questions, it is “normal” for instructors to ask questions geared to get the “right” answers. These are often simple recall. Asking questions that are “safe” is the easy way out. The purpose of questioning in class should be in support of “thinking” and not recall, towards challenging the students and not regurgitation. Based upon the techniques described above, you will be able to employ higher level questioning, and enhance your classroom presentation.

### 2.4 Patterns of Learning (GRAT)

There are four main patterns of learning which seldom occur in isolation, but which inter-relate with one or more of the others in the learning process. If you are to understand your role, you must consider the way each should be used in the learning process.

#### 2.4.1 Guidance

This pattern of learning entails considerable assistance from the instructor. It is often combined with trial and error, where the instructor provides guidance to the student and then allows him/her to perform the task, deviating from the desired outcome within set limits. The instructor may then correct any errors which have appeared in the student’s efforts.

#### 2.4.2 Rote Learning

This pattern involves memorization, perhaps with little or no emphasis on understanding. Some material lends itself to this type of learning. However, it depends upon repetition for retention and usually involves one of the other patterns when that which is memorized is to be applied.
2.4.3 Analysis

This is a pattern of learning where the students are on their own and apply what they have learned to the situation which confronts them. It may be termed mental trial and error, where the students review past experiences and find something they have learned in the past that fits the present situation. Analysis develops the ability to find solutions to new problems, or to improvise in an unfamiliar situation. This is often called judgement or airmanship and consists of the ability to think and plan in the air.

2.4.4 Trial and Error

This pattern of learning is an attempt by the students to solve a problem, or to reach a conclusion primarily through their own efforts. As Roger von Oech stated in his book, *A Whack on the Side of the Head*, “We learn by trial and error, not by trial and rightness.” Here he alludes to the fact that if error was removed we would be content and simply continue to do things the same way, not really having learned anything new. This pattern can be rewarding in that the subject can be very thoroughly learned; however, it can be very time consuming. It may be compared to someone learning to play golf by himself. It is good instructional technique to allow students to learn some aspects of the subject matter by trial and error “the hard way,” in order to allow learning, and to impress upon them the correct way of doing things. However, it would likely be impractical and inefficient to include too much trial and error in a course.

2.5 Laws of Learning (PERRIER)

Some authorities call the laws of learning “principles,” while others label them “learning factors.” A survey of textbooks on learning will not reveal a final or fixed set of laws, principles or rules of learning. Learning is a subjective process, and to treat it completely and in depth would be to delve into psychology, biology, physiology, and almost every science having to do with human beings. Such an approach is impossible and impractical in this publication. For these reasons, although the Laws of Learning are sound, the list is necessarily arbitrary and incomplete.

The Laws of Learning are:

- The Law of Primacy;
- The Law of Effect;
- The Law of Recency;
- The Law of Readiness;
- The Law of Intensity;
- The Law of Exercise; and
- The Law of Relationship.

The application of the Laws of Learning to the instructional process will increase the efficiency and effectiveness of student learning. One may not find all the Laws of Learning apparent in every situation. They manifest themselves individually or in groups. If you understand them, you can deal intelligently with motivation, participation and individual student differences, the three major factors affecting learning.

2.5.1 The Law of Primacy

Primacy, the state of being first, often creates a strong, almost unshakeable impression. For flying instructors this means that what they teach must be correct the first time. A faulty or inaccurate first demonstration of a flying sequence may leave a false impression that is difficult to change. The student’s first experience with a sequence should be positive and correct. It must be remembered that students will often encounter a task before it is called for in a Lesson Plan. Any poor example shown at this time would have to be “unlearned” when the sequence comes up in a subsequent Lesson Plan.
2.5.2 The Law of Effect

This law is based on the emotional reaction of the student. It states that learning is strengthened when accompanied by a pleasant or satisfying feeling and, conversely, is weakened when associated with an unpleasant feeling.

Learning can be strengthened when accompanied by a satisfying feeling, such as a sense of accomplishment. There are also times when learning can be strengthened by a powerful negative feeling as well. We have all done things at one time or another that “did not turn out so well.” For example, the emotions engendered by a near “disaster”, or the corrective action initiated by an instructor or supervisor when deserved, are not easily forgotten. If we know what we did wrong and how to correct the error, we have likely said, “I never want to make that mistake again!” – and don’t! As American baseball player Vernon Sanders Law stated, “Experience is a hard teacher because she gives the test first and the lesson after.” Generally speaking, it is better to employ positive rather than negative reinforcement.

Unpleasant emotional reaction can inhibit (weaken) learning. An experience that produces feelings of defeat, frustration, anger, confusion or futility in students is naturally unpleasant. If you attempt to teach beyond the student's level of understanding at an early stage, the student is likely to feel apprehensive and will not find the experience satisfying or effective.

Another violation of this principle can occur during performance analysis when instructors, in an attempt to be accurate, immediately emphasize all the errors that were committed by students during a sequence. This is a negative approach and does not give the student the necessary positive reinforcement to make the experience offer some satisfaction. A much better method, which also contributes to the Law of Effect, is to point out the positive aspects of a student’s performance and then discuss the errors which were committed. Whatever the learning situation, it should contain elements that affect the student positively and give some feeling of satisfaction. Each learning experience does not have to be entirely successful, nor must each lesson be mastered completely. If a student was to receive nothing but positive feedback at all stages of training, his or her emotional state might be pleasant. However, learning would be decreased and there would be no incentive to correct errors. Students must receive an honest appraisal of their performance in order to improve. Instructors have to understand how both negative and positive emotions play a role in the learning process. Students are praised for those things done properly, thereby providing a sense of accomplishment. We then provide a critique of those tasks which were improperly conducted, followed up by methods to improve performance, thereby providing a challenge. Proper debriefing techniques should assist in the sense of accomplishment and facilitate the learning process, while counselling techniques may be used to correct improper or unsafe behaviour.

2.5.3 The Law of Recency

Other things being equal, the last things learned are the ones best remembered. Conversely, the further a student is removed, time wise, from a new fact or understanding, the more difficulty he/she has in remembering it. For example, it is sometimes easy to recall a telephone number dialled a few minutes previously, but it is usually impossible to recall an unfamiliar number dialled a week earlier. Instructors recognize the Law of Recency when they carefully plan a review of previous work in an air lesson before embarking on the new sequences. This law is applied advantageously when the pre-flight briefing is presented immediately prior to the air lesson. This law seems closely related to exercise; however, exercise involves practice while recency is involved with the time of this practice.

2.5.4 The Law of Readiness

If people are to learn, they must be physically, mentally and emotionally ready to do so. Effective instructors do their utmost to ensure that the above conditions are satisfied at the onset of any lesson. If students have a strong purpose, a clear objective and proper motivation for learning something, they will make more progress and be more receptive to the instructor than students who lack this motivation.

Under certain circumstances you can do little, if anything, to inspire readiness to learn in a student. If outside responsibilities, interests or worries are weighing too heavily on a student's mind, if the schedule is overcrowded, if personal problems seem insoluble, the student will be unable to develop an interest in learning. Health, finances or family affairs can overshadow a student’s interest and desire to learn. Good instructors will maintain a
relationship with students which will enable them to detect symptoms of these difficulties and attempt to alleviate them, so that the students can become ready for learning.

The student must be "ready" to learn before he/she can benefit from any of the training. Readiness refers to both the maturity and experience levels of the student. In other words, you must pay close attention to teaching in developmental stages. For example, to initiate emergency scenarios when the student is just learning another task for the first time is not going to help the learning process. However, once the student has become proficient at various tasks independently, you may begin to combine these tasks. Trying to teach too many tasks at once, or teaching new tasks before the previously learned tasks are mastered, is not an effective method of instruction. These choices will impact directly on the transfer of learning to the student.

Under normal circumstances, well-conceived motivation, meaningful review and a well-defined aim at the beginning of each lesson will assist in fulfilling the requirement of readiness.

2.5.5 The Law of Intensity

Students learn more from a vivid, dramatic or exciting experience than from a routine or boring one. They can learn more about fire fighting by watching someone fight a fire than by listening to a lecture on the subject. The Law of Intensity, therefore, implies that students will learn more from the real thing than from a substitute. You must use your imagination in employing methods which approach reality as closely as possible.

2.5.6 The Law of Exercise

This law states that meaningful mental or physical activity is essential if learning is to occur. During flying training, this principle is achieved through practise or repetition. Students learn by applying what they have been told or what has been demonstrated to them and, each time they practice, their learning continues or is strengthened. The program makes provision for this practice, and you must ensure that it is accomplished and that it is directed toward a goal. Oral questioning, hypothetical problems, review and/or practice are all methods of satisfying this law.

2.5.7 The Law of Relationship

The Law of Relationship emphasizes the necessity for students to understand the relationship between new and old facts and between ideas and skills, if learning is to take place. During flying training, students must understand not only why they are learning a particular sequence, but also how the sequence combines with previous ones and where it fits in the overall syllabus. You can best satisfy this principle by linking the lesson to previous ones, then linking each individual sequence within a particular period of air instruction.

All the Laws of Learning are not apparent in every situation. They manifest themselves singly or in groups, and if you understand them you can deal intelligently with motivation, participation and individual student differences, the three major factors affecting learning.

2.6 Learning Styles and Multiple Intelligences

2.6.1 General

Instructors must recognize the differences in aptitude, personality and learning styles among students, and understand the necessity to treat them as individuals. The saying, “When we all think alike, no one is thinking,” holds truth. Coping with learning differences among students is perhaps the greatest challenge of instruction, and finding the correct approach for each student is essential. Good teaching recognizes individual differences. The slow learner, the average student and the bright student are the three most common types of categorization. Learning styles is another way of recognizing student differences. Other differences include age, emotional, social, physical, spiritual, aesthetics, and morality. Chapter 3, Section 3 – Teaching Adolescents will discuss dealing with student differences in some of these respects. However, this section will discuss the effects these differences have on the student's learning process.
2.6.2 Learning Styles

Current education research indicates that people learn in different ways. You may have noticed throughout your own life that there are some people who learn better by seeing, some who learn better by hearing, and some who learn better by doing. A good instructor is able to develop lessons which meet some of the needs of each type of learner.

The three learning styles are:

- **Visual.** The visual learner learns best through reading. The instructor can meet the needs of this learner through readings, PowerPoint, posters, and video.
- **Aural.** The aural (or auditory) learner learns best through sound or sound association. The instructor can meet the needs of this learner through instructor-led classes (lecture-type), group discussion or by using music, rhymes, mnemonics or sound effects to emphasize points.
- **Kinaesthetic.** The kinaesthetic learner learns best by touching objects and doing activities. The instructor can meet the needs of this learner through manipulatives, activity-based lessons, an simulation.

These three learning styles can be further amplified by understanding the eight multiple intelligences (MIs). Each MI is generally associated with one or two of the three learning styles, and familiarity with the different MIs can enhance the instructor's ability to meet the needs of their students. The MIs are as follows:

- **Logical-Mathematical.** This student likes to experiment, explore, ask questions, and work with numbers. They tend to be good at math, reasoning, and problem solving. They learn best through categorizing and working with abstract patterns and relationships.
- **Spatial.** This student likes to design things, draw, look at pictures, watch movies and play with machines. They are good at reading maps, imagining things, and doing puzzles. This student learns best through visualization and working with pictures.
- **Linguistic.** This student likes to read, write and tell stories. They are good at memorizing names, places, dates, and trivia. They learn best through saying, hearing, and seeing words.
- **Bodily-Kinaesthetic.** This learner likes to move around, touch, talk, and use body language. They are good at physical activities (sports/dance/acting) and crafts. They learn best through physical interaction, movement, and processing knowledge through bodily sensations.
- **Interpersonal.** This student likes to have a lot of friends, talks to people and moves between groups. They are good at understanding people, leading others, organizing, communicating, manipulating others, and mediating conflict. They learn best through sharing, comparing, relating, cooperating and interviewing.
- **Intrapersonal.** This student likes to work alone and pursue their own interests. They are good at understanding self, focusing on dreams, following instincts, and pursuing goals.
- **Musical.** This learner likes everything musical including singing, humming, listening to music, and playing instruments. They are good at picking up sounds, remembering melodies, and keeping time. They learn best through rhythm, melody and music.
- **Naturalistic.** This learner likes to be outside, observing animals, geography, weather, and interacting with the surroundings. They are good at categorizing, organizing living space, planning activities, preservation and conservation. They learn best through studying natural phenomenon, being in a natural setting, and learning about how things work.

2.6.3 Application

Your job as an instructor is to try to best accommodate the particular type of students you will be instructing. So what is the best way to accommodate individual learning requirements? A well-designed and well-planned course. It is important for an instructor to be aware of the different learning styles and MIs, and it should be the goal of every instructor to target these characteristics. However, it is important for instructors to remember the following points:
Students learn using more than one style or MI. Students can be aural and visual, or visual and kinaesthetic, or aural and kinaesthetic. In fact, it is a rare student that has only one learning style. The same is true of MIs; in fact, the logical student is also normally very musical and spatial.

Multiple opportunities. Instructors do not need to touch each style and MI in every single lesson. Though this is possible, it is very difficult and requires a lot of preparation and planning that may not be possible in the context of the CCO. If the instructor has the flexibility of multiple lessons to teach the same or similar material, then they should use each lesson as an opportunity to touch the different styles and MIs.

In context with ACGP. The instructor should remember that in the context of the ACGP, all of the information which is learned in the classroom is at some point brought out in the flight training. The training structure of the ACGP lends itself to enabling each student no matter their learning style or MIs. One difference between a good instructor and a great instructor is not just realizing that cross over of information, but identifying it to the student and using it at the appropriate time.

"What I hear, I forget; What I see, I understand; What I do, I remember." (Confucius 451 BC)

2.6.4 Summary

In summary, the goal is not to determine each and every students’ specific learning style, but to be aware that there are different learning styles. Note that not everyone likes to learn as you do. If you are not a note taker, for example, be aware that some students are note takers, even though the material is “in the book”. Be especially aware that what seems familiar and easy to you may in fact be confusing and extremely difficult for a student. Keep the student’s perspective in mind. Try to remain flexible. If something is not working then try something else. Those of us who have experienced a variety of instruction realize that our training philosophy is very good. By providing good verbal support in conjunction with good visual support, followed by hands-on performance and practice, you should be covering all the bases.

2.7 Active vs. Passive Learning

2.7.1 General

Active learning means that the student is involved in the process. Passive learning is when the student is simply receiving information – he or she is not involved in the process. If you think about your own previous experiences as a student, you will no doubt remember lessons which you found interesting and learned a great deal, and lessons where you had great difficulty paying attention and remembering what was said. Accepted instructional wisdom holds that students must be “engaged” in the learning process in order to receive the most benefit from instruction. This means that you have to make the students think about what they are learning, and have them participate in the process. They have to go beyond mere memorization and regurgitation of facts. They must understand and apply what they have learned. This is “active learning.” Active learning is virtually impossible when “the instructor is on send, and the student is on receive.” This is passive learning. You may remember being in classes yourself where the instructor drones on for the entire class, perhaps throwing up slide after slide while you struggle to keep your eyelids propped open. This is often called “Death by Power Point” or “Death by Lecture.” If students learn, it is in spite of, rather than because of, the instructor. The “pure lecture” instructional format is an example of passive learning. There are times when it is justified, such as a special guest lecturer who may have much to cover in a short period of time, but it should be rarely and prudently used in flying instruction. As Socrates stated, “I cannot teach anybody anything, I can only make them think.” So the challenge is to make them think! The following sections of the Flight Instructor Guide will help you understand how to provide an active learning environment for your students.

2.8 Transfer of Learning

2.8.1 General

In simple terms, “Transfer of Learning” means that the closer the training to the real thing, the better our students will perform. This is one of the most important concepts in training, but it is not always applied properly. It is simple – if training does not transfer to performance on-the-job, then training is a waste of time. 

Train like you fight. Fight like you train. If feasible, this maxim should be applied to all tasks conducted by your students. The training establishment should attempt, whenever possible, to simulate operational conditions during training.
A emergency procedure carried out under controlled, non-stressed conditions during training may not transfer when this procedure has to be carried out in real life conditions. You must strive to set up training scenarios which are as realistic as possible, while still remaining within safety guidelines.

**Note:** It is not uncommon to run across instruction which does not provide good transfer to actual operational conditions. For example, providing the theory for emergency procedures and a written examination does not ensure that the student can actually conduct the procedures under the stress and confusion of a real life situation. If the actual procedures cannot be conducted, which is entirely possible for safety reasons, then the procedures must be simulated or made as realistic as possible, with all training limitations clearly identified.

2.8.2 Transfer Factors

The following factors influence the transfer of learning from training to the actual operational conditions.

- **Environment.** Maximize the similarity between the training environment and the real job. Full motion simulators, artificially induced stress, reduced visibility, are some examples.
- **Realism.** Employ examples, models and training devices that simulate real situations. Provide practical real life “hands on” under close supervision.
- **Materials.** Select materials and training aids that enhance what is being taught.
- **Communication.** Fully explain course objectives as they relate to the operational task. Label and point out main elements of the task. Ensure that students have mastered the general principles before moving on to the higher orders of learning.

2.9 Motivational Effects on Learning

2.9.1 General

It has been said that “nine tenths of education is encouragement.” The factor that perhaps has the greatest influence on learning is motivation, the force that causes a person to move toward a goal. It can be rooted in any or all the personal or social needs, i.e., security, conformity, self-esteem and recognition. These needs compel people to act, to move, to start working toward an objective, or to achieve a purpose. Your task is to motivate the student towards the learning process. People work best when they are motivated. If we want to motivate people, we must convince them that the information or skills being provided contain some value or benefit to the learner. Motivation is the greatest influence on learning. It is what causes the individual to move towards a goal. If an individual wants something, he or she will strive to achieve it. How much they are determined to achieve this something will be determined by how badly they want it.

2.9.2 Poor vs. Good Motivation

Examples of both poor and strong motivation are all around us. When students are given a task to learn that they will not use, they will not be motivated to learn that task. If students are not aware that what they are learning is important, then they may also lack motivation. In training we have all learned some tasks which were naturally fun and interesting, and some which were tedious. It is easy for the instructor when the task is self-motivating to hold the students’ interest, but the good instructor must make particular effort to motivate students when the task is not inherently motivating. In these cases, students can perhaps be motivated by encouragement, recognition of their efforts, and assurances that what they are learning is relevant. Motivation can be intrinsic or extrinsic. Most of our students have an intrinsic motivation to succeed. They want to pass their courses. This gives instructors a tremendous starting advantage, in that most students arrive on course already intrinsically motivated. Extrinsic motivation such as rewards is also a useful tool. Rewards can range from simple recognition of a “job well done” to advanced learning opportunities. Below are some examples of what to avoid and what to do in terms of motivation. These points have, in part, been adapted from the *Creative Training Techniques Handbook*.

Following is a list of ideas to actually motivate the students.

- Become interactive with the students;
- Maintain an active learning environment;
Create a need. “What’s in it for me?” Tell the students “why they have to know the material.”;
Develop a sense of personal responsibility. It is the instructor’s role to provide the best instruction possible – however, it is the student’s responsibility to learn;
Create and maintain interest with good verbal and visual aids;
Ensure that the content is relevant and relate it to the operational environment or the job;
Give recognition, encouragement and approval – when merited (praise in public, criticize in private);
Foster wholesome competition;
Demonstrate personal interest in the subject and advocate its importance;
Establish long range objectives – show them the benefits;
Recognize that the students have individual motives and objectives, in addition to those of the organization and your own; and
Treat the students with respect.

How to squelch motivation:
Have little interaction with the students;
Get the students in a passive mood and keep them there;
Assume the class will apply what is taught, do not tell them why or how to apply it;
Be quick to criticize, especially in front of their peers;
Employ sarcastic and derogatory language;
Ridicule and humiliate the students; make them feel stupid or annoying for asking questions; and
Employ fear. The student may develop fear of the task, or it may assume such proportion as to cause him/her to fail in his/her training. While the above may seem amusing to read, the sad fact is that almost every one of us can remember instances where instructors from our own training past have done a number of the above. Nothing is so simple as to say “never do this, always do that.” For example, mild fear can be used effectively, as in physical security, or as discussed in the Law of Intensity, whereas strong fear should never be used because student reaction is unpredictable. However, in general, we should not be employing the above approaches if our intent is to positively motivate the students.

2.9.3 Positive and Negative Reinforcement
Positive or negative reinforcement will have an impact on motivation. Positive reinforcement provides a satisfying stimuli in order to encourage a specific behaviour. Negative reinforcement provides an unpleasant stimuli in order to encourage a specific behaviour. Positive reinforcement should be used in most cases, not just because it is more pleasant, but because experience has shown that positive reinforcement gets better results. A professional instructor should use “leadership” rather than “coercion.” The results of positive reinforcement are longer lasting; however, there are times when negative reinforcement may be used to good effect – for example, should a student consistently display unsafe practices, the instructor may find it necessary to strongly reprimand the student to persuade him/her to modify his/her behaviour.

2.9.4 Summary
As instructors we have the responsibility to keep our students motivated to learn or, if required, to provide them with the motivation to learn. To do this we must create an environment in our classroom that produces the best results for the training we deliver. We can do this by emphasizing the importance of the subject matter being taught, and by striving to make instruction varied and interesting. We know we have succeeded when the students keep learning even after we have finished instructing.
2.10 Conclusion

The **Laws of Learning** provide insight into considerations for effective learning to take place. These “Laws” are:

- **Primacy.** First impressions are lasting impressions;
- **Effect.** If the experience has a positive effect on the student, learning is enhanced. If it is negative, learning may be compromised.
- **Recency.** Other things being equal, the learning most recently completed will most likely be retained longer than earlier learning experiences;
- **Readiness.** Students must be physically, mentally and emotionally ready to learn;
- **Intensity.** Vivid, dramatic experiences have an increased chance of being retained over routine experiences.
- **Exercise.** Thinking and doing will enhance learning.
- **Relationship.** Facts, ideas and skills must be related to each other;

Four **Learning Patterns** have been identified that inter-relate with each other. Instructors awareness of these patterns allows them to be utilized to enhance learning. They are:

- **Guidance.** Considerable guidance from the instructor, often combined with trial and error to facilitate learning; and
- **Rote Learning.** Memorization and repetition to achieve performance;
- **Analysis.** Students act independently and use previous knowledge, experiences to react to a new situation.
- **Trial and Error.** Students make an attempt at performance and modify their behaviour until objective is achieved;

**Student Learning Differences** implies that we as individuals have different likes and dislikes, or preferences, that also apply to learning. As instructors, we should be aware of this fact and not adapt our instruction to our own learning style. Appeal to all senses (audio, visual, kinaesthetic), and increase the opportunity for effective learning transfer. We should not become impatient with students because to us or others it appears to be “so simple.” They may have learned it last, but they may also have learned it best.

**Active vs. Passive Learning** implies getting the students involved in the process. Putting on a video, turning up the room temperature, avoiding eye contact, speaking in a monotone, and not asking questions will combine very nicely to put the students in a passive non-learning mode. The entire raison d’être evolves around the students – get them involved! Make them think and do!

**Transfer of Learning** discussed the importance of the learning transferring to actual on-the-job performance. If the training is not reflected in on-the-job performance, we should ask why that training is conducted in the first place. The example given was classroom instruction and testing of emergency procedures. In this case, someone may meet our training requirements by passing the test, but not be able to actually perform the drill. Practical training through recall and repetition will transfer to a real scenario.

The factors affecting transfer are:

- **Environment.** Simulate the real job environment;
- **Realism.** Use training techniques to allow learning to reflect real situations;
- **Materials.** Use training aids that enhance learning; and
- **Communication.** Fully explain objectives, tasks and sub-tasks and ensure everyone is ready before proceeding to the next step.
Motivational Effects on Learning discussed the importance of motivating students. Although people must be self-motivated in order to learn, we should foster a learning atmosphere where it is easy for the students to increase their self-motivation. There are various ways to increase motivation in students and you should be aware of them. This aspects relates back to Flight Instructor Guide Chapter 1 Section 1 and the instructor's role, where we must act as leaders, coaches, etc., to keep the students focussed and encourage them to complete the learning objectives. Use positive and negative reinforcement judiciously.
Section 3 - Methods of Instruction

Introduction
There are a variety of instructional methods that an instructor may use, each with its own purpose. Selecting the proper method is essential in order to efficiently and effectively meet instructional objectives. This section will introduce the various instructional methods, with emphasis on classroom-based instruction. Effective use of some methods will require additional research. As you gain experience, it is hoped that you will use those methods which will most benefit your students.

Section Objectives

Upon completion of this section, the Flight Instructor should be able to:

- Describe briefly the various instructional methods and their uses; and
- Select an appropriate instructional method.

3.1 General

There are various instructional methods available, each with advantages and disadvantages.

Below is a list of some of the methods available, all of which will be briefly described in this section:

- Lectures;
- Developmental teaching;
- Teaching interview;
- Role Playing;
- Case Study;
- Guided Discussion;
- Tutorial;
- Seminars;
- Simulation and Gaming;
- Field trips;
- Computer-Based Training (CBT);
- Distributed Learning; and
- Explanation/Demonstration – Practice (Demo/Practice).

In ACGP pilot training, the majority of instruction generally takes place either in the classroom or the aircraft. The most common methodologies include developmental teaching and explanation-demonstration-practice. Therefore, this course will emphasize these two instructional methodologies. We do not wish to dismiss other methods of instruction when appropriate. Field trips, seminars, role playing, and any of the other various instructional methods may be extremely useful.

3.2 Method Selection

Selecting the appropriate method of instruction is a crucial step in the design and development of training. Recently, much emphasis has been put on the use of Computer-Based Training and other trendy methods. It is important to objectively determine the best method of instruction. This is best accomplished by being aware of the various options available and by making a systematic analysis of all factors involved when planning instruction.

A systematic analysis of the following factors should be considered when selecting an instructional method.

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Objectives. Is the objective to provide theory, manual or procedural skills, to develop concepts, instil desired attitudes or to develop teamwork?

Course content. Is the content based on knowledge, theory or attitude? How difficult is it?

Students. What is the existing skill, knowledge, attitude level of the students? The class size? Maturity? Aptitudes?

Instructors. What are their availability, qualifications, experience and skill levels?

Materials/Equipment/Facilities. Consider the availability of each. This will impact methodology considerations.

Time. The time available for instruction should be considered when selecting a method.

Cost. The method must be cost-efficient. However, if the method is not effective, it will not be cost-efficient.

3.3 Interactive Lecture

The interactive lecture is an instructor-led methodology which combines both the traditional lecture and some sort of interaction in order to meet the lesson objectives. In the interactive lecture, the instructor will lecture briefly at the beginning of the lesson or teaching point in order to introduce material or set-up and activity, and then provide the students with an activity which allows them to interact differently with the lesson content. Activities which fit in well with the interactive lecture are games, videos, worksheets, verbal confirmation stages. In certain circumstances, a guided discussion can also fit in with an interactive lecture. If you review the principles of instruction (ICEPAC) you will see that the interactive lecture generally meets all of the principles.

Advantages of the Interactive Lecture:

- It is good for use with both small and large audiences;
- Ideal in cases where a lot of information must be passed in a short time;
- Lecturer has total control over the content/sequence of the session;
- Less rigid space requirements (can be done just about anywhere);
- Requires less time over more participative methods; and
- Adaptable and versatile with regards to content.

Disadvantages of the Interactive Lecture:

- Requires precise timing and adherence to a schedule in order to avoid traditional lecture; and
- Requires highly skilled and knowledgeable lecturer/instructor.

Uses of the Interactive Lecture:

- For orientation of students;
- To introduce a subject;
- To give direction on procedures;
- To present very basic material;
- To introduce a demonstration, discussion or performance;
- To illustrate the application of rules, principles or concepts; and
- To review, clarify, emphasize or summarize.
3.4 Role Play

The students are assigned roles requiring them to interact with others in responding to various realistic situations. The instructor identifies the purpose of the role-play, provides the students with enough background information to help them accurately play the assigned role and motivates them to become more fully involved in the activity. Debriefing the role-play is important in order to connect the activity to the learning objectives of the lesson.

Advantages of Role Play

- High participation, interactive delivery and may lead to discussion;
- Experience is developed in a supportive environment; and
- Can be very versatile depending on the application.

Disadvantages of Role Play

- Participants can be easily side-tracked requiring a need for good preparation, and controls need to be set appropriately; and
- Requires a very competent, experienced and prepared instructor.

Uses of Role Play

- Instructor upgrades where the senior flight instructor acts as a student and the junior instructor acts as the senior instructor;
- Tabletop exercise in lieu of actual simulated crash response;
- Instructor mutuals; and
- Lessons with attitudinal objectives.

3.5 Group Discussion

The group discussion is a student-led activity where a topic is pre-arranged prior to the session and the students discuss that topic with minimal interaction with the instructor. The topic may be chosen by the instructor, or the students. The instructor is more of a facilitator in this activity in that they act as the overall mediator. The instructor must set the rules by which the discussion will occur, but the students will need to participate in the creation of those rules as they need to be able to self-monitor their interactions against those rules.

Advantages of the Group Discussion:

- Highly interactive for the students;
- Allows the students to take control of their own learning; and
- Allows the students to explore areas of a topic which they may not have explored in an instructor-led environment.

Disadvantages of the Group Discussion:

- Can require a large amount of time;
- Requires the instructor to give up a lot of control, and thus can only be done with highly motivated and mature students; and
- Requires preparation on the part of the students in order to participate in the discussion.
Uses of the Group Discussion:

- To share information and explore topics in depth in a collegial manner, including:
  - policy changes;
  - best practices; and
  - planning sessions.

3.6 Peer Learning

Peer learning is where the students observe other students as they take part in a learning activity. They can either be learning from the other students mistakes or by observing what they did correctly. Peer learning can also include peer tutoring, where a more successful student helps a student to learn the material required.

Advantages of Peer Learning:

- Students, especially teenagers, are generally more receptive to learning from a peer;
- Peer tutors will increase their mastery of the material as they teach it to their peers;
- Can offer an opportunity for the instructor to confirm the peer tutor’s mastery; and
- Students learning from their peers mistakes may better realize why it was wrong if they see it.

Disadvantages of Peer Learning:

- If the peer tutor is not as proficient as thought, or can’t communicate effectively then the opportunity is wasted;
- The wrong lesson may be learned from observing the mistakes; and,
- A good debrief by the instructor is still required to ensure the correct information was learned.

Uses of Peer Learning:

- Observing circuit patterns on a given day;
- A subject SME is among the students, instructor may ask them to explain the material instead; and
- When preparing for exams, peer tutoring may be used.

3.7 Case Study

The case study method presents students with real life challenges. It helps bridge the gap between classroom theory and practice by applying previously learned concepts and principles. In the case study method, a scenario is provided to the students. This is normally given as homework, which then serves as the basis for a classroom discussion. Usually, a case will describe a situation and problem previously faced by others in a given field. At the end of the case study, there will often be questions posed that will be addressed in class. Accident investigations are a good example whereby students can be given actual cases and then benefit by discussing their viewpoint and observing the lessons learned. While it is possible to complete case studies individually without follow-up class interaction, we have listed the advantages/disadvantages, making the assumption that there is follow-up in classroom sessions.

Advantages of Case Studies:

- Challenges students to apply what they know to a realistic situation;
- Forces participation from the students;
Enables students to think, reason, and employ information in a logical fashion, as they would in an actual position;

It is a flexible learning approach in that it can be the basis of an entire course or simply one lesson plan;

Allows students to gain solving problems experience; and

Involves high interaction between students, increasing the chance they will learn from each other.

Disadvantages of Case Studies:

Due to the discussion component, this method may not be ideal for large groups;

It is not suitable for standardized procedures or single solution which has been accepted as “correct”; and

They are not well suited to the development of objectives at the rudimentary level, where the lecture and readings are more efficient.

Uses of Case Studies:

Where students are expected to gain experience analyzing information and making decisions such as flight safety or situational scenarios; and

As a lead-in or even a partial substitute for on-the-job training where knowledge plays a pivotal role.

3.8 Guided Discussions

This method is typically employed with a small group (4-12) that attempts to achieve learning through maximum student participation. The instructor uses “lead-off questions” and “follow-on questions” in an effort to direct and stimulate the students’ thoughts and discussion. The students bring out the pertinent points that permit accomplishment of the lesson aim. The instructor will normally give out readings (or case studies) prior to the discussion, allowing ample opportunity for the students to read the material. As opposed to a conventional classroom setting, the students face each other in a circular seating arrangement to encourage discussion. The instructor sets the stage by introducing the lesson explaining the aim and its importance. The instructor operates as a facilitator in this case, keeping the discussion on track and soliciting input from participants who otherwise may be silent. It has proven to be an extremely satisfying learning vehicle for the participants, as they are very much involved in the learning process. At the end of the guided discussion the instructor provides a conclusion emphasizing the main points and conclusions of the lesson.

Advantages of the Guided Discussion:

Increases student interest and stimulates thinking;

Increases student acceptance of material – they are not being told by an instructor but, rather, reaching conclusions as a group;

Utilizes student knowledge and experience;

Results in more permanent learning because of increased participation and other Principles of Instruction;

Provides an atmosphere allowing good instructor student rapport; and

Allows students to develop imaginative solutions to problems.

Disadvantages of the Guided Discussion:

Requires a highly skilled instructor;

Requires preparation by the students;
Limits content;
- More time consuming than typical instructor-led teaching; and
- Restricted group size.

Uses of the Guided Discussion:
- To supplement lectures, reading, or laboratory exercises;
- To determine how well students understand concepts and principles;
- To summarize, clarify or review points;
- To prepare students for instruction which is to follow;
- To determine student progress and the effectiveness of prior instruction; and
- To foster attitudinal change.

3.9 Tutorials

This method of instruction is one where the instructor works directly with an individual student, and can be one of the most valuable learning experiences available. It may involve the use of demonstrations, coaching, questions and discussion of work done by the student. This “one-on-one” approach allows for great interaction between the instructor and student. Bloom (1984) conducted research which found that students who were taught by the tutorial method scored higher 98% of the time, compared to their classroom counterparts. This is due to the greater opportunity to employ the Principles of Instruction in a one-on-one situation.

Advantages of Tutorials:
- Permits adaptive instruction;
- Virtually guarantees participation;
- Promotes safety habits due to continuous instructor presence; and
- Allows for a very thorough exchange of ideas and concerns, uninterrupted by other students.

Disadvantages of Tutorials:
- Requires highly competent instructors with diagnostic and remedial abilities;
- Very labour and time intensive; and
- Personality compatibility between instructor and student becomes critical.

Uses of Tutorials:
- To instruct highly complex skills common to aircrew training;
- To instruct skills or operations that involve dangerous or expensive equipment; and
- To provide individualized remedial assistance.

3.10 Seminars

The seminar is similar to the tutorial method, except in this case the instructor provides a tutorial type of instruction to a group rather than to an individual. Seminars may target both large and small audiences, depending on the complexity of the material. Small group size (< 12) is the norm to allow the instructor to provide personal attention to each participant. As in the tutorial method, the instructor is coaching the participants through a skill or logic process to reach conclusions and objectives.
Advantages of Seminars:

- Allows for group learning through brainstorming, exchange of experience, etc;
- Increases student interest and stimulates thinking;
- Increases student acceptance of material – they are not being told by an instructor, but rather reaching conclusions as a group;
- Results in increased participation;
- Provides an atmosphere allowing good instructor-student rapport; and
- Allows students to develop imaginative solutions to problems.

Disadvantages of Seminars:

- Requires a highly skilled instructor;
- More time consuming than typical instructor-led teaching; and
- Restricted group size for effective instruction.

Uses of Seminars:

- To provide general guidance for a group working on an advanced study, problem, or research project;
- To exchange information on techniques and approaches being explored by members of study or research group; and
- To develop new and imaginative solutions to problems under study by the group (e.g., through brainstorming).

3.11 Simulation

Simulations are instructional scenarios where the student is placed in a “world” defined by the instructor, with parameters controlled by the instructor. Decisions made by the student as they interact with this “world” affect the outcome of the simulation. Simulations promote the use of critical and evaluative thinking, and the open-endedness of simulations encourages students to contemplate the implications of the scenario. Simulation can take many forms including computer-based technology, role-play, games, and other non-computer based activities. Conducting a tabletop exercise of a crash response is an example of simulation done without computers. Flight training is a classic example where simulation is used extensively.

Advantages of Simulation:

- Intimate involvement with problems is achieved;
- Attitudinal results are possible because of the high personal involvement;
- Promotes critical thinking;
- Enjoyable and motivating activity; and
- Saves wear and tear risk of damage with the “real thing.”

Disadvantages of Simulation:

- Computer simulators have a high initial capital outlay;
- Large amount of preparation time;
- Some distortion of reality may be present due to the parameters’ bias; and
- Simulation cannot create the fear or stress of actual flying operations.
Uses of Simulation

- Flight Simulation;
- Crash response simulation; and
- Instructor mutuals

3.12 Games

Use of games is a form of instruction aimed at capitalizing on the seemingly natural phenomenon of learning through play. Aspects of this can include simulation and question/answer-type scenarios. Simulation games can also contain some elements of role playing. Video games such as Flight Simulator are a modern application of the simulation style of gaming, while Trivial Pursuit would be a question and answer style of game that can be used for learning.

Advantages of Gaming:

- Intimate involvement with problems is achieved;
- Attitudinal results are possible because of the high personal involvement; and
- Capitalizes on the fact learning is enhanced when enjoyable.

Disadvantages of Gaming:

- Students may be interested in the game itself, rather than the important concepts and principles; and
- Games are difficult to invent and require creative instructors.

Uses of Gaming:

- To represent a social system or interpersonal process in miniature so that the course member can practice making the responses to various situations which are similar to those encountered on the job.

3.13 Self Study

This is a method in which the instructor assigns the study of books, periodicals, manuals or handouts, and/or the review of audio-visual materials. It may require the completion of a project or research paper, or prescribe problems and exercises for the practise of a skill. Independent study can be used in the form of Programmed Instructional Packages (PIPs) or simple reference material such as the modules in the CF Flight Instructor Course Handbook, or this document. Independent study can be used prior to, during, or following a course. Visual attractiveness and clarity are essential to ensure effective learning.

Advantages of Independent Study:

- Able to reach a large audience in a short time;
- Inexpensive to develop;
- Ideal for teaching lower cognitive skills, i.e., learning basic facts, concepts and rules; and
- Students can proceed at their own pace and schedule within limits set by instructor.

Disadvantages of Independent Study:

- Passive delivery with no interaction between students and instructors; and
- Dependant on student’s ability to read and comprehend.
Uses of Independent Study:

- To orient students to a topic prior to classroom or laboratory work;
- To set the stage for a lecture, demonstration or discussion;
- To provide for or capitalize on individual differences in ability, background or experience through differentiated assignments;
- To provide for the review of material covered in class or to give practice;
- To provide enriching material;
- To provide remedial instruction;
- To provide make-up instruction for late arrivals, absentees or transients;
- To maintain previously learned skills which are not performed frequently enough; and
- To provide for, or capitalize on, individual differences in ability, background or experience through differentiated assignments.

3.14 Field Trips

The Field Trip is a planned learning experience in which course members observe “real life” operations that illustrate what was discussed or learned in the classroom.

Advantages of Field Trips:

- Allows for variety in the curriculum;
- Allows students to experience the job environment; and
- Appeals to all the senses, facilitating learning.

Disadvantages of Field Trips:

- There is always the threat of scheduling problems and last minute changes over which the instructor may have little control;
- Instructor is dependant on others for some of the learning transfer; liaison with the site to be visited is critical;
- Can be time consuming, especially if long transit is involved; and
- It is hard to focus the students; they become easily distracted by things that may not be supporting the concepts or principles targeted for the lesson.

Uses of Field Trips:

- To reinforce and clarify classroom learning;
- To inject variety into the training situation; and
- To permit students to view operations, equipment, or locations which cannot easily be shown in the classroom.

3.15 Computer-Based Training (CBT)

CBT refers to individualized interactive instruction provided to the learner via a personal computer (PC). For our purposes, we consider such things as interactive compact disc, interactive video disc, web-based training and electronic performance support systems to fall under this category. This training method provides stimulus to the learner, analyzes responses and provides feedback. The PC can be hooked to a wide area network or individual...
lessons/assignments can be provided on computer disc. Instruction can range from a very simple tutorial style to a sophisticated, almost humanlike feedback. Student evaluation methods are often embedded into the courseware. CBT can be, and most often is, developed as a discrete, stand-alone block of instruction. It can also be incorporated into other computer programs.

Advantages of CBT:

- Self-paced learning;
- Provides immediate feedback;
- May allow branching to suit learner;
- Consistency of instruction;
- Interactivity (very important factor in learning);
- Helps standardize training;
- Enables learner to remain in own environment, making CBT a good candidate for distributed training;
- Supports use of multimedia (audio and video);
- Can be used at learner's convenience;
- Potentially decreases learning time;
- Substantially reduces need for instructors, teaching assistants, conventional training facilities, etc., allowing for long-term savings;
- Offers high quality motion video and graphics;
- Has large storage capacity
- Is a robust medium (i.e., student-proof);
- Is write protected;
- Provides easy delivery; and
- Is portable.

Disadvantages of CBT:

- Pre-structured activities; menu-driven;
- Development costs are high, although becoming more competitive (research suggests CBT development time ranges between 50-500 hrs for one hour of instruction and averages 200-300 hrs);
- No development shortcuts are available; courseware must be well designed, developed and evaluated if effective instruction is to be provided;
- Relatively high hardware costs, although becoming more competitive;
- Adding complex feedback may significantly increase development costs;
- Learner isolation unless tutorial help is available; and
- Instructors require specialized skills to design courseware and operate in a computer training environment.

Uses of CBT:

- In cases where there is a large user population – to offset the development costs of such programs, the greater the number of students, the more cost-effective the CBT. Delivery costs drop rapidly once the development has been completed.
3.16 Distributed Learning

Distributed Learning (DL) is a method of self-instruction using printed and/or audio-visual or computer-based media, often presented through Computer-Basic Training (CBT) or paper-based training materials such as Programmed Instructional Packages (PIPs). It reflects a learning scenario where the instructional staff and the students are physically separated from each other. Some instruction lends itself to a DL format whereby a training establishment can develop, manage and evaluate the individual training requirements of widely dispersed operational units. Sometimes DL may be used exclusively, such as in correspondence courses. Sometimes it may be used in conjunction with other instructional methods. It can be used to bring students up to a required threshold knowledge level prior to attending formal training, or as a follow-up to training. It may also be augmented with synchronous (real time) or asynchronous communications between instructors and students through dedicated chat-rooms, email, message boards, phone/conference calls, etc.

Advantages of DL:

- Individual time required to complete a training program is reduced because students work at their own pace;
- Travelling time to, from and/or at training establishments is considerably reduced or completely eliminated;
- Training is proactive; training can be completed when an individual requires it, rather than when an instructor or school can provide it;
- Training program content, delivery and evaluation is standardized through the effective application of self-paced learning principles;
- The length of in-house courses can be reduced when programs are designed to include a DL package before or after in-house delivery; and
- If properly implemented, DL approaches should eventually reduce associated training costs.

Disadvantages of DL:

- The role of instructors must change from being deliverers of group based instruction to developers, managers and evaluators of self paced DL packages;
- Additional personnel and resources will be required to convert from group-based to self-paced delivery;
- The initial development of electronic delivery is more costly than traditional delivery;
- Formative/summative evaluations are more difficult to conduct at a distance; and
- DL methods are dependent on individual reading and writing skills.

Uses of DL:

- Primarily when the students are geographically separated from the training establishment; and
- To provide information and knowledge.

3.17 Demonstration/Practice

This method is the primary instructional method for teaching both practical skills, such as performing a medium turn, and cognitive skills, such as completing a flight plan. It can be used in the classroom, field, simulator or aircraft. It may be used with either groups or individuals.

This method of instruction is based on two basic human tendencies:

- People learn by imitating; and
- People learn by doing.
It is really quite simple and very effective. In this method, the instructor first explains the skill to be learned. Then the instructor provides a “perfect” demonstration of the skill in real-time. The instructor will then demonstrate the skill slowly (if possible), and in steps accompanied by a detailed explanation for each step. The student will imitate the instructor, followed by the instructor suggesting ways to improve. The student will continue to practise the skill with instructor input, as time permits, or until the skill is mastered. If this sounds familiar it is - it’s EDIC.

Advantages of Demonstration/Practice:

- Student learns practical skills in a controlled environment;
- Weak areas skills can be quickly identified and addressed;
- Students receive individualized feedback on their performance; and
- Skills are broken down into manageable chunks for ease of learning.

Disadvantages of Demonstration/Practice:

- Instructor/student ratio depends on the skill to be learned. Complicated skills may require small instructor/student ratios (even one-to-one ratio); and
- Students learn at different speeds.

Uses of Demonstration/Practice:

- To teach manipulative operations to procedures;
- To teach troubleshooting;
- To illustrate principles;
- To teach operation or function of equipment or tools;
- To teach teamwork;
- To set standards of quality; and
- To teach safety procedures.

3.18 Conclusion

There are various instructional methods available to a gliding instructor. Each comes with benefits and drawbacks. Different methods are better suited for different types of training or subject matter. The various available methods are:

- Lectures;
- Developmental teaching;
- Teaching interview;
- Role Playing;
- Case Study;
- Guided Discussion;
- Tutorial;
- Seminars;
- Simulation and Gaming;
- Field trips;
- Computer-Based Training (CBT);
Distribution Learning; and
Explanation/Demonstration – Practice (Demo/Practice).

When considering which method to select consider:

- Objectives;
- Course content;
- Students;
- Instructors;
- Material/Equipment/Facilities;
- Time; and
- Cost.
Section 4 - Ground Lesson Preparation

Introduction

As in all things, the key to success is careful planning. In order to plan for instruction, you must first determine the key requirements of the training and, second, determine the best method for presenting and teaching these teaching points to the student. The product is called a Lesson Plan. Every flight instructor in the ACGP will at one time or another teach a ground lesson, typically as part of the Glider Pilot Scholarship course. Proper preparation of the lesson is key to the success of the students later in the course. While the actual layout of each lesson plan may vary based on individual preferences, each lesson plan should follow the guidelines within this chapter.

Proper Planning and Preparation Prevents Poor Performance.

Section Objectives

Upon completion of this section the Flight Instructor should be able to:

➔ Describe the components and content of a lesson plan;
➔ Explain the confirmation of learning;
➔ Prepare the instructional environment;
➔ Describe the various types of questions and their specific uses;
➔ Describe the various training aids and their specific uses; and
➔ Prepare a lesson plan.

4.1 Procedures for Lesson Preparation

You must refer to the Course Training Plan and the lesson specifications before planning a lesson. Lesson specifications prescribe the objective, content and methodology to be used in the conduct of the lesson.

The following steps are involved in planning instruction:

➔ Step 1 - Determine the lesson objectives from the lesson specification;
➔ Step 2 - Write the performance statement conditions and standards for the lesson objective;
➔ Step 3 - List the teaching points in sequence;
➔ Step 4 - Determine instructional methods to be used;
➔ Step 5 - Determine verbal supports, training aids, and any other materials to be used; and
➔ Step 6 - Write the Lesson Plan.

4.2 Components of the Lesson Plan

The Lesson Plan, if carefully developed, is an essential tool to guide and ensure that instruction follows a specific, well-planned, goal-oriented design.

The lesson plan is divided into the following parts.

➔ Introduction;
➔ Body; and
➔ Conclusion.
Lesson Outline

Introduction

Body
Stage 1
- Intro
- Main Teaching Points (ICEPAC)
- Interim Summary

Stage 2
- Intro
- Main Teaching Points (ICEPAC)
- Interim Summary

Stage 3
- Intro
- Main Teaching Points (ICEPAC)
- Interim Summary

Confirmation – Ensure student comprehension of teaching points (discussed further Section 4.3).

Conclusion

4.2.1 The Lesson Plan – Introduction

"If you don't know where you are going, any road will take you there." Lewis Carroll

As the quotation from Alice in Wonderland suggests, the introduction should tell the students "where they are going", that is, what is the objective of the lesson. Second, the introduction should capture the students' interest and build their motivation for the subject matter. The introduction to the lesson may take from 5 to 10% of the total lesson time.

At this point we are showing you the framework of the Lesson Plan introduction or the 'skeleton'. The following section will continue the development of the Lesson Plan with such things as questioning and verbal and training aid considerations. Here, our emphasis is on the logical development of the lesson with respect to its content. The outline and required information for a lesson introduction follows.

Example - Introduction Content

PART 2 – INTRODUCTION
Objective: The instructor shall describe the debrief process as outlined in Module 11 of the RCAF FIC Instructor’s Handbook.

Outline: The Purpose Of The Debrief; Preparation For The Debrief; Debrief Format; and Conduct Of the Debrief.

Introduction: Introduce the lesson by linking the material to be covered with the role of the instructor. Items to touch on are:

To be an effective instructor they need to understand that debriefs exist to improve student performance; That debriefs will follow a predetermined and proven format; That the preparation for the debrief will have a direct impact on its effectiveness; and That the conduct of the debrief is typical of human interaction and interpersonal skills are important.

4.2.2 The Lesson Plan – Body

The body of a Lesson Plan presents the teaching points divided into a series of stages. Each stage specifies the activities of both you and the course members. The body of the lesson may take from 70-85% of the total lesson
time. The table on the following page presents guidelines for planning the main content for each stage of the Lesson Plan body.

You will note that each stage of the lesson takes the same form of the lesson in general, i.e., introduction, body and conclusion. You should also note that confirmation is conducted throughout, and upon completion of, each stage. Confirmation may also take place at the end of the lesson. You should feel comfortable that the students have understood the current stage of the lesson prior to proceeding with, or terminating, the lesson.

Note: The rule of thumb is that you should organize main teaching points into manageable chunks of information, thus creating several separate stages within the body of the lesson. Due to the large amount of information aircrew typically must learn, the proper organization of the body will allow the information to be a little easier to “swallow” with interim introductions and summaries of the information (teaching points). This helps the students navigate through the contents. “OK, we have covered X, now we are going to cover Y.” A typical lesson would be laid out in the following manner. Since we are discussing the lesson body, all aspects of the LP are shown here to display the relationship.

Example – Body of the Lesson Content

Stage 1 – Purpose of the Debrief

Stage Introduction: Indicate that you will focus the first part of the discussion on the purpose of the debrief and try to relate the concepts with the job of a line instructor.

Stage Body: Emphasize that the debrief is not simply a matter of recounting the students’ performance. While the students will be anxious to know how well or how poorly they performed, the instructors’ objective is not so much to talk about the past, but rather to use past performance as observed in the training mission to make adjustments to future performance.

The roles of the instructor from Module 2 may be reviewed here. They are: Instructing; Leading; Tutoring; Coaching; Mentoring; Assessing; Course Managing; Quality Assurance. The opportunity to fill these roles should be related to the debrief. This must be clear – the purpose of the debrief is to enhance the learning process. Properly used, it is one of the best tools available to the instructor.

Interim Summary: Perform a quick recap of the purpose of the debrief and state that it is a valuable tool in meeting our instructional objectives.

4.2.3 The Lesson Plan - Conclusion

The conclusion of a Lesson Plan allows for the summary of key points and links them to the coming lessons and to on-the-job use. The conclusion may take up to 5% of total lesson time.

Example – Conclusion Content

Summary: Review material for entire lesson.

Confirmation: Given a discussion format, confirmation should not be necessary at end of lesson testing. However, consideration may be given to conducting the review by asking developmental questions based on the teaching points.

Conclusion: Conclude the lesson by:

Indicating that as instructors, we must understand the primary purpose of the debrief and not get caught up in what went wrong but rather how to fix it – again enhance student learning;

Expressing the need to use a standardized and proven format in the conduct of the debrief in order to achieve the above objective;

Expressing the need to scrutinize the student(s) performance and extract a ‘lessons learned’ approach. This can only be done by adequate preparation for the debrief; and

Reminding the ICs that the way they conduct the debrief will have a direct impact on its effectiveness. They should use proper tone, maintain control and display objectivity.
4.3 Confirmation of Learning

Confirmation is one of the Principles of Instruction. It must also be a planned element of the lesson. The purpose of confirmation is to ensure that the student is achieving the lesson objectives. In many instances, an end of lesson test is an appropriate method of confirming student learning has taken place. However, there are additional ways of confirming learning, some of which may be more appropriate in certain situations. In reality, you should periodically confirm that students are understanding the lesson. It is really too late in the game to find out that “John didn't get it!” when there is no time left in the lesson to correct a lack of understanding. The earlier the lack of understanding is detected and corrected, the better! The first step of confirmation begins with paying attention to student(s) reaction to the lesson. Does there seem to be confusion? Is (are) the student(s) attentive? Is there frustration? Any time there seems to be confusion may be a good time to ask a confirmatory question. “Does everyone understand why proper voice procedure is essential to efficient, effective radio communications?” If you are still unsure, then ask some pointed questions. “Give me one example of why proper voice procedure is so important in an aviation environment… Jim?”

The second step in confirmation is to use planned questions at logical points in the lesson. Naturally, the conclusion of a section, or stage, of instruction is one such logical break. If you are teaching a class on aerodynamics and you have just finished “coefficient of lift”, ask a few questions to confirm understanding prior to moving on to the next stage. At the end of the lesson you should have some sort of quick, informal quiz or test to confirm learning. Many lessons, especially practical lessons, lend themselves to a quick test. “OK, before we move on, show me a 360-degree steep turn.” This can also be easily done with certain knowledge lessons. If you have just finished a lesson on calculating aircraft weight and balance, assign a problem at the end of the lesson or ask a few quick random questions. To sum up, you must confirm that the student is meeting the lesson objectives. The Lesson Plan (LP) must detail the confirmation methodology. However, there are numerous ways of meeting that task. You may ask confirmatory questions throughout the lesson and/or at the end of each stage of instruction and/or provide a snap quiz at the end of the lesson. You may also confirm learning has taken place by giving assignments. The objective must be kept front and centre: Can you as the instructor answer these questions? Did the student(s) learn what they were supposed to learn? Did they meet the Lesson Objective? How do you know?

4.4 Preparation of the Instructional Environment

The final step in the lesson preparation endeavour consist of ensuring that the room layout is appropriate and that the instructional resources required to conduct your lesson are ready. There are several bits and pieces that need attention and they are, unfortunately, often overlooked. This affects the overall quality of the instructional/learning experience.

The professional instructor will arrive prior to the students and ensure the following areas are addressed:

- The classroom set up is appropriate given the selected instructional methodology, i.e., desks are organized in a “U” shape for discussion, grouped for syndicate work, etc.
- The room is properly ventilated and illuminated;
- The training aids are available, in working condition, and can be seen and/or heard by all students; and
- If training equipment is being used, sufficient quantities are available to provided effective hands-on training for all students.

4.5 Questions

4.5.1 Types of Questions

Various types of questions can be used to serve the different purposes described above. The five most commonly used types are presented below.

Lead-off

- Used to start a discussion or introduce a new topic;
Should be designed to get students thinking about a topic, i.e., the objective is to start discussion, not necessarily to get an actual answer; and

*Example:* "Why is it important to thoroughly understand rope-break procedures?"

**Follow-up**

- Keeps students thinking about the topic at hand;

*Example:* "What other reasons would one have for practicing stall recoveries?"

**Overhead**

- Question is addressed to the whole class without indicating who should answer; and
- Instructor must guard against tendency for the same few students to answer each time.

**Direct**

- Question is addressed to a specific person;
- Useful for:
  - getting selected course members to participate;
  - “jolting” inattentive students; and
  - pulling a student back on to topic during discussion.

**Reverse and Relay**

- Instructor answers a student’s question by directing it back to the student;

*Example:* "Why do you think we should have a review flight after each 5 solos in the syllabus?";

- Question may be relayed to another student.

*Example:* "OCdt Jones, can you answer OCdt Bloggins’ question?"

### 4.5.2 Writing Questions

The wording or phrasing of a question will be dictated by its purpose, the instructional situation, and the ability of students. Although the actual wording of the question may be determined in the classroom environment, the person designing the lesson can use the following information in planning the general way the question will appear in the Lesson Plan. Well-worded questions will usually conform to the criteria described below.

**Comprehension**

- Questions should be brief, yet complete so that the students understand the meaning; and
- Questions should be composed of words that are within the student’s experience and related to overall subject matter.

**Language level**

- Questions should be designed to measure the student’s knowledge of material, not of the English/French language; and
- Questions should be stated in simple, straightforward language.
Difficulty

- Questions should challenge students to apply their knowledge;
- Questions should not be so easy that the answer is obvious to all; and
- Questions should not be so difficult that only a very few students would have the answer.

Relevance

- Questions should be developed to reinforce and support the main teaching points of the lesson.

4.5.3 Inclusion of Questions into the Lesson Plan

Now that we have had a general introduction to questioning we will look at how they can be incorporated into a Lesson Plan. In reality, you should go through the entire content of the Lesson Plan and determine what points can be supported by good questions (in the upcoming example we are simply looking at the lesson introduction). Once good questions have been formulated, they should be reflected in the lesson plan itself. The instructor delivering the lesson may have other questions that they believe are suitable and may therefore use these in the conduct of the lesson. As the name implies it is a Lesson Plan, and as all good plans, they must be flexible and susceptible to change. The LP provides a guide for the types of activities and questions to be used. In the following example, we are continuing the development of the lesson we have seen earlier in this section. However, we can now interject questions. In the case of the introduction, the instructor has determined that a good question would be a “lead-off” “overhead” type (to stimulate mental activity). Since we are dealing with debriefs, and the instructor knows that all instructor candidates have been subjected to debriefs, it is felt that exploitation of this fact in the form of a question would prove effective. “I want you to take a moment to think about the worst debrief you have ever personally experienced – do that now.” The instructor developing the LP now elects to go to a follow-up question. As this is still meant to stimulate mental activity of the whole group, it is elected to be another overhead question – the question being one of the most simple and effective in the instructor’s toolbox – “Why?” Based on this, the LP introduction may now look like this:

Example – Introduction Content with Questions

Objective: The IC shall describe the debrief process as outlined in Section 6 of the ACGP Flying Instructor Guide.

Outline:
- The purpose of the debrief;
- Preparation for the debrief;
- Debrief format; and
- Conduct of the debrief.

Introduction:
Opening Activity: Open with an overhead question to the class, ask them to think for a moment about the worst debrief experience they can remember.
Follow on Question: “Why do you consider this experience a poor debrief?”
Use IC responses to introduce the lesson by linking responses with the role of the instructor. i.e., responses should lead you to the main teaching points. These main teaching points state that:
- To be an effective instructor, you need to understand that debriefs exist to improve student performance.
- That debriefs will follow a predetermined and proven format;
- That the preparation for the debrief will have a direct impact on its effectiveness; and
- That the conduct of the debrief is typical of human interaction, and that interpersonal skills are important.

Opening the class with questions, as in the previous example, can assist to maximize the Principles of Instruction. These questions create interest, participation, and comprehension through a developmental approach where it is the students who will arrive at the teaching points with instructor guidance. In addition, emphasis, accomplishment and confirmation also take place because, together, you are arriving at the teaching points. For example, one student who relates a confusing debrief experience reinforces the teaching point of following an
established format; another who describes an experience with a frustrated instructor who was openly impatient and hostile emphasizes the teaching point of proper approach when conducting the debrief. In addition to the Principles of Instruction, we can also effectively relate the responses to the roles of the instructor (proper mentoring, coaching, etc.) Certainly other questions would follow as this lesson has been designed to be a Developmental Lesson and the instructor delivering it would have to be prepared with questions of their own. Remember, questions are one of the best ways to achieve the principles of instruction. Put time and effort into the development of good questions. Nothing will have a greater impact on your presentation.

4.5.4 Uses of Questions

Some of the uses of questions are presented below:

- Stimulate mental activity;
- Challenge students, promotes alertness and curiosity;
- Alert students pay closer attention to instruction, understand better and learn more quickly;
- Evaluate learning:
  - The larger the sample of students questioned, the more accurate and valid the evaluation;
  - Especially suitable for assessing achievement of knowledge-based Es;
  - Can confirm knowledge during a practical exercise;
- Arouse and maintain interest:
  - Particularly effective in getting students involved in developing a lesson;
- Teach problem-solving skills:
  - Instructor influences acquisition of problem-solving skills and related knowledge by posing a series of problems to solve in class;
- Guide and provoke thought:
  - Careful selection of questions allows the instructor to guide students’ thinking through the logical development of a lesson; and
- Control a lesson:
  - Questions can be used to:
    - open discussion;
    - limit or end discussion;
    - move discussion along a path;
    - bring out certain aspects;
    - highlight special points;
    - change the course of a discussion; and
    - arrive at a conclusion.

4.6 Training Aids

4.6.1 Definition and Purpose

A training aid is any physical resource or item used by the instructor to clarify, simplify, or reinforce instruction. Training aids enhance or improve the efficiency or effectiveness of learning. As Confucius said, “A picture is worth a thousand words.” This holds true in training, where students are able to visualize what is being taught. The ancient Greek mathematicians traced complicated drawings in the sand in order to explain their theories, just as we use the white board in modern classrooms. With this in mind we will now look at our options in terms of training or instructional aids.
4.6.2 Classes of Training Aids

For our purpose, training aids can be divided in five types or classes.

- Audio-visual aids: Communication devices which utilize sound, visual images or both, such as projectors, recorders, video cameras, etc;
- Audio-visual programs: Audio-visual programs refer to films, videotape, CDs, or DVDs, PowerPoint slides and multi-media packaged courses;
- Training equipment: Standard items of CF equipment used in a training role (e.g., radio, propeller);
- Training devices: Non-standard or obsolescent items of equipment used in a training role (e.g., old engines, mock-ups, models, parts or pieces of discarded equipment); and
- Simulators: Any device or combination of devices, equipment or training aids which represent the important features and/or functions of a real life situation, piece of equipment, or device.

4.6.3 Ideas for the Use of Training Aids

Training aids can appeal to all five senses. It has been cited that 75% of all learning comes through sight (if you are on the ball, you would recognize this as a supporting statistic from CREST in our previous section!). How would you explain in words to a four-year-old what an elephant is? If the child could see the elephant he/she would learn more, and if the elephant happened to trumpet at the same time, the child would learn even more from his/her sense of hearing. (CREST again!) You may feel at this point in time that we are stating the obvious. However, training evaluations have indicated a lack of creativity or intention to capitalize on the employment of training aids. Always ask yourself, “Is there some way of communicating this better?” In other words, think about it while you are designing your Lesson Plans, and do not be afraid to be creative. Instructors may find it difficult to find good ideas for training aids. Consequently, their aids may be routine or even dull. Several sources of assistance may be of available to you. Some are listed below:

- Graphics section. Almost every school or base has access to an imaging or graphics section manned by professional visualizers and artists who can suggest new techniques and help you come up with ideas. They may even be able to help with production.
- Other instructors are a valuable source of ideas. Sometimes their ideas can spark a new one of your own.
- Commercial displays in newspapers, magazines, or even in television and stores, can suggest imaginative ways of depicting ideas.
- Finally, the instructor’s own imagination. If given full rein, this is an excellent source for new ideas.

The training aids should concentrate on key points. While there are no absolute rules on when to use aids, they are often appropriate when:

- long segments of technical information are necessary;
- a point is complex and difficult to describe;
- the instructors finds that they themselves are forming mental visual images; and
- the students seem puzzled by an explanation or description.

4.6.4 Advantages and Disadvantages of Training Aids

We have already stated that training aids can help the trainee learn faster and better. Some of the particular advantages of training aids are that they:

- Help students understand principles and laws. A standard example is the use of training devices to explain subjects such as mechanics, electricity and physics;
Bring realism into the classroom, such as the depiction of a manoeuvre and its effect through film; and help students by giving them a pattern or helping them form associations (a common use being an org chart).

Listed below and on the following page are some of the common training aids and their associated advantages and disadvantages. **Today's most common aid, digital projection, will follow at the end.**

**Whiteboard**

- Highly flexible;
- Can be prepared beforehand;
- Inexpensive;
- Easy to use;
- Two dimensional;
- Time consuming: old material has to be erased;
- Instructor has back to class when using; and
- Requires good writing.

**Here are some considerations for the use of the whiteboard:**

- Take advantage of colours available in liquid markers when highlighting points or drawing diagrams. Use strong working colours such as black, green, brown and blue. Use red for emphasis. Avoid yellow as it is hard to see from the back of the class;
- Use circles, oval, squares, lines and bullets to draw attention and assist in organizing the ideas and thoughts on the board;
- Print (not write) letters at least two inches tall so that everyone can read them;
- When talking to the class, talk to the class, not the whiteboard. Simply write your point, then turn to face the class and elaborate. Also, be sure to stand clear so as not to obstruct the view of the students;
- Pace yourself when writing or drawing something. Pause for a second and let everyone have a chance to see and process the information before you address it;
- Once you have some information on the whiteboard, move around. Walk over to where the students are sitting so that you can see the information from their angle and distance;
- Some drawings or writings may be elaborate and you may want to prepare them before class, covering them up until needed. You may also want to give consideration to flip charts or wall sheets for this purpose (they have the added benefit of being reusable); and
- When finished with a marker, be careful not to fidget with it. Again, be natural, but if you think you may fidget with it to the point it is distracting, then put it down when you are not using it.

**Videos/Films**

Videos and films provide us with the benefit of showing motion, which is very important in complex instruction such as flight training. We have included both video and films together here. The only real difference is that video has the added benefit of being shown in a fully lit room. When selecting videos or films, they should not be so outdated as to lose their training appeal. We have probably all seen training movies which, although good in dealing with teaching points, also have a lot of distracters. For example, some of the old black and white training films are amusing due to the changes in technology and styles. While your main concern is on a good quality film that addresses your teaching points, you will also want to get the most updated film possible. You should also preview your film so that you can "talk to it" before showing it.
When you use video/film, you should:

- Familiarize yourself with the projection equipment and have it ready to go. All too often, instructors disregard this step since they have “used it so many times before.” Then unexpected “technical difficulties” take place while the learning process stops.
- Relate the video to the course content. Explain its setting and get students thinking about the video in advance. Provide links to other training they have been exposed to. “In this film you will see a nice depiction of the approach sequence and the ATC communications we discussed last class.”;
- Tell the students what you expect them to observe in the video. Even provide handouts to accompany the film with some key teaching points you want them to look for;
- As a variation of the above, you can give different points to look for, to different groups in the class. When the video is complete each group can report on its conclusions. This increases participation in what is typically a passive learning environment;
- Give the students clear guidance as to what you expect them to do with the information provided in the video. Do you want them to take notes? Will there be a discussion afterwards? Consider having the students write questions based on the film for discussion afterwards;
- You should stay in the room while the video is playing, even if you have seen it before. As instructors, we are busy and often leave the students to view the video while we take advantage of the time in other ways. You are still the instructor, the video is enhancing your instruction, not taking the place of it. Your attitude towards the film will influence the students attitude towards it;
- Stop the video and comment on particular points as you deem appropriate. Do not think you have to run the video uninterrupted. If a valuable point was just portrayed, stopping the video and addressing it will provide the emphasis and student interest component of the Principles of Instruction; and
- Follow up on the video. Refer to it in subsequent lessons where applicable.

Models/Mock-ups

- Three dimensional representation;
- Allows manipulation of parts or machines without impact of error;
- Ease of use;
- Course member interest;
- Realism;
- In large groups, students may not have an opportunity to observe, handle, take apart, etc;
- It may be impractical, too expensive, or impossible to obtain models for a lesson; and
- May be storage problems.

Below are some considerations for their use:

- Introduce the equipment, stating its purpose and main components to orient the students;
- Ensure there is an unobstructed view of the equipment. Have students reposition themselves or stand and form a semi-circle around you so that they can see;
- If you intend to use charts or models, leave them out of sight and have them carried to the front of the room when needed. Otherwise, they will be distracters when not in use. Another thing you can do is to keep them covered until needed. Anything to peak your student’s curiosity;
- Since you are calling on the students’ senses (visual, verbal and perhaps audio and tactile), speak slower than when simply lecturing. Give students a chance to absorb all of the information;
- Since you are handling a piece of equipment, make a concerted effort to keep looking at the class to determine if there are any questions and to read the group (looking for confusion, etc..). Instructors often have a tendency to look at the equipment too much; and
When you are finished with the equipment, remove it from view.

Flip Chart
- Portable (ideal for use in the field);
- Very flexible;
- Easy to store;
- Requires neat handwriting;
- When writing, instructor has back to class; and
- Tendency to become messy.

4.6.5 Development of Digital Projection Training Aids

When developing training aids, remember they have to be seen or heard. Placing or projecting the training aid in the classroom prior to instruction to ensure you can see it from various angles and positions is a must for instructors. At the present time, the most commonly used training aid is digital projection. Developing digital presentations requires moderate preparation prior to conducting the class.

Identify the main teaching points to be addressed through computer/digital projection. Develop the “slide” while keeping some basics in mind:

- All lettering and illustrations must be able to be seen from all positions in the class seating arrangement;
- Use the 6 X 6 rule as a general guide. It states that the slide should contain no more than 6 lines of 6 words each. If planning your visuals on paper beforehand, use index cards. This forces you into a smaller work space and helps avoid cluttering the image;
- Generally use at least 24 point size; anything less will be too hard to see;
- Avoid using all upper case. A COMBINATION of upper/lower case works much better allowing you to place emphasis in the exact spot you wish to;
- Do not get carried away with the features of the program and incorporate animations or graphics at the expense of your teaching point;
- On the projection, include only the key points. Too much information and the projection becomes a distracter instead of an enhancer. Do not become the cause of “Death by PowerPoint”;
- Use “build” when working with bullets where the bullets appear in sequence;
- Keep graphics simple and to the point, the visual is supposed to be "worth a thousand words." It should not take a thousand words to explain it.
- The use of colour is very important. Use good contrasting colours. Here are some guidelines:
  - Avoid dark print with bright backgrounds such as black on white. This is confusing to the eye as the text is drawing the eye in, but the bright background reflection is pushing the eye back (try looking at a fluorescent light for a while). Darker or soft backgrounds work much better with contrasting text.
  - Avoid the use of red in the text. First, it is hard on the eyes and, second, red is a colour symbolizing danger and warning. Finally, red is difficult to see in a dark room. The anatomy of the eye and the way the brain processes colour is responsible for this reaction to red. Red text should be avoided unless you are specifically highlighting a warning or hazard and you have a good contrasting background colour. Even in this case, it should be limited to one or two words. If over-used, it will detract from the emphasis; and
- Once you have finished producing your slides, it is a simple case of testing them out in the actual training environment as previously mentioned to ensure they are clear and visible from each student’s perspective.
Note: Be sure to make a backup copy of the presentation and, perhaps, print copies of the actual slides. This way, if the computer is not working, you at least have the option of transferring the presentation to transparencies for use on the OHP.

Most considerations pertaining to digital projection take place in their preparation; however, there are several points regarding their application:

- As in the case of the whiteboard, ensure when addressing the class you look at them, not the projection;
- Stand clear of the screen so as to not obstruct the view of the students, or have the image projected onto parts of your body, which is very distracting;
- Move around the room, ideally you should have a remote mouse so you are not “chained” to the computer; and
- Let the students read what is on the screen. If you are talking and you have just projected an image with bulleted text, there is competition between you and the projection. Read the applicable bullet to yourself to ensure the students have had enough time to read it, then continue talking.

4.6.6 Inclusion of Training Aids Into the Lesson Plan

Now that we have developed training aids for each teaching point, we can incorporate this information into the Lesson Plan so that the instructor, regardless of who it is, knows the training aids and the sequence. It is a good idea to reproduce the training aid right in the LP, or give a detailed description, so that the instructor knows what training aid is required for the lesson. For example, inserting a copy of the slide, in the case of PowerPoint, would be more effective than simply stating “slide 1”. In the former case, the instructor can review the lesson completely by using the Lesson Plan, whereas if they could not recall what slide 1 depicted, they would have to physically seek it out. Two pages forward shows the first stage (of the body) of the ‘debrief’ lesson plan incorporating training aids.

4.6.7 Summary

The use of training aids allows us to apply natural methods of learning through sight and sound. Human orientation is largely visual. The communication of our thoughts is often accomplished through visualization. In fact, the sense of seeing is so important to us that we often use terms such as “Do you see?” “Do you get the picture?” “What is your viewpoint?” in referring to understanding in our daily language. You should strive to incorporate what we have discussed here in your future lectures. When you have a teaching point, determine if it can be supported by a training aid. If a teaching point is already supported by a training aid, can it be improved upon or replaced to become more effective?

4.7 Learning Aids

Learning aids are those things that we give students to enhance their learning. For example, if you are using a PowerPoint presentation and have included handouts as part of the presentation, either before, during or afterwards, then the handouts become learning aids. Courses that provide students with manuals, textbooks etc are providing students with learning aids. This Flight Instructor Guide is a learning aid. If students are taking massive notes during the class, this may be at the expense of focusing on what is being said, and indicate the need for a learning aid such as handouts or a text. You should review the teaching points in your lessons and determine if learning can be enhanced with learning aids.

4.8 Example Lesson Plan

Now that we have completed the sections dealing with the development of Lesson Plans, we will look at a completed one, based on our “debrief” lecture. It is important to note that formats for the Lesson Plans may differ slightly from unit to unit. However, all Lesson Plans should contain the same information presented in the Flight Instructor Guide examples. Your unit may have a master Lesson Plan format they wish you to use. The important thing is that instructors are able to pick up a Lesson Plan and have an entire “plan of action” for conducting that session in their hands, complete with the organization of the material such as introduction, body
with stages and interim summaries, as well as a review and conclusion, as previously detailed in Section 4. In addition, the LP should contain guidance for the use of questions, verbal support and training and learning aids as detailed in this section.

**Example Lesson Plan (Includes Only Stage 1 Of The Body)**

**PART 1: LESSON IDENTIFICATION**

**TITLE:** MODULE 11 – DEBRIEFING STUDENTS

**Performance.** Conduct Student Debrief.

**Conditions.**
- Given: Training Mission & Student(s); and
- Denied: Assistance.

**Standard.** The IC shall conduct a debrief in accordance with the Instructor’s Handbook, Module 11.

**Main Teaching Points:**
- The purpose of the debrief;
- Debrief elements;
- Preparing for the debrief; and
- Tips and techniques for the conduct of a debrief

**Method.** This EO will be accomplished by a combination of Self-Study and Guided Discussion. Students will be required to read Module 11 and be prepared to respond to module questions. The concepts will then be reviewed and expanded during the associated guided discussion as detailed in this Lesson Plan.

**Duration.** 2 Periods. (1 self-study + 1 guided discussion)

**References.** A-P9-000-001/PT-000, A-P9-050-000/PT-001, FIC Instructors Handbook.

**Training/ Learning Aids.** Standard classroom with whiteboard and projection system/FIC Instructor’s Handbook.

**Note to the instructor.** The guided discussion shall be conducted in structured manner, using the list of “questions to the class” provided in the following pages. Instructors are to complement each segment of the guided discussion by follow-up and direct questions taking into account the flow and direction of the discussion. Interim summaries shall be conducted at the end of each segment to confirm the material was learned and provided a basis from which the discussion can progress to the next segment.
Module 11 The Debrief

PART 2 – INTRODUCTION

Objective: The IC shall describe the debrief process as outlined in Module 11 of the FIC Instructors Handbook.

Outline:

→ The purpose of the brief
→ Preparation for the brief;
→ Brief format; and
→ Conduct of the brief.

Introduction:

Opening Activity: (Slide 1 Title) Open with an overhead question to the class, ask them to think for a moment about the worst debrief experience they can remember.

Follow-up Question: “Why do you consider this experience a poor debrief?”

Use IC responses to introduce the lesson by linking responses with the role of the instructor, i.e., responses should lead you to main teaching points which are: (Slide 1 - bullets)

To be an effective instructor they need to understand that debriefs exist to improve student performance;
That the preparation for the brief will have a direct impact on its effectiveness;
That debriefs will follow a predetermined and proven format; and
That the conduct of the brief is typical of human interaction and interpersonal skills are important.
Module 11: The Debrief

Visual Aid Description

Slide 2 Title

Build Bullets

Slide 3

Build Bullets

Purpose of the Debrief

- The debrief provides an opportunity to capitalize on:
  - recently completed task performance;
  - motivated students;
  - an honest teaching/learning environment;
  - one-on-one tutoring environment;

- The debrief provides one of the best teaching opportunities to the instructor

PART 3 – BODY OF THE LESSON

Stage 1 – Purpose of the Debrief (show Slide 2 – Title only)

Stage Introduction: Indicate that you will focus the first part of the discussion on the purpose of the debrief, and try to relate the concepts with the job of a line instructor.

Stage Body: Emphasize that the debrief is not simply a matter of recounting the students’ performance. While the students will be anxious to know how well or poorly they performed, the instructors' objective is not so much to talk about the past, but rather to use the past performance as observed in the training mission to make adjustments to future performance.

The roles of the instructor from Module 2 may be reviewed here:

Question (overhead): What are some of the roles of the instructor from Module 2?

Ans: Instructing; Leading; Tutoring; Coaching; Mentoring; Assessing; Course Managing; Quality Assurance.

Question (follow-up): How do these relate to the learning environment of the debrief?

Verbal Aid: (Statistic) In the case of tutoring, it was found that students who were tutored performed better than 90% of their classroom counterparts.

Question (follow-up): Why do you think this is the case?

Question (follow-up): Do you think that the debrief lends itself to a learning environment? Why?

Verbal Aid: (Reason) (Recap – use Slide 2 auto build) The debrief is an optimum learning environment because:

- The task performance has been recently completed and is fresh in the student’s mind;
- Students are motivated to do well (they want to look good, not bad);
- The students are “exposed”, there is no “low profile” in a classroom or amongst their peers, performance has been objectively observed and an honest environment exists; and
- Students are in a one-on-one (tutoring) environment (a premium).

This must be clear – the purpose of the debrief is to enhance the learning process. It is also one of the best tools we have to help us in our various roles as instructors.

Interim Summary: (Slide 3) Perform a quick recap of the purpose of the debrief and state that it is a valuable tool in meeting our instructional objectives.
4.9 Lesson Plan Checklist

On the following page is a checklist to assist in the development of your Lesson Plans. It is quite likely as an instructor you will be responsible for developing lessons, and while we have shown an example of a particular template, we realize that your Lesson Plans may have a different one. As stated before, it is the processes, general format and organization that are important, and the checklist is included to assist you in this regard.

4.10 Conclusion

An effective lesson plan will go a long way to ensure you deliver an effective lesson. The examples and ideas provided are a starting point but you must write a lesson plan that works for you. If you find the layout or format is not working for you, change it because the end product is a well delivered lesson and if your plan inhibits the delivery, you will not do the students justice.

All lessons have the following parts:
- Introduction;
- Body; and
- Conclusion.

Before the lesson, the instructor is responsible for the preparation of the instructional environment. This includes:
- Classroom Setup;
- Training Aids are available and working; and
- Sufficient training material and equipment.

There are various types of questions including:
- Lead-off;
- Follow-up;
- Overhead;
- Direct; and
- Reverse and Relay.

Questions should be designed to test the students at the level they are currently working. They should be clear and be focussed on the material of the lesson.

Now that preparation is complete, see Flight Instructor Guide Chapter 1 Section 4, 5, and 6 for tips on delivering air lessons, and Section 10 for tips on delivering ground-based lessons.
FIG LESSON PLAN CHECKLIST

Part 1 – Lesson Identification (Cover Sheet)

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>EO Number and Name</td>
<td></td>
</tr>
<tr>
<td>Objective(s)</td>
<td>From EO in TP</td>
<td></td>
</tr>
<tr>
<td>Method</td>
<td>Instructional Method to be used</td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>In minutes for entire lesson</td>
<td></td>
</tr>
<tr>
<td>Main Teaching Points</td>
<td>As per TP</td>
<td></td>
</tr>
<tr>
<td>References</td>
<td>As applicable (section/page, etc)</td>
<td></td>
</tr>
<tr>
<td>Required Training Aids</td>
<td>List as applicable</td>
<td></td>
</tr>
<tr>
<td>End of Lesson Test</td>
<td>As required</td>
<td></td>
</tr>
</tbody>
</table>

Part 2 – Lesson Introduction

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review</td>
<td>Relate previously taught material (if req’d).</td>
<td></td>
</tr>
<tr>
<td>Objectives (What)</td>
<td>Explain what the trainees will be able to accomplish at the end of the lesson.</td>
<td></td>
</tr>
<tr>
<td>Importance (Why)</td>
<td>Explain why it is important for the trainees to achieve the lesson objectives.</td>
<td></td>
</tr>
<tr>
<td>Fit (Where)</td>
<td>Relate where/how the lesson fits into the course and on the job.</td>
<td></td>
</tr>
<tr>
<td>Approach (How)</td>
<td>Provide an overview of how the lesson will be conducted (stages).</td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>Minutes for introduction (instr guidance)</td>
<td></td>
</tr>
</tbody>
</table>

Part 3 – Body of the Lesson

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Brief intro to the specific stage of the lesson</td>
<td></td>
</tr>
<tr>
<td>Teaching Points (TPs)</td>
<td>Each should be clear, concise &amp; correct and have appropriate:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Teaching with emphasis on ICEPAC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Verbal Support (CREST)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Training Aids</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Learning Aids</td>
<td></td>
</tr>
<tr>
<td>Trainee’s Participation</td>
<td>Students assist in development of TPs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use of questions/activities/etc.</td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>Minutes for each TPS (instructor guidance)</td>
<td></td>
</tr>
<tr>
<td>Confirmation</td>
<td>Student learning is confirmed</td>
<td></td>
</tr>
</tbody>
</table>

Part 4 – Conclusion

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>Brief review of teaching points</td>
<td></td>
</tr>
<tr>
<td>Closing/Re-motivating</td>
<td>Lesson importance and links with future activities</td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>Minutes for conclusion (instructor guidance)</td>
<td></td>
</tr>
<tr>
<td>Additional readings</td>
<td>As required</td>
<td></td>
</tr>
<tr>
<td>Assignments</td>
<td>As required</td>
<td></td>
</tr>
</tbody>
</table>

Ensure Principles of Instruction are emphasized throughout the lesson:

Interest; Comprehension; Emphasis; Participation; Accomplishment; Confirmation
Section 5 - Flight Line Lesson Preparation and Briefs

Introduction

Although this section is described as Instructional Delivery (Airborne), in reality it applies on the ground as well. Time spent training in the air is very valuable. Both you and the student must be thoroughly prepared prior to take-off in order to maximize the learning experience. It is the intention of this section to provide you with some considerations to maximize your airborne training instruction.

Section Objectives

Upon completion of this section, the Flight Instructor should be familiar with the skills required to:

- Prepare an air lesson;
- Deliver an air lesson briefing; and
- Deliver a mission outline brief:
  - Aim
  - Sequence
  - Confirmation
  - Conditions

5.1 General

When it comes to air instruction, a methodological approach is extremely important. There are at 4 major phases to the air training mission for the instructor:

- The air lesson preparation;
- The air lesson brief;
- The air lesson; and
- The debrief.

Since the debrief is a significant teaching/learning opportunity, we have elected to dedicate an entire section (Section 6 – Air Lesson and Debrief) to its proper conduct. However, some considerations for the debrief are included in this section as an introduction.

5.2 Air Lesson Preparation

Students should not be required to attempt an air exercise if they have not received all the necessary ground instruction to prepare them for it. Nor should they be required to attempt the air exercise with inadequate briefings, lack of preparation time, significant last minute changes, etc. that conspire to send the student aloft in a confused or exhausted state. Therefore, proper planning for airborne instruction is important. While many of these factors are addressed through scheduling and the Training Plan, you need adequate preparation to ensure efficient use of time, both in the briefing and in the air.

In order to be an effective instructor, you too must be adequately prepared for the airborne flight instruction. Instructors need adequate preparation to ensure efficient use of time, both in the briefing and in the air. Some key areas of preparation are listed below:

- Review the upcoming air lesson training documentation and specific lesson objectives to determine what must be taught, as well as what proficiency levels are required. You need to know what tasks the student is expected to do with or without assistance;
- Review student progress data to determine the student strengths, weaknesses, and what needs to be improved or reconfirmed;
Develop a plan or “air picture” so that you do not arrive at your training altitude and waist precious time trying to determine what you will do next. Visualizing the airborne instruction and thinking about how much practice time a student will have on any given sequence are good tips to help keep you on track. Remember that this plan or “air picture” needs to be flexible to account for student weaknesses, environmental conditions, local traffic etc., however having a plan before you begin airborne instruction is an invaluable tool to you as an instructor;

Review student progress data to determine lesson emphasis, i.e., student strengths, weaknesses, and what needs to be improved or reconfirmed;

Plan the upcoming lesson including: potential developmental questions, subdivision of tasks, direction of attention, etc.;

Prepare your training mission brief based upon the above requirements and your plan for conducting the air lesson;

Assemble any training aids required: references, models, board briefs, digital brief, etc., that are necessary for the brief. Failure to plan the briefing and lesson will result in you and your student(s) not utilizing precious flying hours to their full potential. Planning is critical as you will be operating in a flying classroom, greatly reducing your margin of errors. You must be ready if you are to maximize student training;

To make efficient use of the time available, the trip should be planned to avoid delays between sequences. Altitude limitations, area restrictions and weather conditions should all be considered. The trip should be planned so that one sequence is logically and directly followed by another with the minimum time spent losing or gaining altitude in transit from one area to another;

Students should not be required to attempt an air lesson if they have not received all the necessary ground instruction to prepare them for it. Nor should they be required to attempt the air exercise with inadequate briefings, lack of preparation time etc that conspire to sent the student aloft in a confused or exhausted state. Therefore, proper planning for airborne instruction is very important; and

Failure to plan the air lesson will result in you and your student(s) not utilizing precious flying time to its full potential and may result in poor student performance. Planning is critical as you will be operating in a flying classroom, greatly reducing your margin of errors. You must be ready if you are to maximize student training.

5.3 The Air Lesson Brief

5.3.1 Purpose of the Pre-Flight Briefing

The purpose of the pre-flight briefing is to prepare the student for the upcoming air lessons. This is done through a review of old material, the introduction of new material, and linking theoretical knowledge with practical skills.

First, it is important to understand the difference between the pre-flight briefing and the mission outline. The pre-flight briefing is done in a formal setting and normally done the day before the air lessons will actually be flown. The mission outline briefing is given by the instructor immediately before the air lesson to be flown.

The pre-flight briefing can be done as a group activity with all of the instructor’s students. This will save time, and allow students the opportunity to learn from each others questions. The only time that a group briefing would not be a good idea is if you have a student who has fallen behind in training. This student will need individual attention until they are caught up.

Traditionally, pre-flight briefings would be done in a formal classroom setting. This allows the instructor to use the best training aids. However, this is not always possible so instructors should choose a location which is comfortable, well lit, and private enough so that distractions will be minimized. Training aids are definitely key to a pre-flight briefing so instructors are encouraged to bring ones appropriate for the air lessons being briefed. A model aircraft is always a good idea.
5.3.2 Elements of a Pre-Flight Briefing

The pre-flight briefing is generally broken down into 4 stages:

- Review;
- Overall Aim of the lessons;
- Identifying new work; and
- Conclusion

**Review**

This is the first stage of the briefing and must be done before anything else. This is a good place to review old material, talk about any trends which are common to all students, and check on your students’ welfare. This is also a good place to review material specific to the air lessons such as SOPs and lessons previously learned. The review should be dynamic and involve student participation.

**Overall Aim**

This stage is where the instructor introduces the goal of the lesson(s) being taught. It should be a general concept such as “practicing unusual attitudes” or “introducing parts of the circuit”. The biggest challenge which an instructor will encounter is when briefing multiple air lessons which do not relate to each other. The ACGP course syllabi are pretty good about blocking similar lessons together, but weather or other factors may disrupt this flow. If this is the case, the instructor will have to address each lesson separately.

**Introducing New Work**

This is the stage where the instructor introduces the new material being learned in the lessons being briefed. The trick here is to teach the new material without losing the attention of the students. Time is of the essence. If the instructor knows ahead of time that the briefing will go long, then plan a couple of breaks. The instructor can also plan ways to engage the students dynamically. For example, while teaching circuits and flight management the instructor could set up a mock airport and have the students walk and talk their way through the proposed lessons.

**Conclusion**

Wrap the pre-flight briefing up with a review of the new material, including confirmation of key points. This is also a good time to remind the students of any SOPs (though done in the initial review, it is always good to remind of rules), and any announcements relevant to Summer Training Centre life (change in meal times, reminder of exhaust/intake weekend, etc). Also, verify any welfare issues which may have come up in the review to ensure you have everything.

- What does the student know now, and to what depth?
- What does the student need to know?
- How will you present this material?

For this purpose, instructors use “subdivision of tasks” and “direction of attention” to assist in identifying new work and assisting in instruction. Before proceeding, we will explain these terms.

**Subdivision of the Task.** This refers to the chunking of a relatively large task into smaller, more manageable pieces. Rather than learning a complicated task in one piece, you break the task into several logical subtasks. In this section, for example, the task “Conduct an Air Lesson” is broken into four sub-tasks that are again subdivided. Normally, an instructor would teach and emphasize each sub-task. Like putting together a puzzle, it is a building block approach. In some cases, it may even be possible to teach and practise each sub-task to proficiency before attempting the entire task. This is an efficient and tested method for teaching complicated tasks.

**Direction of Attention (DOA).** This goes hand-in-hand with “subdivision of tasks” and refers to how you draw the student’s attention to the critical element(s) of the task. For example, the critical elements for a glider pilot doing their first landing is the correct height to start the flare. Despite other requirements and information coming
at the pilot, his/her focus and concentration must be on the altitude as they get very close to the ground. The concept is that for each task there are critical elements which require the student’s focused attention in order for the task to succeed. They should be addressed first. Nice to know and finesse-type actions should come last. Sort of like a “Must”, “Should” and “Nice to know” hierarchy. Your job is to separate those critical elements from the multitude of less important data. You may leave out some of the less critical actions temporarily until the student has mastered the critical elements. As the student becomes familiar with the task and gains confidence, additional variables and finesse-type actions can be added until the student has mastered the complete task. Again, the concept is that the student should not be expected to perform all aspects of a complicated task in the first attempt. Critical elements should be taught and practised first; when these are mastered less critical elements should be slowly introduced until the entire task is mastered.

5.3.4 Individual Task Brief (Board Brief)

The presentation of a board briefing incorporating this approach is an important step towards a successful training mission. You will want to brief each item or task by providing an aim, a motivation, an outline of the procedure focusing on the new work and, finally, link it to other tasks. For this purpose, the AMOL technique is valuable. It is a tool for you to use to ensure that all aspects of the task are covered.

The AMOL technique is described below:

- **Aim** – The What! What is the objective of this task? What the student will be taught and what he/she will be expected to know by the end of the instruction.
- **Motivation** – The Why! Why do they need to know this? “You need to know this because if you have rope break…”
- **Outline** – The How! How will this portion of the lesson evolve? The topics/stages to be covered.
- **Link** – The Connection! The student is shown how the current lesson is linked to previously learned material. E.g. “This is what you know how to do already, manoeuvres X and Y. This new manoeuvre, Z, is really just a combination of X and Y. All we have to do is put them together…. “ The lesson can also be linked to future tasks. “This manoeuvre will also be used later on when you start…. “ This step allows the student to put the elements of what is being taught into context.

If you think in terms of the introduction, body, and conclusion that was applied to each stage in building a classroom lesson (Section 4), then the Aim and Motivation provides the introduction to the task. The Outline or “how” portion is the body, and the Link is the conclusion.

The ideas that follow represent one way of completing the “Board Brief” that has proven to be quite effective:

- Write the teaching point you are covering on the board;
- Write the acronym AMOL vertically on the left side of the board;
- Discuss and write the aim or the objective of the teaching point (A);
- Discuss and write the motivation behind the teaching point (M). This will require some detail as the student(s) must understand why they are being taught a particular procedure. They may have been exposed to this before, but it should be stated again. Enthusiasm is necessary to impress upon the student(s) the immediate importance of the lesson, as well as the long range goal. Future roles may be used as a source of motivation, as well as any previous experiences that can serve as motivation. Providing motivation may be as simple as asking the students why they think the procedure is important; and
- The Outline is the major part of the presentation (O). It describes the “how”. You would have previously prepared this portion of the briefing breaking down the Teaching Point/manoeuvre/tactic into steps (subdivision of tasks). You should not be lost for words at this point in the briefing. Students should be familiar with the Teaching Point, allowing you to include developmental teaching and questioning techniques. Below are some guidelines to assist in this portion of the presentation:
  - Think about the teaching point being covered and how you would perform it. Subdivide it into portions in a logical order and place these on the board;
Once the teaching point has been divided, identify those portions of the teaching point that represent new material. This is where you want to place the emphasis;

Now that the teaching point has been divided up into stages and you are aware of the new work requiring emphasis, you can focus the student(s) Direction of Attention (DOA) on those points and then proceed to those parts the students already know;

You can identify one DOA for each portion of the subdivided procedure to allow the student(s) to improve. Do not just offer up book knowledge as the student(s) likely know the book very well. Offer up some “how to’s”, providing tips and techniques to do the procedure/task;

Share your experience and lessons learned. If the new work for pilots is finding the 30-degree bank in a medium turn, don’t simply say this is the new work where you want the students to focus – offer a “how to” to find the 30-degree point. This is the essence of teaching;

“I have not failed, I have found one hundred ways that don’t work”, Thomas Edison.

The final portion of the AMOL is the Link (L) and it acts as the conclusion. It is here that you link this task with previous tasks, or to new ones yet to be covered. This gives the students context, and again emphasizes the importance of the task. If the task is based on previous learning it assists in comprehension. For instructors unfamiliar with the above technique, it may appear confusing. However, it is simple once it has been performed.

While the process described above has been proven effective, you may wish to modify the approach. The basic concepts of AMOL should always be used as a proper brief of task execution and will require an aim, motivation, and an organized approach or outline. They should always be linked with other tasks/objectives. AMOL reflects an application of the Principles of Instruction discussed in Section 2. This technique is used to brief individual tasks within the air lesson brief. If there are several tasks being conducted on a trip incorporating new work, then you would use AMOL for each one of them. Once you have covered all the teaching points, using AMOL to address the new work, you can proceed to the conclusion of the brief.

5.3.5 Concluding the Air Lesson Brief

At the conclusion of the air lesson brief, you should provide a good description of the training sequence and interaction with the other crew members. Also emphasize safety, etc.

Ensure you include the following:

- Review the main points of the lesson – clearly, quickly and concisely;
- Encourage student questions;
- Ensure student comprehension by asking several key questions; and
- Briefly re-outline the proposed exercise sequence.

5.3.6 Common Briefing Errors

Some common briefing errors have emerged over time. It is hoped that by being aware of them you may reduce the likelihood of them occurring during your briefings. Some of the common errors are:

- **Inadequate motivation on the instructor’s part.** We have emphasized the importance of student motivation, however you must be motivated or it will undermine the process;

- **Poor student participation.** Don’t let the brief turn into a lecture. It is a prime learning opportunity. The students’ next task is to perform, so they are usually quite interested in getting it right. Take advantage of the opportunity by asking questions and using developmental techniques;
Instructor fails to discuss normal student errors. As you gain experience, you will see areas where students typically have problems. Address these in the brief and help the students increase their chances of success;

Briefings are too long. Again, don’t turn it into a lecture. You are trying to focus the students on the DOA aspects, not cover every little point;

Poorly planned and timed. This will come with experience. Hopefully this section and the chance to discuss the conduct of air lessons and their briefings will help in this regard;

Inaccurate material. Sometimes the “wing it” attitude does not only result in a poorly planned briefing, but also results in incorrect material being taught. You must ensure that a review of the procedures and the air lesson plan is conducted; and

Weak conclusions. Cover the broad points clearly, quickly and concisely. Students may endeavour to give the impression they understood everything in the briefing. It should be pointed out that this is the opportunity to clarify any points and address any difficulties. Do not waste time on irrelevant questions and answers. The brief should be a positive experience for the students, with specific “how to’s” and a solid outline of both the procedures and the general conduct of the entire trip, in a motivated atmosphere. Now that we have determined a plan of action to assist in the conduct of the air lesson brief we can progress to the conduct of the air lesson itself.

The most common errors in the pre-flight briefing centre on time. Remember that the students will need time to take care of personal things as well as study for ground school (which the instructor should be assisting with).

One common error is taking too much time to teach the new material. It needs to be taught effectively, but time does not necessarily equate to quality. The instructor needs to carefully plan out their approach to the lesson and focus on efficiency as well as effectiveness.

A second common error is covering too much in the review stage. The review should focus only on material relevant to the air lessons being briefed.

A third common error is not being able to conclude the briefing quickly. The conclusion does not need to be long, and in fact should be short. It is simply a wrap up.

5.4 Mission Outline Brief

The mission outline brief is done just prior to the conduct of the actual air lesson. Depending on RGS SOPs, this can be done prior to strapping into the aircraft or after strapping in. In any event this must be done prior to doing any pre-take-off sequences.

5.4.1 Elements of the Mission Outline Brief

The four elements of the Mission Outline Brief are:

- Aim;
- Sequence;
- Confirmation; and
- Conditions.
Aim
The instructor ensures that the student understands the purpose and goal of the air lesson to be flown. This will include a general statement on the overall purpose of the lesson and any new/upgrade PLs to be achieved.

Example: “The purpose of this lesson is to demonstrate and practice spins, spirals, and stalls. During this lesson you will need to achieve PL 2 for spins, spirals, stalls, and you must upgrade to PL 3 on gentle turns.”

Sequence
The instructor will outline the specific sequences which will be performed during the air lesson. This is also the opportunity to ensure that both air crew know who is responsible for performing each sequence.

Example: “For this air lesson, you will have control for pre-take-off, take-off, air tow, release. I will demonstrate steep turns, and then you will practice. You will have control through the circuit, and I will provide assistance as required.”

Confirmation
The instructor will confirm the relevant knowledge that the student will need to know for this particular air lesson. For early lessons this should be limited to items which are being introduced for the first time.

Example: “What airspeed must you be flying in order to enter a steep turn?”

Conditions
The instructor and student discuss the conditions of the day as they apply to the air lesson to be flown. This may include surface and upper winds, active runway, and alternate landing areas. The ultimate goal of this discussion is to ensure that the instructor agrees with the students assessment on how the weather (and other factors) will affect all of the major aspects of flight management and specific sequences.

Example: “Where are the winds coming from? How is that going to affect your take-off and circuit? What are the upper winds doing? How will that affect the work in the practice area?”

5.5 Conclusion
Delivering an air lesson is central to effective flying instruction. In order to have a high quality lesson you must have a plan. The four major phases of an air lesson are:

- Air Lesson Preparation;
- Air Lesson Brief;
- Air Lesson; and
- Air Lesson Debrief.

To start the air lesson brief the AMOL technique is used:

- Aim;
- Motivation;
- Outline; and
- Link.

Immediately before the air lesson the Mission Outline Brief is conducted:

- Aim.
- Sequence.
- Confirmation; and
Conditions.
Section 6 - Air Lesson and Debrief

6.1 General

This section provides a description of how the air time will be spent in covering a review of previous lessons; outlining who will have control of the aircraft at certain times; introducing and practicing new lessons; combining old and new lessons to increase general proficiency; and demonstrating the manoeuvres which will comprise the next briefing. The air exercise is used as a guide only. Students will vary in ability and it is up to the instructor to plan the lesson so that efficient use is made of airtime to give maximum benefit to his/her particular student.

6.2 Aspects of the Air Lesson

The air lesson is the culmination of all ground school and practical exercises. It is in the air lesson that we strive to provide the student with the realistic training experience they will need throughout their Air Cadet Gliding Program experience.

The air lesson uses a tutorial/coaching method. It can be applied or modified to any practical lesson, in the air or on the ground, where one on one coaching is required. The following terms are applicable to the airborne environment:

- **Subdivision of the task** – Introduced in Section 5, this refers to the chunking of a relatively large task into smaller, more manageable pieces. (See Section 5)
- **Direction of attention** – Introduced in Section 5, this refers to how you must draw the student’s attention to the critical element(s) of the task execution. Despite having the air lesson brief where this was covered, the student will often lose focus and “drop the ball”. It is up to you to help them pick it up again and keep focused on the critical elements of the task.
- **Airborne questioning techniques** – Never ask trivial or irrelevant questions, the training time is too precious. It is often difficult to question the student when you most want to – when you think they are having difficulty and you want to assess their thinking, since that is when they are most flustered. Keep the questions clear and concise. Try to extract the information you want from the student. As opposed to questioning in classroom instruction, you may find questions that require one word answers useful in an airborne environment due to the training tempo. (Review Questioning Techniques in Section 2)
- **Performance analysis** – This is careful observation of the student’s performance - what the student is doing correctly, what areas show weakness or error, and how to correct the deficiencies. Merely listing faults is not performance analysis. You must be able to analyze the problems in order to determine why they are occurring and how to correct the observed deficiencies. In an airborne environment you must then communicate the corrective actions to the student, using an explanation/demonstration process if required. It is not the student who is being critiqued, but the task performance. (See also The Debrief in this section)

6.3 Teaching the Air Lesson

In addition to planning the air lesson on the ground, an instructor should think about how they are actually going to teach each manoeuvre or task in the aircraft. For example, as instructors we all know how to execute a steep turn; however we must think of how we are going to teach this sequence. A good starting point is subdividing of the task as mentioned above. Simplify the turn by teaching it in stages. This will allow for a clear demonstration and allow the student to direct their attention at specific areas.

When teaching new work in the air, the format used is Explain, Demonstrate, Imitate, and Critique (EDIC). A full EDIC is not usually required for all sequences conducted in the aircraft, but it can still be a useful teaching tool. A full EDIC is required the first time you teach a new sequence. It gives the student the best opportunity for success. A proper critique is always important.

- **Explain** - The explanation is done to prepare the student for the demonstration, emphasizing what the instructor wants him/her to notice. The instructor must ensure that the student is looking in the right place at the right time during the demonstration. This explanation should be short and to the
The detailed briefing has occurred on the ground, there is neither the need nor the time to repeat it. The explanation may also direct students to what they should feel when following through on the controls.

- **Demonstrate** - In the ACGP, a demonstration is normally required even though the material has been previously covered during the briefing session. The instructor must fly the demonstration as accurately as possible ensuring that the student focuses on the points given in the explanation. Value can be obtained by having the student follow through on the controls.

- **Imitate** - After the demonstration, the student should fly the manoeuvre under the instructor’s guidance. To learn, a student must be given a chance to correct his/her own errors and develop a feel for the sequence. If an error becomes too great or, the instructor immediately corrects every error, there is little learning benefit. The instructor must carefully choose what guidance to give and when to give it, without distracting the student. Emphasis should be placed on the student first learning the major points of the lesson with increasing emphasis being placed on minor points during successive practices. Verbal guidance should be sufficient in most cases but the instructor must be ready to take control if required.

- **Critique** - The critique will take the format of: strengths, weaknesses and ways to improve. When debriefing, instructors should normally take control so that the student may devote full attention to the instruction. This should always be done when the student has attempted a task or manoeuvre for the first time. It is important to provide strengths so that the student can repeat them on the next attempt. When selecting weaknesses, instructors should limit themselves to two or three major points. Once an error has been identified the instructor must provide specific suggestions to correct it. It is important to allow the student the opportunity to apply the correction to the manoeuvre; this builds confidence by showing that the tip provided helped them achieve the desired level of importance. If no specific suggestions can be made there is little point in debriefing the student.

### 6.4 Control of the Aircraft

When teaching a sequence, instructors may require students to “follow through” on the controls. Students should do this by placing their hands and feet lightly on the controls so that they can feel the control movements made by the instructors. When students are performing a sequence, instructors must not “ride” the controls as this robs the student of the feeling of accomplishing the manoeuvre themselves and could lead to the dangerous situation where neither the instructor nor the student has control of the aircraft.

There will be times, such as landings, where the instructor may have to provide physical assistance without formally taking control. This should be the exception. The instructor must brief the student on his/her intentions and may have his/her hands and feet near the controls or may be following through lightly. Inputs while the student is flying should be made for safety, and the student must be informed of them during the critique. There should be no doubt as to who has control of the aircraft. Instructors must ensure that the procedure for giving and taking control, as outlined in the ACGP manual, is used at all times.

### 6.5 Fault Analysis

The sole purpose of fault analysis is to improve future performance. The student was in the aircraft and generally knows when he is fast, low, etc. Merely listing errors serves little useful purpose and is not fault analysis. For effective fault analysis the instructor must determine why an error occurred and provide a specific method of how to correct it. Why errors occur will be discovered in the monitoring done while the student is flying. The instructor must monitor the aircraft to check attitudes, configurations, etc. but he/she must monitor the student to ensure he/she is focussing his/her attention in the correct place and making the proper inputs at the proper time. Instructors should not be overly critical of minor faults during the early stages, but should correct major faults first and as improvement is noted, correct the smaller errors. Questioning a student may also reveal why an error is being made but must be kept brief and is often better used in the flight debrief.

Fault analysis is a major tool utilized in assisting instructors develop a students weaker sequences. For example, the task of coordination impacts many aspects of flight. The obvious problem is that the student is not utilizing proper rudder movements while turning or flying straight and level. If left uncorrected, this problem will also lead to poor pitch attitude combined with over and under banking of the aircraft. A common error that instructors make
is debriefing all these problems as isolated debriefing points. It is quite possible that focussing the instruction on coordination could possibly improve all three problems.

6.6 Maximizing Air Training

A few tips that will help you maximize in-flight training:

- **Follow-through.** Always keep track of what the student is doing to ensure it is what you want him/her to do. Brief questions or key words (cues) can help them refocus should they deviate;

- **Guidance.** Provide guidance as required without letting it get in the way of learning. Be brief, to the point, and try to have them recognize their own errors in performance;

- **Personal limitations.** This is based on knowledge and capabilities, and will improve with experience. Know the student’s personal limitations and your own. Never let a situation evolve to a point where it cannot be recovered.

6.7 Airborne Training Considerations

**6.7.1 Effects of Environmental and Physical Conditions**

The airborne environment can be a difficult one in which to train. Such factors as noise, temperature, turbulence, dehydration, fatigue and air sickness are all familiar to those who have conducted airborne instruction. These factors are also present in the operational environment. Our performance-based training doctrine, therefore, mandates training with these “real life” factors present. That is, we do not wish to eliminate, in training, aspects of the job aircrew have to deal with in normal flights. Although all the factors play a role, air sickness may be the most debilitating. Air sickness is a common occurrence among aircrew students. The problem is most acute in the early stages of training. The warning signs are pallor, sweating, retching and vomiting. The particular signs and symptoms of airsickness are not significant when compared to the effects that they have on the individual's ability to concentrate and to carry out his/her task. Not only will air sickness waste training time, it also makes it difficult for you to assess the student’s true ability. If a student feels mildly unwell but keeps symptoms hidden, performance may be attributed to a lack of skill or potential. There are limited things you can do. However, given the value of training time, it may be worth taking a “time out” and allowing the student to look at the horizon and take a moment, or even cutting the trip short in extreme cases. If air sickness is temporary, most Training Plans will accommodate extra training time. If air sickness is a persistent problem, then the situation may require a review. Chronic air sickness should be dealt with in accordance with applicable orders and regulations. Remember, the objective is to train and not simply fly. If learning is not occurring, the objective is lost. See Flight Instructor Guide Chapter 2 Section 4 of this document for more details on handling airsickness.

6.8 How to Judge Safety and Learning Limits

Safety is the primary consideration in all aspects of the ACGP. Training ab-initio students is made safer by the attention of the instructor to all aspects of the student's instruction and flying.

Safety limits are the boundaries which an instructor must impose on a student's practice in order to ensure that the safety of the flight is never compromised. A good instructor recognizes that a student must have opportunities to make and correct errors, but evaluates the learning value of allowing the student to continue against the possible threats to the safety of the flight. This section will deal with identifying safety and learning limits and possible instructor reactions.

Proper ground preparation by way of briefings, scenarios and questioning can help to identify both the correct procedure for a sequence and corrections to potential student errors. A student who understands an error and its possible correction in advance of trying a sequence for the first time can often contribute to the safety of the flight. The instructor does not always have sufficient time to explain a necessary correction while airborne, and advanced preparation can give the student the tools to respond correctly to an error the first time it is encountered.
The safety limit is the point at which the instructor acts to prevent an unsafe condition from occurring. Instructors must include a margin for error within their safety limits in order to ensure that the glider is never placed in a situation that result in an incident or accident. The safety limit then is not the last possible moment to act in prevention of an unsafe condition, but is a time when the instructor has sufficient opportunity to easily correct the error.

The learning limit occurs prior to the safety limit and is primarily concerned with student learning. A student who is unable to correct an error is unlikely to be able to correct an increasingly larger error, and at this point the instructor takes control and corrects the error before returning control of the glider to the student.

As previously discussed, it is important to know at all times who is in control of the glider. This is normally done through the formal transfer of control using the "I have control, you have control" method.

While there is not a constant point for each manoeuvre where the safety limit is reached, there are indicators that can be used to identify the limit for each different occasion. Eventually instructors develop experience in evaluating a situation, but generally they consider the following factors:

- **The phase of flight.** Generally, errors made close to the ground or on tow have less of an opportunity for correction than errors made while in the practice area. Instructors may need to immediately take control without providing an opportunity for verbal assistance to the student. An abrupt climb during the take off that has the potential to cause tow plane upset needs to be corrected immediately and there is often a limited opportunity for any verbal input from the instructor. An attitude change while practicing turns or straight glide, while not ideal, is unlikely to cause immediate danger to the glider and gives the instructor more time to react before the safety limits are reached.

- **Student reactions.** If you provide clear and accurate verbal assistance, your student will often be able to follow your directions and correct their errors. In some cases however, your student may misunderstand or misapply what you have told them. A student who reacts incorrectly, or who fails to react to your verbal direction, may be an indication that the situation is approaching the safety limit. For example, a student who does not react to your direction to open the spoilers when significantly high on base may be placing the glider in a position that is quickly approaching the safety limits and has likely exceeded the training limits. A student who incorrectly uses significant aileron input during a recovery from an incipient spin may cause the glider to enter an unwanted spin.

- **Magnitude of the error.** The size of a student’s error, or the length of time for which they have been making the error without a suitable correction should be considered. Often, this will be an indicator of the student approaching their learning limit, however in some cases, it may be a precursor to reaching the safety limit. A student who has completed the first several minutes of tow and is unable to keep the wings level to maintain a steady position has not necessarily passed the safety limit. If the student is not making progress with their skill on tow, they may have reached their learning limit.

### 6.9 Flight Safety

The importance of flight safety in the air training environment is obvious, as is your role in its promotion. Students tend to emulate the attitudes and activities of their instructors. If you promote flight safety, students are likely to follow your lead. You are in a leadership role and must set an example by being alert to unsafe practices and be quick to follow up on them. See Flight Instructor Guide Chapter 2 Section 3 Safety Limits for more information.

### 6.10 The Debrief

The following information serves as an introduction to the debrief.

- The purpose of the debrief is not to simply state how the trip went. Its purpose is to improve future performance. Approach the debrief with that in mind;

- Debriefs should take place as soon as possible after the training event;
The debrief will follow this format:

- A statement regarding overall performance (trip assessment);
- Recognition of student strengths and procedures performed correctly;
- Identifying and analyzing areas of difficulty; often the students do not realize what was done incorrectly;
- Suggestions for improvement; important for the learning process to continue;
- Consequences if student does not improve (if applicable);
- Summary of the strong points, areas to improve and ways to improve them; and
- Re-motivation - finish on a positive note.

Performance Analysis is comprised of three elements:

- Strengths;
- Areas to improve; and
- Suggestions/Ways to improve.

When conducting a debrief:

- Recognize and respect the students as individuals;
- Never attack a student’s personality;
- Be objective in your analysis;
- Be consistent; and
- Be honest.

6.10.1 The Purpose of the Debrief

The only purpose of the Debrief is to improve student performance and to maximize student learning.

**Debriefs should take place as soon as possible after the training event.**

6.10.2 Debrief Elements and Format

The debrief follows a specific format. This is not an accident. The format is designed to maximize the instructional value of the feedback presented to the student. You are encouraged to follow this format for reasons that will become clear in the following segment.

The following sections describe the format of the debrief in detail.

6.10.2.1 Overall Performance

The first thing that should happen is that the student is apprised of his/her overall performance: Unsatisfactory, Marginal, Achieved Standard with Difficulty, Achieved Standard, or Standard Exceeded. Until the student receives this “primary” information, he/she will be unlikely to concentrate on “secondary” issues.

6.10.2.2 Strengths

Next, strengths are introduced. This starts the process in a positive atmosphere. There may be a tendency for a new instructor to think, "The student did well on tasks A, B and C, but he had problems in D and F. Therefore, I am going to concentrate on the problems and just omit or briefly refer to A, B and C." This would be an error. All of the elements of the debrief work together and all are equally important. None should be glossed over or omitted. Commenting on a student’s strengths is just as important as commenting on the weaknesses. In particular, you should focus on such things as mastery of a newly taught task or of a task with which the student was previously having difficulty.
The following are just some of the more obvious benefits that come from discussing a student's strengths:

- First, it helps ensure that your feedback is objective and factual, meaning that all aspects of the performance are covered – negative and positive. Without the positive reinforcement supplied by the debrief "strength" section, the debrief would merely become a session of criticisms and negativity. It would not be long before students would come to dread the debrief;
- Second, it reinforces to the student, and emphasizes, what he/she is doing correctly, thus greatly increasing the chance that the student will continue to conduct the task correctly;
- Third, it confirms to the student that real progress is being made. This will boost a student's confidence. If a student knows that he/she is doing some things right and that they are progressing, it is much easier to accept the seemingly negative comments which are to follow; and
- Lastly, although it must be obvious by now, the reinforcement of positive performance is a great motivator for the students. Motivated students do better than unmotivated students.

6.10.2.3 Performance Analysis

As discussed in Section 5, performance analysis is really the starting point for debrief preparation. Without good performance analysis the debrief is, in truth, just a waste of time. While conducting performance analysis, you will note strong points and areas for improvement in the student's performance – this is the easy part. More importantly, your task is to analyze performance to determine why problems are occurring and how they can be corrected. It is the ability to accurately pinpoint the cause of error and to successfully correct the error which separates the expert instructor from the novice. With experience, you will quickly learn to separate the wheat (causes) from the chaff (symptoms). While performance analysis has been previously described as a part of the practical, or air lesson process, in reality the same process must occur for all instruction including in the classroom for (academic), assignments or tests. For example, if you have just marked an assignment on "Weight and Balance Calculations," what should you be concerned with? Certainly, as an instructor you should be conducting an “analysis” to determine if there are any problem areas or worrisome trends. If a significant percentage of the class did not correctly complete the calculations you should try to determine why. Was there an error in the instruction? Was the assignment confusing? Was there something going on the night of the assignment that distracted the students? Normally, some kind of formal debrief, either verbal or written, will follow tests or assignments. Assignments may be returned with written comments. Tests may be verbally reviewed with the class, with emphasis on the areas where particular difficulty seems to have arisen. If an individual student has shown exceptional problems on either a test or an assignment, a one-on-one debrief may be required. However it is done, the debrief will follow the same general guidelines as already discussed – strong points, problem areas, how to correct or improve performance and motivation.

6.10.2.4 Areas for Improvement

Following the presentation of the strong aspects of the student's performance you should then introduce the areas requiring improvement. The novice instructor must realize that not every problem can be addressed in one debrief - “Pick the low-hanging fruit.” You should focus on several critical problems, perhaps 3 or 4 maximum. Do not present a long list of errors and expect the student to be able to absorb it all. The student will overload and shut off. Learning will not be occurring. Covering too much ground can actually cause more damage than not covering enough. You want the student to focus on and correct the 3-4 critical problems before worrying about lesser problems. Sometimes these lesser problems will actually correct themselves with time since the lesser problems are often corrected when the student corrects the critical problems.

The normal process for introducing areas for improvement is to take each individual problem area and address it with the student as follows:

- Explain to the student what you, the instructor, precisely see as the problem(s) affecting performance. Ensure that the student understands the problem(s);
- Ask the student to provide input as to how to solve the problem; and
- Provide your input as to how to solve the problem, then provide specific direction or advice on how to correct performance problems.
6.10.2.5 Consequences

If there are administrative consequences arising from the student’s performance, ensure that the student is aware of them. If conducting a practical mission, you need to be aware of the student’s course progress and the possible consequences of any Unsatisfactory or Marginal trips prior to the mission.

6.10.2.6 Summarize

You should quickly review strong points and critical weaknesses. At this point, the student should explain the required actions he/she must undertake for improvement. Questions can be asked of the student to confirm that he/she understands the errors that were made and the actions to be taken in order to remedy any problems. Prior to ending the debrief, you must ensure that the student understands what is required of him/her.

6.10.2.7 Re-motivation

Finally, you should re-motivate the student, particularly if the task did not go well. Even students who are performing adequately may feel like they are being criticized by instructors after hearing about 3-4 things they have been doing wrong. If the student is progressing normally you should reassure the student everything is on-track and that the problems encountered are normal training problems and not unusual. If, on the other hand, the student is truly experiencing difficulty, you can assure the student that everything possible will be done to bring the student up to standard. At a minimum, the student should leave the session feeling that you are on his/her side. Remember, your job is to teach students. It is next to impossible to teach a de-moralized and de-motivated student.

6.10.2.8 Conclusion

If you have not already noticed, you will realize once you read Flight Instructor Guide Chapter 3 Section 1 – Interviewing and Counselling that the debrief is, in reality, an extension of certain counselling techniques. Counselling is directed towards unacceptable or poor behaviour while the debrief is directed towards instruction and performance. It is easy to see the elements of what has been called the “sandwich technique” – begin with High (strong points), put Low (weak points) in the middle and close the “sandwich” with High (motivation). There are good psychological reasons for utilizing this method. Following the proper format will ensure that the student receives the necessary positive reinforcement and motivation as well as the direction he/she needs to learn and continue improving.

6.10.3 Preparing for the Debrief

6.10.3.1 Preparation Time

The debrief should be presented as quickly as possible after the instructional event, while it is still fresh in both the students (or students’), and your mind. Any serious delays will start to detract from the instructional value of the debrief. In the case of practical instruction, the debrief should certainly be given within the hour. In the case of a written assignment or examination, feedback can be delayed somewhat but should also be delivered as soon as possible, perhaps the next day or within a couple of days if necessary. Having said this, it is also necessary that you take the time to carefully develop the debrief so as to maximize instructional value.

6.10.3.2 Duration

The debrief should be precise and concise. If it is too long, learning is not occurring. For practical or air lessons the debrief should be concise and be relative to the length of the lesson; any more and the student will overload and tune out. As you should be addressing several critical items, rather than detailing every minor error, this timing should be attainable. It is reasonable that a debrief on a flight that teaches two new sequences and reviews three others should take longer than a flight that only teaches one item. In most cases, if it takes you longer to debrief what happened in the flight than to fly the flight, you are probably belabouring some of the points as a minute by minute description of the flight would take less time. In the end, you must deliver a debrief in an manner that is effective to you and helps the student improve their performance on the next flight.

6.10.3.3 Environment
For individual debriefs, you should pick a quiet area, free from interruptions and observers. At times this can be difficult on the gliding field. You may want to go past the parked vehicles or somewhere else that has minimal foot traffic. If there are training aids required to illustrate your teaching points, you should ensure they are available. To debrief written tests, you will undoubtedly use the classroom, again any training aids which would help resolve identified problems should be available.

6.10.4 Tips and Techniques

6.10.4.1 Tone

The tone of the debrief should generally be matter of fact, straightforward and objective. The student should feel like you are providing facts and advice, rather than feeling that you are there to criticize. Ideally, the feeling the student should have is something like, “We are here to identify and solve problems. The instructor is on my side and trying to help.”

6.10.4.2 Control

You must maintain control of the debrief. The debrief can be stressful, particularly if a student is having major difficulties or if his/her personality is such that constructive criticism is difficult to accept. The debrief must not degenerate into a debate. This does not mean, of course, that you and student cannot have a discussion regarding the observations. If a student genuinely does not understand what the problem or error was, you must make every effort to make the problem clear to the student. You should not, however, allow students to continue to argue with the observations. In Flight Instructor Guide Chapter 3 Section 3 – Teaching Adolescents you will learn about individual personality traits and receive some suggestions how to deal with individuals and problem students.

6.10.4.3 Approach

You should approach the debrief objectively and with the attitude that the debrief is a learning exercise. The student's performance should be critiqued based on his/her performance relative to where he/she should be at the specific point in the course. When training Air Cadets to fly gliders, this is probably their first exposure to a significant and ongoing one on one training environment. It is also likely the first time they have had this much one on one contact with an officer. Up to this point, most of their training has been conducted in classes or groups. Also, for many Air Cadets, this is the first training experience where there are significant consequences to Unsatisfactory Course Progress. In the initial debriefs they may not understand that they must perform to the standard or the training will cease. This critical point must be conveyed without giving the debrief a feeling of doom and gloom. As much as possible, subjective assessment should be avoided. Avoid the “I like to do it this way” attitude. If an action has to be performed in a certain way, fine. Inform the student. However, if the student has performed a task acceptably, even if not done entirely the way you would have done it, accept that. Finally, honesty is always the best policy when debriefing students. You will not be doing the student, or the organization, any favours by “taking it easy” on the student.

6.11 Conclusion

It takes a significant amount of resources to deliver an airborne lesson. Because of that, it is important to maximize the effectiveness of every lesson.

The introduction of new work should always follow:

- Explain;
- Demonstrate;
- Imitate; and
- Critique.
While airborne you must judge safety and learning limits to ensure the flight is always safe and the student is learning as much as possible. Before the limit is reached the instructor needs to reset the situation to ensure the effectiveness is maximized.

After the flight, and to ensure the highest possible success on the next flight, a proper debrief must be given. The debrief will include:

- Strengths;
- Areas for Improvement; and
- Ways to improve.

Ultimately the only reason for flying an instructional mission is to teach the student and help them improve their performance. If the instructional flight is not geared toward that goal then there really is no reason to conduct the mission.
Section 7 - Performance Levels, Overall Flight Ratings, and Grading Errors

Introduction

It takes a great amount of resources to train aircrew. These resources include personnel, aircraft, training facilities and money. It is in everyone’s best interest that every effort is made to bring the student up to the training standard. When a student fails a course, they take away the resources that have been invested in them up to that point in time. It is in our best interest to continually monitor the progress of student aircrew while undergoing training to anticipate problems and address them before they become too great. This section will outline the tools we use as flying instructors to achieve this objective.

Section Objectives

Upon completion of this section, the Flight Instructor should be able to:

- Define proficiency levels and trip assessment;
- Define Overall Flight Ratings (OFR) system; and
- Describe common rating errors.

7.1 Proficiency Levels

7.1.1 General

To assist in a standardized method of performance monitoring, the Air Cadet Gliding Program has migrated to a single Proficiency Level (PL) system with common assessment terminology. The following pages show the proficiency levels. Despite the fact that these have been standardized across the Air Cadet Gliding Program there is, always will be, and arguably should be, a subjective aspect to awarding these levels on the part of the instructor. It is neither possible, nor desirable, to develop assessment criteria that is so rigid that it removes all subjectivity on the part of the instructor. There may be times when discussion with experienced instructors will assist in application of these levels and help attain unit standardization. It should be emphasized that the reference in these levels to “assistance” is referring to instructor assistance (or crew assistance) that cannot be expected on-the-job. It does not refer to normal assistance that is readily available on crew based aircraft. This is a very important point and you will see its implication as we go through the various levels. It is also important to note that they must be read in conjunction with the definitions of minor and major errors. Normally, a Training Standards Performance Objective will require a Level 3 proficiency. It is important to read the levels and definitions over carefully at this time. We will then discuss each individually.

7.1.2 Application of the Proficiency Levels

Cutting the formal and already short PL definition down into a few short words often paints the instructor into an impossible position, constrained by their own false paradigm. It would be far better if the instructor expanded the definitions into separate concepts instead of narrowing them further. For example:

- did the student complete the task - how well is immaterial at this first step;
- did the student make any MAJOR errors - understanding of what is a Major error is important here;
- did the student NEED physical assistance, or did the instructor wish to point something out?
- did the student NEED verbal assistance, or did the instructor want to point out some small errors?
- does the student need more practice, or more instruction?

While frustrating, there is no absolute answer or combination of answers that truly defines every situation an instructor may see or have to weigh in determining a sequence’s PL. There is no-one else in the cockpit to assist with these decisions although once on the ground, senior instructors and flight commanders will always be willing to assist.

7.1.3 Definition of the Proficiency Levels, Major Errors, and Minor Errors
7.1.3.1 Major and Minor Errors

- MajorError: an error that significantly detracts from the ideal and/or jeopardizes the safety or successful completion of the task.

- Minor Error: an error that detracts from the ideal but does not jeopardize the successful completion of the task.

But what is "ideal" and what could "jeopardize" the safety of a flight and what could prevent "successful completion" of a task? While most instructors immediately recognize a Minor Error, there is much debate of what is a Major error. One guide an instructor might use in making such a determination is how an error contributes to making more errors. For example, if a student does not use rudder to enter a turn, the resulting adverse yaw often results in an initial nose high attitude followed by a nose low attitude resulting in poor airspeed control. In this case, not using rudder would be a Major error because it detracts from a smooth entry and inhibits successful airspeed control. Breaking flight rules or times when the instructor MUST take over to prevent a flight incident are obvious examples of Major errors. But most often, flight instructors are not faced with such obvious situations.

Scenario - While at a safe altitude and safely within the practice area, a student is asked to demonstrate a forward slip then recover after losing 200 ft. The student immediately and simultaneously opens spoilers and flips the glider on its right side, the airspeed increases to 60 mph then stabilizes at 55 mph, and the student's track slowly drifts to the right. At the required altitude, the student returns to straight and level flight. As an instructor you recognize two steps were missed on the entry: assessing the wind direction to determine which wing should be lowered, and setting the attitude for 55 mph prior to entering the slip - much like setting up for a steep turn. Are either Major Errors? True, neither are "ideal", but remember detracting from the "ideal" are both Major and Minor errors. Did either error "significantly" detract from the ideal? Perhaps. The sentences above are too sparse and cannot describe all the details you would need to make a true determination. But by breaking each error down, we might come to some conclusions.

- Assessing wind direction - How critical is this to successfully doing a forward slip? If the winds are light, a glider pilot can easily do a slip with the opposite wing down. But if the winds are strong, then most often the glider will slip sideways with the wind. Did the student's decision/forgetfulness to not assess the wind contribute to the drifting to the right? If the forward slip had not been a demonstration but was needed to complete a safe landing, would the wind assessment have more importance? Is assessing wind direction a Mandatory step in doing a forward slip, or a technique to help with the manoeuvre?

- Setting attitude - How critical is this to successfully doing a forward slip? The narrative states the airspeed stabilized at the required 55 mph. Is it more important to begin a forward slip at the required airspeed or maintain a stabilized airspeed, at the required airspeed, after the entry is complete? Most airspeed indicators have lag - so even after setting an attitude, the airspeed may not read the required number. There is often a one or two second delay. The scenario above indicates the student did not set an attitude, but "immediately" began the manoeuvre. And, as with assessing wind direction, is setting attitude a Mandatory step in doing a forward slip, or a technique to help with the manoeuvre?

- Was the demonstration ideal? No. The student did not assess the wind or set the required attitude prior to entering the forward slip.

- Was it "significantly" not ideal? Here your judgement as an instructor must come into play. Did the manoeuvre still look like a slip? Did it accomplish what a slip is supposed to do? How significant were the misses - did they add to further problems within the manoeuvre?

- Was the demonstration safe? The narrative does not indicate if the instructor was ever concerned about drifting to the right, although this might have caused concern if the forward slip had been demonstrated while on final.

- Was the task/demonstration completed? Yes. A forward slip was demonstrated to the required altitude without the instructor taking over.

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Overall, determining if errors are Major or Minor can become complex. There may be multiple deviations from the ideal in the sequence which may or may not add up to the sequence being completed or not. This must be weighed carefully and each situation can be different. Any student who can put an aircraft into a forward slip with such aggressive moves as described here, attain a stabilized airspeed, and who can then return to straight and level flight, possesses some flying skill. However, it is not a question of if they have skill, the question is if the sequence was performed properly. It is also important to remember that the speed of the change in the glider’s attitude is not necessarily indicative as to how well the maneuver is done. So your decision as to whether any error is Major or Minor must be based on many factors. You can discuss the situation with supervisors or other instructors but, at the end of the day, only two people fit in the glider and you have the job to assess if the errors made were Major or Minor. At times, using the Proficiency Level definitions will assist you in making the decision.

7.1.3.2 Proficiency Level 1

“Student was not capable of completing the task. Student required verbal and/or physical assistance to avoid making major errors. Further instruction is required.”

This level is fairly self-explanatory. The student was not able to complete the task and required instructor assistance to avoid making errors that detracted from the ideal and may have also jeopardized flight safety. This is clearly a very low level of performance, however, this may be an acceptable level on the student’s very first trip. A student doing a task in a glider or tow plane for the first time may not be expected to actually complete the task, and may be expected to require instructor assistance. The first time a glider pilot attempts a spin recovery for example, they may find a proficiency level 1 awarded for this task. If the student was unable to identify the direction of the spin and used incorrect rudder input, further instruction is required.

7.1.3.3 Proficiency Level 2

“Student completed the task but required verbal and/or minor physical assistance to avoid making major errors. Further practice is required.”

In this level the student was able to complete the task but still requires assistance from the instructor. Again with the spin example, the student the student knew the direction of rotation but was slow to react allowing the spin to develop significantly longer than desired. Major errors are still a concern, and more practice is required.

7.1.3.4 Proficiency Level 3

“Student completed the task, making only minor errors. Student required minimal verbal cues to analyze and/or correct errors.”

In level 3 the student has completed the task albeit with minor errors. At this point we are close to where we want to be (assuming level 4 is the terminal objective) with required instructor assistance in the form of verbal cues vice physical assistance. The student may be unaware of certain errors or how to correct them but, at this point, we believe the student generally understands what they’re doing and why; they still need reminders or cues to check this, verify that, or tips to improve task performance. They understand how to do the major functions of the task, but probably need a bit more time and practice to put it all together. The errors may not be serious, but they prevent the student from being as effective as they should be – e.g. The student was able to recover from the spin but the wings were slightly banked. The student leveled the wings after the instructor mentioned it. This is an important point in that the student is still not able to perform to the degree required in the Performance Objective (PO), had it not been for verbal cues that would not be available to them ‘on the job’. However the student is proficient enough to practice solo. For the Basic Glider Pilot Course level 3 is the terminal performance but this level is not terminal performance for other more advanced training.

7.1.3.5 Proficiency Level 4

“Student completed the task without assistance, making only minor errors. Student was able to self-analyze and correct errors.”
In level 4 the student was able to complete the task without any instructor assistance. In this case the student is still making minor errors and more errors than experienced operators, but this is expected and it will work itself out. The instructor is confident that the student is able to self analyze and correct errors thereby meeting the objective. This level normally reflects the requirements of the PO on course beyond the Basic Glider Pilot Course. Errors can be made as long as they are not major ones, and the student is able to address them. For example, the student completed the spin recovery and noted during the recovery that the wings were not quite level. The student rolled the wings level without a cue from the instructor. It should be clear that instruction may still be occurring and that the instructor may be providing some cues and assistance.

**NOTE:** If a level 4 is required and you are not conducting a PC (check-ride), assistance/instruction may be required during the mission in order for your student to achieve a level 4 by the end of the mission.

7.1.3.6 Proficiency Level 5

**“Student completed the task without assistance and without error.”**

In level 5 the student is basically operating at a level that is beyond what is called for in the Performance Objective. The student recovered from the spin with the wings level and a minimum loss of altitude. This level is included to allow instructors to recognize what is clearly superior performance in a given task.

### 7.2 Overall Flight Rating System

#### 7.2.1 General

After you have assigned Proficiency Levels to the applicable sequences flown, you will be able to provide an Overall Flight Rating (OFR). The purpose of the OFR is to determine the overall progress of the student. The OFR is based on the PLs assigned as described in the definitions which follow. In some cases, the OFR assigned can lead to Unsatisfactory Course Progress.

Below are some general considerations to be included in a written trip assessment regardless of community.

- Observations should be sufficiently detailed to provide the student tangible feedback on the mission;
- Strengths and weaknesses should both be noted. We are often quick to condemn, but seldom commend. Keeping in mind what we have previously covered in this course, giving the student a feeling of accomplishment (when it is due) despite their weak areas, will increase their chance of improvement;
- Any levels awarded which are higher or lower than those proficiency levels required should be substantiated; and
- Overall trip assessment should be determined and figure prominently on the face of the assessment sheet.

#### 7.2.2 Overall Flight Rating Definitions

The five OFRs used in the ACGP are as follows:

7.2.2.1 Standard Exceeded

**“Student performed the majority of the tasks to a level higher than required”**

This assessment is present to recognize strong performance. The criteria is expressed as 51% of the tasks performed at a level higher than required.

7.2.2.2 Achieved Standard

**“Student performed all tasks to the level required”**
This level of performance is what we typically hope to see on each assessment. It means that the student scored a minimum of what is considered the standard for a particular mission. A student who achieves this assessment on a series of missions is progressing normally.

7.2.2.3 Achieved Standard with Difficulty

“Student experienced difficulty achieving the minimum levels required”

This level of performance is slightly below what we typically hope to see on each assessment. It means that the student scored the minimum levels required for the tasks performed, but did so with difficulty. A student who achieves this assessment on a series of air lessons is progressing at a slower rate than normal. A student who performs at this level should be considered for additional assistance in order to attempt to avoid increasingly poor performance.

7.2.2.4 Marginal

“Student was unable to achieve the level required on one task.”

In this case, the student performance is such that they can continue training, however they will have to be watched carefully on the subsequent trip. The instructor should pay particular attention to the task that was indicated as marginal on the subsequent trip.

The marginal rating exists to recognize that everyone can have a ‘bad day’ however it does not mean that any remedial action is necessary. In the majority of cases, the debrief can address minor deviations in established procedures.

7.2.2.5 Unsatisfactory

“Student’s overall performance did not meet the level required”

This assessment is assigned when you have determined that the student’s performance on the trip was clearly deficient. This OFR will be assigned when the student fails to achieve the standard on two or more tasks in a given air lesson. Unsatisfactory trips will have to be addressed, most likely through scheduled remedial training; however it all depends on the circumstances and the applicable Training Plan. Continued unsatisfactory ratings will result in a determination of Unsatisfactory Course Progress.

7.2.2.6 Notes for Marginal an Unsatisfactory OFRS

The marginal rating is designed to identify students who are having difficulties meeting the task proficiencies required on a given training mission/trip/flight. The trip immediately following a Marginal or Unsatisfactory trip may not be rated as Marginal. In addition, no Enabling Checks (EC) or Performance Checks (PC) may be assessed using a Marginal rating.

7.3 Grading Errors

7.3.1 General

Accurate rating is necessary in any training process to maintain validity and quality control. One of the first steps you can take towards becoming an accurate assessor is to recognize that all instructors have a tendency to make certain natural rating errors. Many of the errors discussed below are simply reflective of human nature. It is unlikely you would even be aware that you are making these errors unless they are pointed out to you. By being aware of these natural tendencies you can minimize their effect on your assessment. The following rating errors have been found to be common among instructors.
7.3.2 Errors of Central Tendency

Many instructors hesitate to give extremely high or extremely low ratings. They tend to group their ratings close to the centre of the scale. This error occurs most commonly in inexperienced assessors because they lack confidence in their ability to rate, and assign 'average' grades to all students as safe grades. Even with experienced instructors this error may appear in the ratings of abilities that are difficult to identify. There are enough items on an assessment to make it improbable that a student would consistently fall in the central rating block on all procedures. Also, it is improbable that any large number of students would consistently fall in the 'average' column. If an error of central tendency is taking place, true ability is not reflected on the assessment and the rating is of little value.

7.3.3 Error of Standards

Some instructors tend to overrate or underrate everyone in comparison to the ratings of most other instructors. They do this because of the difference in their standard. In flying training, the standards are in the mind of each rater and it is possible to have as many standards as there are raters. Experienced instructors are usually able to agree fairly closely on ratings. This agreement indicates that their standards are similar. Inexperienced instructors agree less frequently, but generally will come closer as experience is gained. Every effort should be made to get more experience and standardize the judgment through increased experience, and through discussion with other instructors.

7.3.4 Logical Error

Instructors who have a logical error allow the performance on one item to influence the rating of another item, which they associate with the first by a logical connection. A pilot example may be allowing their rating of the student's approach phase to influence the rating for the aircraft landing instead of grading each item separately. Individual items within a procedure can be rated incorrectly through this type of logical carryover. The alert instructor should grade each procedure separately and objectively.

7.3.5 Error of Familiarity

When instructors fly frequently with the same students, they can lose some of the grading objectivity that they had during the first trip. They may become accustomed to some of the student's weaknesses or eccentricities and overlook them as errors because they are so familiar with them. Instructing in a phase or course for such a long period of time that instructors begin to overlook errors that are common to most students can also cause this type of error. You must make an effort to step back and seek an objective perspective.

7.3.6 Halo Error

The “Halo Effect” refers to the psychological phenomenon whereby an individual is seen to be incapable of doing wrong, like an angel. We talk about the stereotypical doting parent who never sees their “little angels” as doing anything wrong, even as they are caught spray-painting foul language on the neighborhood school. Someone else’s children must have encouraged them. As we are aware, it is often the case that those who are thought to be “little angels” are quite the opposite. The opposite effect can also be generated when an individual is disliked or seen as incompetent; everything that the individual attempts is wrong.

In instruction the Halo error refers to allowing their rating of an individual's performance to be influenced by their general impression of the individual whether consciously or subconsciously. We may like or dislike the student because of something they says or do, of looks, or of nationality or background, and we let this feeling influence our rating. The student may be the class leader and speak well in a social environment but these qualities may have nothing to do with a specific task performance. In order to avoid the halo effect or its opposite, you must be aware of this natural tendency and consciously strive to objectively base your assessment on each individual task.

7.3.7 Error of Narrow Criterion

Another error common to new instructors is that of using the students they are working with in the present as though they represented the whole range of proficiency. Instead of using all students as criteria, they use only the two students they now have and rate each student against the others. If they happen to have two superior
students, they begin grading one down because they cannot perform quite as well as the other. On the other hand, they may have two weak students, yet the one who does the best gets above average grades.

7.3.8 Error of Delayed Grading

If the rating is separated long enough from the actual performance, information about the performance is forgotten and the rating is in error. If this happens, the rater will often go to the central type rating for lack of information to justify extreme ratings. Another possibility is the trip will stand out in the rater's mind and the forgotten material will be rated according to this lingering impression. The longer the delay, the greater the possibility of error.

7.4 Conclusion

Valid assessment is important to ensure training is progressing normally. To achieve this there are 5 proficiency levels assigned to individual sequences.

From the 5 proficiency levels we determine the overall flight rating as:

- Standard Exceeded;
- Achieved Standard;
- Achieved Standard With Difficulty;
- Marginal; and
- Unsatisfactory.

There are common grading errors that we may encounter during assessment:

- Error of Central Tendency;
- Error of Standards;
- Logical Error;
- Error of Familiarity;
- Halo Error;
- Error of narrow Criterion; and
- Error of Delayed Grading.
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Section 8 - Progress Monitoring

Introduction

Assessing the student as the perform the tasks assigned is very important. However, in order for it to be truly effective the instructor and supervisor must monitor the overall progress of the student.

8.1 Purpose of Progress Monitoring

Progress monitoring is about closely observing a student’s progress relative to the course Training Plan (syllabus) and ensuring that all training milestones, tests, assignments, flights, etc., as well as any deviations from the norm or concerns are documented. Instructors and school staff need to know and document, whether student X is progressing normally, above normal, or below normal. It certainly involves documenting the outcome of formative and summative evaluation; however, it is also an ongoing, day-to-day activity. Furthermore, it is not just about passing or failing tests, it is also about ensuring that a student has completed the required assignments, has had the same opportunities as other students, understands concepts presented in class, or can perform tasks at the level required of him/her. For example, if Bloggins missed a class due to illness, the instructional staff should be on top of the problem and ensuring he gets caught up. Progress monitoring should in fact be occurring constantly: in the classroom, in the aircraft, and even in non-training events, if appropriate. When the student is progressing according to schedule, progress monitoring is relatively painless. However, if a student is excelling, or even more importantly, exhibiting difficulties, then the importance of progress monitoring increases dramatically. Continuous progress monitoring provides several advantages to the training unit.

At an RGS the student's progress is monitored during training by administering Enabling Checks (ECs). ECs may be in the form of a written test or a flight.

Continuous monitoring of the student's progress is required to provide:

- Feedback to the student. Students should receive formal indication of their progress in the course. Students who experience difficulty are to be informed of the consequences of marginal assessment, the consequences of further failure(s), and the disposition options available;
- Early warning of difficulty which may allow the avoidance of more serious problems;
- Feedback on the effectiveness of training;
- Information for a Progress Review Board (PRB); and
- Equitable distribution of training assignments.

Training records should be maintained for each student and should reflect the following:

- Completion of essential training activities required by POs;
- Results of ECs, PCs, written or practical tests, etc., as specified in the assessment plan;
- Identification of elements requiring observations such as leadership, participation, etc; and
- Interviewing/counselling results.

Always consult the applicable course TP for student training record requirements.

8.2 The Role of the Instructor in Progress Monitoring

The instructor has a major role to play in progress monitoring. Invariably, it is the instructor who often notices problems emerging early on, in the class or during air training. Instructors should be taking note of how students are doing in class, on quizzes or on assignments. If a student is having more difficulty than is normally the case, or cannot seem to master a concept or task, then a knowledgeable instructor should begin to take note. If possible the instructor should correct the problem and provide feedback to the student. The earlier the warning of difficulties the easier it is to correct the problem. Sometimes a very minor misunderstanding on the part of the
student, once identified and corrected, can solve the problem easily. If the problem cannot be solved, the event should be brought to the attention of supervisors, formally documented and some solution sought such as the prescription of remedial training. If a student seems to have more than his/her share of difficulties then formal documentation should definitely be in order. This calls for judgement on the part of the instructional staff. Instructors monitor student progress by observation, confirmatory questions, assignments, quizzes, examinations – written or performance. The progress of all students must be documented. It is up to the training establishment SOPs and the instructor’s judgement to determine what will get documented but certainly the results of tests, examinations, check rides, and any serious deviations from the norm must be captured. There are many types of issues, not just academic, that may be important. Air sickness comes to mind. Other medical issues may also be relevant. For example, if a student is missing a significant amount of the course due to illness. One thing that is essential is that any observation must be backed up by objective evidence. Any opinions should be supported by facts. It is of no value to anyone to document a statement such as, “Cdt Bloggins just does not have what it takes to be a glider pilot.” The first questions your supervisors should be asking, and which probably will be asked sooner or later, is, “How do you know? What did you see that led you to believe that? Where is your objective data?” If you are saying this, there must be something that is leading you to believe it –otherwise it just appears as if you have a personal issue with the student.

8.3 Monitoring of Performance

In general terms, the normal student progress on specific tasks are broken down and provided with a numerical value, from 1 to 5 - 1 being very little proficiency, 3 equating to the course performance objectives, and 5 being outstanding. Assessment occurs when performance is compared with a standard, and a value judgement is made which is based on that comparison. We seek to measure learning, and to use the measures taken as a basis for assessment. In this way we can determine whether the student is progressing at a rate that will allow for meeting terminal performance objectives by the completion of the course, or its applicable phases. Assessment of the student should not be done at the cost of instruction. Instructors have to ensure that their priorities are straight. You may notice many small deviations from standard procedure. What do you do about it? Some instructors get so involved in documenting what happens, that they forget to teach. The assessment of the training trip should be based upon the performance achieved by the end of that trip.

The questions you should be asking yourself at the end of the trip are:

- Were all the teaching points covered adequately?
- Is the student performing at a level which will allow him/her to continue training?
- What deficiencies exist and what should be done about them?
- Can they be addressed in the debrief?
- Should you give a “heads up” to the next instructor working with the student? and
- Is remedial training required prior to continuing?

Performance monitoring is meant to address these issues. Your main concern should be on creating a learning environment whereby the student can gain experience and improve performance.

8.4 The Process of Performance Monitoring

In dealing with the process of performance monitoring, it is important to know what is expected of the student on a particular trip, observe the student performance, measure the performance against the standard desired and, finally, document the findings. Again, it is important to note that instructors often fall into the assessment mode during training trips, at the cost of training. The primary objective is to conduct training and to teach the student.

These steps are reflected as follows:

- Mission standard determination;
- Performance observation;
- Performance rated against the mission standard; and
- Document performance.
8.4.1 Mission Standard Determination

Prior to conducting a training mission, it is important to know exactly what is required of the student for that trip. The appropriate Training Plan will outline what is required for a given trip.

8.4.2 Performance Observation

Once you are conducting the training, there will be an element of assessment that takes place. You must ensure that the student has a comprehension level expected at that level of training. Usually a lack of understanding will result in visible errors. If you are not sure of the student’s comprehension level you can question the student. The most practical question is ‘why?’. Why did you do that procedure? Why did you perform that procedure at that time? What where your considerations and why? Why did you not follow the established procedure? You should make both mental and written notes reflecting the student’s performance, while putting the emphasis on teaching, and attempting to understand the students logic process. In assessing the students, you must ensure that the information you have is indeed correct. You must be able to recognize faults and determine the magnitude of the fault, and discard those faults that cannot be compensated for or corrected under the circumstances.

8.4.3 Performance Measured Against the Mission Standard

Once you have completed the training, you must answer the question of how well the student is performing. Given the fact that you have conducted active instruction and allowed the student to practice procedures, you must determine if their proficiency is at a level commensurate with the training schedule. For example, if the student was unable to properly recover from a spiral dive by the end of the mission, you must determine to what degree this deficiency occurred and whether it has to be addressed prior to continuing training. The use of proficiency levels, discussed in the previous section, and the training plan, will assist in determining consequences of student deficiencies.

8.4.4 Documenting Performance

The process of documenting student performance is a crucial step in the training process. This documentation will give you, or give the next instructor, an indication of how the student is performing and what areas may need emphasis on subsequent trips. In addition, students experiencing great difficulty may be subjected to a review process to determine courses of action. The information recorded on trip assessments will be used in determining an appropriate course of action in this event.

8.5 Progress Books

8.5.1 General

The student progress book includes more than just completed progress cards. For the Glider Pilot Course, the first few pages of the book comprise a package of yellow cards used for overall tracking of student activity, performance, and also provide a quick reference for information required by the instructor.

8.5.2 Progress Book Yellow Cards

There are seven cards included in the yellow package located at the beginning of a student’s progress book. The first four pages are for information and quick reference only. The eighth page is the proficiency level standards matrix and is included for reference. The remaining pages are used as follows:

- Student Activity Record (Pages 5 and 6) are used to track the activity and performance of the student. Even if there is no actual training activity occurring on that day, the instructor must make an entry and indicate the reason for no training.
- Initial Cockpit Fitting Card (Page 8) must be completed prior to conducting any training with the particular student. The purpose is to ensure proper ergonomics within the cockpit for the student (ie. how many cushions, any adjustments to the rudder pedals, vision over nose, etc).

8.5.3 Progress Books for Other Courses
The Glider Pilot Course is not the only course which requires progress books. Other courses include the Glider Pilot Instructor Course and the Tow Pilot Conversion Course. Essentially these books are handled in the same manner as the progress books for the Glider Pilot Course, but without the yellow card package at the beginning.

8.5.4 Other Administrative Responsibilities of the Instructor

The instructor may be responsible for other administrative duties. These duties may vary depending on the specific RGS, but can include but are not limited to:

- Updating the mission x-board;
- Updating the OFR board;
- Ensuring that student logbooks are updated and consistent with the progress book; and
- Following up on training reviews and poor performance by students

8.6 Progress Cards

8.6.1 General

The progress cards which are included in the progress book must be completed in their entirety in order to be effective for assessment. One part of the progress card is the PLs and OFRs as discussed earlier. In order for the PLs to be accurate they must be substantiated by comments.

8.6.2 Writing Comments

The comments which are written on a progress card should be concise and pertinent. The key thing to remember is that the purpose of the comment is to substantiate why the student received the PL that was given to them. Each comment should include a brief description of the student’s error and identify the root cause of that error.

8.6 Solo Monitoring

8.6.1 General

Once your students have gone solo, it is still your responsibility as the instructor to monitor their flying. At this stage you will be completing white progress cards in conjunction with your student.

8.6.2 Monitoring the Flight

There are certain responsibilities which the instructor has while monitoring a solo flight. The solo monitor must not be distracted and they should be watching the flight as completely as possible. The solo monitor should have a radio on their person or have quick and easy access to a radio in case they need to communicate with the student being monitored. The instructor should only be responsible for monitoring one student at a time.

8.6.2.1 Solo Pre-Flight Brief

The solo student still requires a pre-flight brief from their instructor. This briefing follows the ASCC format at all times and should be given just before the student is strapping in or just after, but before the glider starts pre-takeoff activities.

8.6.2.2 Solo Post-Flight Brief

Once the student has landed, the instructor should meet the student immediately and commence a debrief. The debrief should focus on encouraging the student to self-analyse. The instructor should also ask the student to explain any actions which the instructor felt may not have been ideal. At the end of the debrief, once the instructor feels that they have all of the information required, they can apply an OFR to the solo flight. For details on when a student is unsuccessful on a solo flight, see the applicable Course Training Plan.
8.6.2. Briefing Multiple Missions

If your student will be flying multiple missions, and if allowed by the SOPs of your flying school, the above briefings may be done while the student remains in the cockpit. Good planning on your behalf will be necessary. Remain aware of other aircraft moving around you. Do not conduct your in-cockpit briefing to the detriment of other students and instructors who are using the same airfield.

8.7 Conclusion

Proper performance monitoring is essential for effective training. Through performance monitoring we can identify weak areas early enough to correct the problem before it becomes overwhelming.

Performance monitoring must take place for all training activities including ground instruction, dual flying, and solo flying. This will help ensure the training is effective and the student is progressing at an appropriate rate.
Section 9 - **The Classroom Based Lesson**

**Introduction**

In previous sections you have been introduced to training documentation, some instructional theory, and how to prepare for a classroom lesson. This section will serve to provide basic guidance while conducting a classroom-based lesson. You will find basic tips and techniques that will serve to enhance your presentation of the material while exploiting the Principles of Instruction and the concept of developmental teaching.

**Section Objectives**

Upon completion of this section, the Flight Instructor should be able to present a lesson employing:

- Basic presentation skills;
- Classroom questioning techniques; and
- The use of verbal support, humour and training/learning aids.

**9.1 General**

“Personally, I'm always ready to learn, although I do not always like being taught.”

Winston Churchill

Many can relate to what Churchill said. If you ask someone if they would like to learn something new, they answer “yes.” Most people like to learn new things. However, ask how many like to sit in class for a 50-minute period, and suddenly the responses change. This is because the emphasis has changed from “learning” to “being taught.” In order to be a good instructor, you have to place yourself in the position of the student. We can all recall sitting in class wondering what the point was. We can also recall wondering if this was really important, “need to know” stuff, or simply “stuff.” Students want to know “What's in it for me?” “Why should I bother to learn this?” “Is this important?” The analysis, design and development stages should ensure that everything in the course is indeed relevant. All previous effort is wasted if it does not come together properly in the classroom and we simply end up teaching, while not necessarily accomplishing, learning.

As you read through this section, keep the following points in mind:

- Do not concentrate on being the perfect presenter; no one expects perfection. Simply focus your efforts on being comfortable working with the class. They in turn will feel more comfortable and enhance the learning environment;
- Don’t worry about the teaching styles and techniques of your peers; everyone is different. Take what you can use and discard what you can’t. Concentrate on your strengths; and
- Keep a journal. Simply write down a few thoughts on how the class went, examples that worked well and those that did not. This will allow you to rework your notes and improve each time you teach.

**9.2 The Basics**

**9.2.1 Stance and Movement**

Whether you are aware of it or not, your body language communicates to the audience. For example, if you want to emphasize a point, moving slightly towards the class with your shoulders squared off to the students will convey the fact that what is being said is important. Some refer to this as a “power stance” and it is used effectively by professional speakers all the time.

The following are other ways that we can use body language to our advantage:

- Use hand gestures to point to items of interest, such as the screen or another training aid;
When soliciting or acknowledging input from the students, an open palm, face up, is a welcoming motion and will help solicit questions and input;

When responding to a question from a student, move away (as opposed to moving in) from that student to bring others into the discussion; and

Move around the room in a way that will promote discussion.

9.2.2 Eye Contact

Eye contact is very important. Research has shown that learning is more effective when the instructor establishes eye contact with the students. The students perceive that if you are looking at them you care about and are talking to them, rather than just talking. We always look into each others’ eyes when we communicate with each other. When eye contact is avoided, it isolates the students and has a negative effect on the communication you are trying to achieve.

Some points regarding eye contact follow.

- Some people have a hard time (due to nervousness) looking a group of people in the eyes while presenting. While this is not as common in our experiences in cadet training, some people may have a problem with it. If so, attempt looking between the eyes rather than directly at them. This is another trick professional speakers advocate, claiming that the audience will not notice any difference.
- Research has also shown that avoiding eye contact can have an adverse effect on student participation. Students may have a question, and unless they verbally speak out, the question may be missed when the student tires of holding an unacknowledged hand in the air. Some students will simply not attempt to ask questions.
- Eye contact enables you to look for cues such as frustration, confusion and, unfortunately, boredom. If you see you are losing the group then change strategy. Make a point such as, “This point doesn’t seem to be clear to some of you.” Then address it!
- When establishing eye contact, hold it with one individual for a few seconds, then move to another. You want to let them feel you are personally talking to them, without making them feel uncomfortable.
- Avoid favouring one part of the class. It is extremely common for some instructors to look at only the left, or right, side of the class, or only at a few individuals. Many instructors are unaware of this tendency. Make sure you move your eyes around the entire class.

9.2.3 Vocal Expression

Again, we have all been exposed to instructors who speak so softly you cannot hear them, or are so monotone that it is difficult to maintain interest.

The following are considerations for the use of vocal expression:

- **Tone.** It should reflect enthusiasm, seriousness, and interest as appropriate. Let it vary;
- **Pace.** Some instructors speed up their speaking when in front of an audience. Is it too slow, too fast, are there too many pauses or too few? Are there too many “ums and ahs”? These are considerations when speaking, some of which you may not even be aware. Having an objective observer, or even videotaping yourself will allow you to address these things;
- **Enunciation.** Do you speak clearly? Can everyone understand what you are saying? With new terminology, do you slow down and enunciate clearly so that the students hear it correctly the first time; and
- **Word choice.** Do you use acronyms with which the students are not yet familiar? Do you like to use “big” words like “it is contingent upon the circumstances” or simple words like “it depends.”
9.2.4 Effective Listening

We have included this section on effective listening because listening is probably the most difficult interpersonal skill to master. As an instructor, it is important for you to possess this ability. Listening is not the same as being quiet and hearing what the other person says. Nor is it a passive activity. Listening is something you do, and it requires skill. You should be aware that what a student means to say may not be what you have interpreted. You have to listen very carefully. Research shows that people think and process information at approximately 500 words per minute, yet we only talk at about 300 words per minute. This leaves some extra capacity in the brain which can be used for other things. We often edit the other person’s comments, adding our own thoughts, or we may simply drift off while thinking about something else. People like talking more than listening. We appreciate the sound of our own voice; we like our own point of view and we normally process information in our brain that is related to what we are talking about, so there is no excess capacity. (i.e., there is no chance we will “drift off” while we are talking). We are all aware of the compliment “he/she is a good listener”. We make a point of noting this complement since it is so rare! When you think about it, how much have you actually practised listening and trying to hone this skill? Research shows that we use the skill of listening more than the skills of speaking, reading or writing. Yet, we spend almost no time teaching listening skills.

Below is a list of some considerations to assist in listening and to show that you are paying attention to what the students are communicating to you as an instructor.

- One of the easiest and most effective tricks is to simply repeat in your mind, word for word, what the speaker is saying. If you remember what we said about how fast your brain processes information, as opposed to how fast we talk, this technique forces you to process what is being said. It is impossible to not “hear” what is being said or for your mind to wander. Try it, it works!;

- Minimize distracters. If another student is talking on the side, ask them to please be quiet. Eliminate anything, as much as possible, that prevents you from hearing and concentrating on what the student is saying;

- Allow the student to express his/her thoughts completely before jumping in with your comments. Research shows that many instructors have the tendency to “jump the gun” and start responding to a question before the student has actually finished asking the question;

- Use encouragers such as “OK”, “I see”, “Uh-huh”, etc. to convey your interest and encourage the student to elaborate;

- Use paraphrasing or summarize what the student has said. “If I understand your point, you believe.....”;

- Allow the speaker to correct their mistakes, do not respond to misinformation or errors prematurely;

- When listening to a student, you can certainly convey that you are paying attention by looking him/her squarely in the eyes. Interpersonal skills experts advocate a technique where you actually try to determine the colour of the person’s eyes while you are listening him/her;

- Pause for a few seconds before actually responding; think about what was said;

- Face the student head on, do not turn away at all; and

- Watch your body language. Do not cross your arms or look disinterested. Do use simple gestures such as leaning slightly towards the student or nodding your head to indicate that you are listening. These are all simple things, yet it is amazing how little they are used. If you are able to listen to the students and convey that you are doing so, then your credibility with the students will be enhanced. You will also find that the students are more willing to open up, more prone to ask questions, and engage you in dialogue, again, enhancing learning.

9.2.5 Distracters

We have all heard that you should not put your hands in your pockets or rattle your change or keys while teaching. The real point is to simply relax and be yourself. If you want to put your hands in your pockets – fine. You should be aware, however, of what we call “distracters”. These are things that focus students away from the objective. It could be that the room is too warm, the noise of a plane taking off is distracting, or you left a visual up that you are no longer addressing but some of the students are still looking at, while you have moved on. Some of
these distracters are self-generated and some of them we have limited control over. If you are jingling your keys in your pocket, and you think it might be distracting, then simply stop doing it. The main thing is to create and maintain an environment that is conducive to learning.

9.3 Verbal Support

In Section 2 you were exposed to the use of verbal aids in the form of CREST (Comparisons, Reasons, Examples, Statistics, and Testimonials). Many of these will be incorporated into the Lesson Plan. However, you will want to consider the use of these even outside of the Lesson Plan. In the case of Master Lesson Plans, there is a chance you are taking the Lesson Plan off the shelf and did not write it yourself. Yet you may have at your disposal personal experiences and anecdotes you can share with the class to support the teaching points.

Below is a short list of some considerations for the use of verbal support in your classroom presentations:

- Begin the class with an incident, example, or anecdote. This will get the students’ attention.
- Use a provocative statement such as: “If any pilot ever does this, they should lose their wings!” You are guaranteed to get their attention on what is an important teaching point (perhaps dealing with flight safety, etc.);
- Use enthusiasm. It's contagious. One study indicated that instructors felt this was the number one most important aspect of success in front of the classroom;
- Use rhetorical questions. “Think about it, how many of you have felt concerned or unsure of what the crew was doing, but were afraid to ask?” You do not expect a response, but it directs the students” thinking towards your teaching point;
- Use lots of concrete or memorable examples. Anecdotal or humorous. Students remember these far more than they will remember simple facts;
- Let the students know what is important and what is not, i.e., “This is need to know,” and “this is background information.” Keep refocusing them on what is important;
- Rephrase explanations of major points several times;
- Use words to paint a picture in their mind (word pictures). Which is more effective: “one third of the world's population is Chinese”; or "if you lined up everyone in the world, every third person would be Chinese." The latter is not just a meaningless statistic, but forces students to visualize the statistic; and
- The class ending is just as important as the beginning. Do not let a class fade into non-existence. Make an impressive ending. For example, end with a question for the class to cogitate and answer prior to the next session; a quotation conveying the essential theme; a summary; or what to do before next class.

9.4 Use of Humour

Some may consider this to be a touchy subject; however, it can be an important aspect of classroom delivery. The fact is, we all have different personalities with different senses of humour and, for that matter, different abilities. The use of humour is recognized as another technique available in the instructor’s toolbox. We know from our previous modules that students learn better when they are in a relaxed, and comfortable environment. However, we tend to think of the "external" environment such as seating, lighting, temperature, etc., and not the internal – how comfortable and relaxed they are on the inside. We obviously do not want the students to be uptight and apprehensive. Humour is one very good way to get the students and yourself feeling comfortable on the inside, where it counts. It’s not the intent of this section to encourage you to be humorous if you don’t feel comfortable doing so. The real point is to encourage those instructors who prefer using humour to feel free to do so. Everyone is different. The trick is to follow some guidelines and find what works for you. The use of humour does not mean standing up at the front of the class and telling a joke. Sometimes a simple point with a humorous aspect does the trick.

“When I give a lecture, I accept that people look at their watches, but what I do not tolerate is when they look at it and raise it to their ear to find out if it stopped.” Marcel Achard
Most instructors can relate to this point. We all dread the idea of conducting a class that lacks the Principles of Instruction to the point where the students simply want to leave. And the point is taken, albeit comically. Another example pertains to the relevancy of testing and acceptable responses.

“A university professor set an examination question in which he asked what is the difference between ignorance and apathy. The professor had to give an A+ to a student who answered: I don’t know and I don’t care”. Richard Pratt, Pacific Computer Weekly, Jul 1990

Instructors who wish to use humour, but who do not have the delivery skills to use jokes, can simply make their points using a bit of humour as above, or can rely on situational humour or anecdotes. Most of us have at our disposal experiences which have an entertaining edge to them and that can support teaching points. An added benefit of these is that it fosters a good rapport with the students. If you can relate a “Don’t let this happen to you!” type of story, it allows the student to see you as having made some mistakes and succeeding in spite of them. This is a welcome impression for students who are used to making their share of mistakes during training. Feel free to try these and find out what works for you, but do not fall into the trap of conventional thinking that dictates that the classroom is all work and no play. As we stated before, you have to relax and be yourself. If that allows you to use humour, then great. If not, then that is fine too.

Following are some guidelines pertaining to the use of humour taken from Peter Renners book The Art of Teaching Adults:

Unless you can answer “yes” to all these questions, avoid the humour!

1. Does it support a teaching point?
2. Am I sure that no one will be offended by it and, in fact, be completely comfortable with it?
3. Is it short, uncomplicated, and fresh?
4. Can I deliver it with confidence and timing?

When using humour, remember it is great when it works but it can be disastrous when it doesn’t. It should be reinforcing a point, not substituting for one.

9.5 Training Aids

In developmental classroom sessions, we use a variety of training aids in order to assist learning transfer. They allow us to demonstrate a concept rather than merely describing it. This is superior to simple discussions because they require more senses. There are many books written on this subject, but our purpose is to provide you with some basic guidance. Below are some simple “do’s and don’ts” pertaining to the use of common training aids. Review Section 4 for information on Training Aids.

9.6 Learning Aids

Learning aids are what we provide to the students to assist in instruction. The most common types are handouts, but they could also be pieces of equipment.

- Give clear instructions to the students prior to handing out equipment. “Leave them on the desk and do not touch them until told to do so.” “If you have any questions raise your hand.” It is amazing how quickly class control can be compromised when there is suddenly an activity to do or something to touch; and

- If you are using handouts, you will have to weigh the advantages of handing them out at the beginning, during, or at the end of the class. These handouts may show the key teaching points, or a combination of teaching points and questions to be answered/contemplated:

  - Prior to the class. If given out well before the class, handouts allow the students to familiarize themselves with the material. Another option is to hand them out at the beginning of the class. The handouts will act as a guide where the students can follow your presentation and take notes in the margins, etc. On the downside, the students may
be reading the handouts and not paying attention to the instructor (distracter). Also, if you change your presentation due to time constraints, it could be confusing as you are no longer following the handouts you have provided.

- **During the class.** You may distribute them when needed and ask that they be put away after use. This ensures that they are only using the handouts when necessary. The benefits are the same. However, it does take class time to implement, and

- **Post-class.** These can serve as a powerful re-enforcer. If they are comprehensive enough, they may serve to eliminate the need for note taking (due to individual learning differences, some students may still choose to do so). Be sure to mention that you have these handouts at the beginning of the class, so that the students know that note taking is not necessary.

### 9.7 Student Rapport

There are certain things you can do in order to assist the students and show them that your focus is on their learning, and not simply your teaching.

- Arrive early and talk to the students;
- Use their names whenever possible;
- Emphasize to the students the difficulties in learning the material for the first time, and acknowledge the difficulty of concepts they are likely to find hard to understand;
- Establish a positive image. Demonstrating poor dress and deportment, poor grammar, pronunciation, not admitting mistakes, acting like a know it all, etc., will detract from the rapport you are trying to establish;
- Be prepared. Have your teaching material and aids organized, know your subject, and keep to the allotted timings. This last point is very important as the students will “shut down” once the clock hits the end of the lesson – you are now in their break time and the students know it. To carry on instruction into the break is unnecessary and unfair;
- Use logic and emotion. Logic makes them think, emotion makes them act. You want to be provocative. You want to instil in the students the desire to use the knowledge or skills you are providing them;
- Provide the students with tips and techniques to help them learn the information and perform the skill. For example, an instructor recommending the use of cue cards and how to use them to help study.
- Focus your lectures on a few main points and omit unnecessary exceptions, complexities or details. Remember to provide interim summaries and to touch base repeatedly with the students on fundamentals or basics;
- Define all concepts and terms carefully;
- Reread the text assignments given to the students. This will allow the information to be fresh in your mind and also allow you to see what is boring and dull. Consider other readings you may feel are better suited; and
- Draw upon the diverse backgrounds of your students to introduce different points of view. Have them make presentations in class if the subject matter lends itself to it.

### 9.8 Formative Assessment

Assessment of the students is an ongoing process to ensure that they are learning at the desired rate. We refer to “end of training” assessment as “summative assessment”. This happens in the form of testing at the end of a phase of instruction or at the end of a course. Assessment that takes place “during training” is referred to as formative assessment. This assessment fulfils the confirmation aspect of the Principles of Instruction. Mayor Ed Koch of New York would greet people on the street with, “Hi, How am I doing?” When conducting a class you should always be “checking” the students to see how they’re doing. As part of your classroom conduct you may
use various means to accomplish this. The most common is in the form of questions to the class. In addition, you may want to consider the use of end of lesson quizzes, practical exercises or assignments.

9.9 Conclusion


Remember that a great deal of effort, resources and money have been put in place to provide our aircrew students with their training. However, it is largely the interaction between you and the student that will determine how effective this training will be. The main aspect of your presentation is the content, which is learner centred. Platform skills are instructor centred. The only reason to use the latter is to enhance the former. As an instructor, you should possess good elements of public speaking, high level questioning skills, effective listening techniques, and be skilled with the use of your training aids. There are many things you can do to become an excellent instructor and it is hoped that you will employ those ideas presented in this section, as well others you may find, to achieve this excellence. As the saying goes, “When teaching, light a fire, don’t fill a bucket!”
CHAPTER TWO

FLIGHT MANOEUVRE INSTRUCTION

Section 1 - Flight Manoeuvres - Definitions and Parameters

1.1. Introduction

To evaluate anything, the evaluator must know what they are looking at. The 'thing' being evaluated must have a basic description, a beginning, and an end.

To assist Qualified Gliding Instructors each flight sequence found on the Glider Pilot Training Progress Card has been defined below. This ensures that when discussing a specific air sequence all the people involved are using a common definition. Air sequences in the Air Cadet Gliding Program generally fall within two broad categories: Manoeuvres and Procedures.

Manoeuvres are the sequences that the pilot uses to manipulate the aircraft. They include such things as take-off, turns, and landing. Manoeuvres generally take into consideration the glider’s starting attitude or position and normally consist of changing the glider’s attitude to accomplish a change in direction, a change in airspeed, a change in angle of bank, etc. But what you are trying to accomplish is not important as to how well a change from one state to another has been conducted.

Procedures are the sequences that the pilot uses to accomplish a task, or situate the glider in a specific position or location. Downwind, base leg, and final approach are procedures. Often procedures employ manoeuvres to achieve their goal. Flying straight glide in the downwind to reposition the glider from the initial point to base leg is an example of using a manoeuvre to complete a procedure. Procedures take into account the location and speed of the glider to accomplish a specific outcome; such as touching down at the right location. Procedures often include judgement in the application of manoeuvres to meet the desired end goal.

1.2. Definitions

The following is the approved definition for each sequence rated within the Air Cadet Gliding Program:

Preflight – Consists of all the activities, including pre-takeoff checks, conducted as part of a glider flight before the wings are levelled for the purposes of Take-Off.

Take-Off – Is a manoeuvre including a ground roll, a lift off, and position maintenance on the tow plane. The take-off begins with levelling of the wings for the purposes of take-off and ends with lift-off of the glider or tow plane whichever occurs later.

Emergency Procedure – The suitable response to a real or simulated situation that, if not addressed by the pilot, may compromise the safety of the flight. The emergency procedure begins with the word “simulated”, or the real emergency situation, and ends with “simulation complete”, or safe resolution, of the situation.

Tow – (Air Tow) Maintaining position at one end of the tow rope until reaching the release altitude. The tow begins with lift-off of the glider or tow plane whichever is later and ends with the commencement of the Pre-Release check.

- (Ground Based Launch) - The tow begins with lift-off of the glider, through the transition to full climb, and ends with release from the launch rope.

Release - Includes the Pre-release check, release from the tow rope, and post release actions. Release begins with the commencement of the Pre-Release check and concludes with the straight glide that occurs after the clearing turn.

(Ground Based Launch) - Release begins at the release from the rope, through the clearing turn, and ends with return to straight glide.

Spin/Incipient Spin – Is a manoeuvre where the critical angle of attack is exceeded, and there is an element of yaw, autorotation, and recovery. The spin is characterized by stabilized airspeed and
g load and yaw moment in autorotation. **Spin/Incipient Spin** begins with the change of attitude from straight glide for the purposes of entry and concludes with the return to straight glide.

**Spiral Dive** - Is a manoeuvre consisting of a steep descending turn in which airspeed, wing loading, and rate of descent increase rapidly. The pilot is unable to reduce speed with elevator inputs alone. The spiral dive begins with change of attitude from straight glide for the purposes of entry and ends with the return to straight glide.

**Stall** – Is a manoeuvre where the critical angle of attack is exceeded resulting in a loss of lift. The nose of the glider will fall and the pilot will actively recover the glider to normal flight. The stall begins with the change of attitude toward increasing the angle of attack and ends with return to straight glide.

**Slipping** – Is a manoeuvre in which the aircraft is placed in a banked attitude but its tendency to turn is prevented by the use of opposite rudder. Slipping begins with the change of attitude away from coordinated flight and ends with return to straight glide.

**Slipping Turn** - Is a manoeuvre in which the aircraft is placed in a banked attitude and tendency to turn is reduced by the use of opposite rudder. A slipping turn begins with the change of attitude away from coordinated flight and ends with return to straight glide or a coordinated turn.

**Straight Glide** – Is a manoeuvre where the glider is flying towards a fixed point. Straight glide includes maintaining a constant attitude, coordinated flight, with wings level, a constant track, and a constant airspeed.

**Gentle Turn** – Is a manoeuvre that results in a change of direction by maintaining coordinated flight and an appropriate attitude when stabilized in the turn. The appropriate attitude consists of a constant angle of bank and a constant airspeed. There are 3 parts to the gentle turn: the entry, the steady state, and the exit. The angle of bank is 15 degrees (wingtip just below/on the horizon). A turn begins with the change of attitude and angle of bank and ends with the return to straight glide.

**Medium Turns** – Is a manoeuvre that results in a change of direction by maintaining coordinated flight and an appropriate attitude when stabilized in the turn. The appropriate attitude consists of a constant angle of bank and a constant airspeed. There are 3 parts to the gentle turn: the entry, the steady state, and the exit. The angle of bank is 30 degrees. (Wing strut appears to be parallel to the ground) A turn begins with the change of attitude and angle of bank and ends with the return to straight glide.

**Steep Turns** - Is a manoeuvre that results in a change of direction by maintaining coordinated flight and an appropriate attitude when stabilized in the turn. The appropriate attitude consists of a constant angle of bank and a constant airspeed. There are 3 parts to the gentle turn: the entry, the steady state, and the exit. The angle of bank is 45 degrees. A turn begins with the change of attitude and angle of bank and ends with the return to straight glide.

**Downwind** – Is a procedure contained within the traffic circuit. The track is parallel to intended landing path but opposite to the direction of the approach and landing. Downwind begins at the Initial Point (IP) and ends at the beginning of the turn to Base.

**Base Leg** - Is a procedure contained in the traffic circuit. Base Leg is the portion of the circuit between the downwind and the turn to Final Approach. The Final Approach Airspeed (FAS) is set during the Base Leg. Base Leg begins with the start of the turn to Base and ends with the beginning of the turn to Final Approach.

**Final Approach** – Is a procedure contained within the traffic circuit. The path is along an imaginary extension of the intended landing area's centre-line. Final Approach begins at the beginning of the turn to Final Approach and ends when the attitude changes in preparation for Landing.

**Landing** – Is a manoeuvre where the glider is transitioned from the air back to the ground. The landing includes a reduction in the rate of decent and the reduction of airspeed, a flare or round-out, touchdown, and roll out. Landing begins with the attitude changes in preparation for touchdown and ends when the glider comes to a complete stop.

**Flight Management** – Manoeuvring a glider from the point of release to the circuit Initial Point (IP) that includes the ability to judge altitude, position, traffic, and environmental considerations.
**Airmanship** – All aspects of an individual’s flying performance that might not be covered by established directives. Good judgement, common sense, situation awareness, planning, wind assessment, common courtesy, and lookout are examples of airmanship. Proper completion of required launch signals, ASCOT, and pre-landing checks are part of Airmanship.

1.3. **Considerations**

There are a few things to take into consideration when you use these definitions. It is important to understand they are written to be brief and simple. Long technical definitions are not useful during airborne instruction. When teaching students, try to keep it simple; they will be better able to understand and apply their knowledge effectively.

These definitions may not exactly match what you consider to be part of a specific sequence. In defining each sequence, decisions had to be made on what actions were included in each sequence. Some of the decisions may seem arbitrary because frankly they are. In defining each sequence some elements had merit to be part of one or another sequence and ultimately a decision had to be made. The important thing to remember is this is the definitions everyone within the ACGP will be using to improve understanding and communication.

It is important to note that the type of turns used in the circuit are not defined. While a picture perfect circuit would have medium turns, many factors such as traffic, weather, etc. may have an outside influence on the circuit and a turn other than a medium turn may be more appropriate at times.

1.4. **Conclusion**

Ultimately, flying a glider is a human behaviour and as of the time of writing we do not understand everything about human behaviour. Additionally the performance will be impacted by factors outside the student’s control and these must be included when considering the definition of a sequence.
**Section 2 - Flight Manoeuvres - Why and How to Assess and Common Weak Areas**

2.1. Once the individual sequences have been defined, the next step is to describe why each needs to be assessed and some tips on what to look for during assessment. Reviewing the above definitions of Manoeuvres and Procedures will assist instructors in focusing on what is important for each sequence.

2.2. **Pre-Flight – A Procedure.**
   
a. **Why Assess** - To ensure the student is competent in assessing the safety of the aircraft before flight.

b. **What to Look For** - The pilot should complete the Limited Pre-Flight Inspection prior to strapping in. Forgetting this check before strapping in, realizing the error, unstrapping and conducting the check is acceptable although not preferred. Strap-in should be done without aid. If conducting familiarization flights, confirmation of the passenger's straps should also be included. If the student needs access to any medically required devices such as inhalers, EpiPen™, spare corrective lenses etc, ensure the item(s) can be accessed while fully strapped in. The Pre-Take-Off Check should be done without aid, although use of the placard on the instrument panel is encouraged to avoid missed items. Refer to the glider AOIs for specifics on each item to be checked. When checking the compass, use of the phrase "no bubbles no troubles" is meaningless unless the importance of bubbles is understood by the instructor and student. The compass check used should confirm the unit is free floating and its present heading matches the direction the glider is pointing. The trim check should focus on setting for take-off. Moving the trim back and forth to confirm operation is an accepted technique but not mandatory. The canopy and rear door must be closed and latched prior to hook-up. Should any pre-flight check item be missed it is acceptable, although not preferable, that the student realize the error without prompting and conclude that item at any time prior to lift off.

   c. **Common Weak Areas** - Commonly missed items at this stage are: rudders not adjusted properly, yaw string not confirmed if tangled or free, and radio on and tuned to desired frequency.

2.3. **Take-Off – A Manoeuvre.**

a. **Why Assess** - To ensure the student is competent in getting the glider airborne without endangering the tow plane or tow pilot.

b. **What to Look For** - The glider should be level with the ground at takeoff. The glider should not be forced into the air, but allowed to fly once the airspeed exceeds the stall speed. The glider should be held low enough to prevent lifting of the tow plane tail, but high enough to avoid any prop wash. For best results, the control column should be held somewhat forward (for tail down take-off) or somewhat rearward (for nose down take-off). The exact position of the control column will be dependant upon the weight inside the glider and wind strength. The main point of control column position is to position the glider such that it is straight and level at lift-off. When seen from the side, when a glider achieves lift-off, the stripes along the fuselage should be parallel with the ground. Consider the stall speed of the glider compared to the lift off speed of the tow plane; the glider will achieve lift-off well before the tow plane. If the glider is allowed to lift off while the nose is in a climbing position, the glider will climb before the tow plane has lifted off. The glider pilot will realize the glider is too high and will initiate a descent just as the tow plane lifts off. Such a problem will be greatly exacerbated by strong headwinds. Momentarily touching of the skid plate is not preferred, but acceptable. Once the tow plane lifts off, the glider should climb with the tow plane.

   - At the early stages of lift-off, in the first few seconds, there will be relatively little airspeed moving over the wings. Thus aileron effectiveness will be minimal requiring large control column inputs to lift a fallen wing. Use of opposite rudder (using adverse yaw) will assist greatly in picking up a wing. At all times, the glider should remain in line with the center of the tow plane fuselage. Crabbing to either side due to crosswinds is accepted, and in many cases considered good practice. In the presence of crosswinds, the student needs to keep the glider straight in line with the tow plane fuselage until the tow plane lifts off. Once the
student sees the tow plane crab into the wind, the student should let the glider drift sideways to regain the centerline of the tow plane fuselage.

- It is important that the student not follow through on the flight controls during the first few take-offs. At this point, the glider is in slow flight and control movements can be somewhat abrupt. Thus, the student's first impression might be that such movements are necessary for all takeoffs. Ensure the student has a complete understanding of control movements and the secondary effects of control movements before having the student attempt take-off.

- Turbulence at the end of the runway is common on those airfields with trees or buildings under the departure path. The turbulence will most often result in the tow plane climbing faster than expected. After the first few launches, your student should begin to anticipate this climb and adjust accordingly.

- Be ready to take control quickly. Many "I have control", "You have control" is acceptable and perhaps necessary for the first few attempts at take-off.

c. Common Weak Areas - Not using rudder to help with lifting a fallen wing. Allowing the glider to get too high on the tow plane.

- A dropped wing may not be the student's fault. A wing runner who does not carry the wing far enough, or who carries the wing too far, may negate your student's full aileron inputs. If a wing does drop on take-off, similar to the skid momentarily touching the ground, concentrate on how your student recovers instead of the actual wing drop.

- Over-controlling when encountering low level turbulence - pulling back on the control column instead of relaxing the forward pressure and letting the glider climb into position.

2.4. **Emergency Procedure** – A Procedure.

a. Why Assess - To ensure the student is familiar with the most common in-flight emergencies and various response methods for each.

b. What to Look For - In most cases you will give your student an emergency scenario during launch. It is difficult to describe the types of errors you may encounter during this sequence since it is impossible to describe every emergency scenario that might be offered. But remember it is a scenario. If your student ends your scenario in a proposed downwind landing during 10 kt winds, is that a major error, a minor error, or a discussion point? There are far too many variables to state definitively in these paragraphs. The key here is found in the word 'suitable'. A 'suitable' reply is needed, not the 'perfect' reply. If your student made a selection different than you would have, as an instructor you need to decide if their answer was 'suitable'. Following the GASP steps in order is desired, although it is still acceptable if all the steps are achieved albeit out of order.

c. Common Weak Areas - If the student becomes distracted in replying to your scenario to the detriment of air tow, do not address the problem as an air tow problem. Students need to be able to have such discussions; be able to plan ahead, be able to seek out traffic, all while staying in position during tow. If your student is unable to maintain position while discussing an emergency procedure during any stage of flight this may be a symptom of a student who has not yet fully understood the early lessons on control pressures and smooth control movements.

2.5. **Tow** – (Air Tow) A Procedure.

a. Why Assess - To ensure the student is competent in arriving at the planned release point without endangering the tow plane or tow pilot.

b. What to Look For - The glider should be flown in line with the center of the tow plane fuselage. In crosswinds, both aircraft will be crabbing therefore the fuselage reference remains the same. Control column movements should be smooth. Inputs should be small and held in place to achieve the desired effect. Large, coarse movements should only be used when required, not for every attitude adjustment. Whether the sight picture is tow plane wheels on the horizon, or tow plane wings on the horizon, or wing struts and horizontal stabilizer making an
X, is dependant upon the tow aircraft. Regardless of the required sight picture, gaining position, being stable, and having the ability to regain position if disturbed is the key to safe air tow.

- Boxing the wake is used to show the student the location of tow plane slipstream, to practice recovery if the glider enters the slipstream, and to provide further practice of moving out and back in to position. If your tow pattern has many turns, once the student has experienced the slipstream and has successfully entered and exited from it, there might be no further need to box the wake.

c. Common Weak Areas - Over controlling and keeping the control column in constant motion.

- Not planning ahead during convective conditions. Once the glider is stabilized behind the tow plane, should the tow plane suddenly rise it is often useful for the glider pilot to wait a few seconds before responding. Since the glider was stabilized, the tow plane may have climbed due to convective activity. Waiting just a few seconds might result in the glider entering the same area of lift, negating the need for a large control column movement.

2.6. **Tow – (Ground Based Launch) A Procedure.**

a. Why Assess - To ensure the student is competent in achieving the planned release altitude without overstressing the glider.

b. What to Look For - The glider should be allowed to lift off almost immediately. The glider should be allowed to settle into a climbing nose high altitude. The transition to full climb needs to be initiated before 200 ft, but should not be completed before 200 ft. Speed should be monitored and signals to the winch operator provided as appropriate.

c. Common Weak Areas - Not transitioning to full climb early enough. Rotating too aggressively instead of using a smooth transition to full climb attitude.

2.7. **Release – (Air Tow) A Procedure.**

a. Why Assess - To ensure the student is competent in detaching the glider from the tow plane without endangering the tow plane and other air traffic.

b. What to Look For - The pre-release check must be completed prior to beginning the release. The check may be initiated once the last tow turn has been completed. Doing the check during a turn is acceptable.

- The glider should be allowed to drift somewhat higher than normal high tow position. The actual height will be dependant upon the tow plane type and length of rope. The glider should then be stabilized in that position. The glider should then be put into a nose low attitude which will increase the glider's airspeed and create a slack in the rope. Once the pilot sees the slack develop (1 or 2 seconds) the glider can be returned to level flight. The release should be activated once the glider is in level flight. The pilot should visually confirm the rope has detached before initiating the clearing right turn. It is acceptable to fly in a straight line for a moment to assist with confirming release. The clearing turn should incorporate a climb to convert the relatively high air tow speed into more altitude. Releasing straight behind the tow plane without setting up for the soft release procedure is acceptable but not preferred. Releasing in turns is not preferred but is acceptable and in some cases may be necessary.

c. Common Weak Areas - Climbing so high as to be able to see the entire planform of the tow plane. Descending so aggressively that the glider enters the slipstream. Not stabilizing at each position, resulting in a rapid pitch up followed by a rapid pitch down. Not confirming the rope has detached before initiating the clearing turn.

2.8. **Release – (Ground Based Launch) A Procedure.**

a. Why Assess - To ensure the student is competent in detaching the glider from the winch rope without endangering other air traffic.
b. **What to Look For** - The control column should be eased forward at the top of the launch to release the tension before release. The top of the launch can be identified by sight picture, sound, ASI, VSI, or Altimeter. Once the release has been activated, the glider should initiate a clearing turn. Clearing turns may be made to either the right or left. Continuing straight may be needed for traffic avoidance, but is not preferred.

c. **Common Weak Areas** - Releasing too early. Releasing too late.

### 2.9 Spin/Incipient Spin – A Manoeuvre.

a. **Why Assess** - To ensure the student is can recognize the onset of a spin and practice the recovery should the glider accidently enter a spin.

b. **What to Look For** - The ASCOT check must be completed before entry. If multiple spin/spiral/stalls are to be flown, repeating the ASCOT between every manoeuvre is not always necessary, although a traffic check may be applicable if other aircraft are near. The recovery steps should be done fluidly without stopping at each step. Rudder should be used in conjunction with aileron to level the wings. Excess airspeed should be used to regain altitude. Either climb or spoilers may be used to control airspeed. The entire manoeuvre should be planned to avoid descending below the minimum recovery altitude. Descending below the recovery altitude is acceptable if, in the opinion of the instructor, the entry altitude was sufficient.

c. **Common Weak Areas** - Not strapped in properly (Poor ASCOT). Stopping at each step. Not using rudder in conjunction with aileron to level the wings. Not transitioning to a climb attitude after recovery thus not regaining altitude or resulting in an airframe over-speed.

### 2.10 Spiral Dive – A Manoeuvre.

a. **Why Assess** - To ensure the student can recognize the onset of a spiral dive and practice the recovery should the glider accidently enter a spiral dive.

b. **What to Look For** - The ASCOT check must be completed before entry. If multiple spin/spiral/stalls are to be flown, repeating the ASCOT between every manoeuvre is not always necessary, although a traffic check may be applicable if other aircraft are near. The recovery steps should be done fluidly without stopping at each step. Rudder should be used in conjunction with aileron to level the wings. Excess airspeed should be used to regain altitude. Either climb or spoilers may be used to control airspeed. The entire manoeuvre should be planned to avoid descending below the minimum recovery altitude. Descending below the recovery altitude is acceptable if, in the opinion of the instructor, the entry altitude was sufficient.

c. **Common Weak Areas** - Not strapped in properly (Poor ASCOT). Stopping at each step. Not using rudder in conjunction with aileron to level the wings. Not transitioning to a climb attitude after recovery thus not regaining altitude or resulting in an airframe over-speed.

### 2.11 Stall – A Manoeuvre.

a. **Why Assess** - To ensure the student can recognize the onset of a stall and practice the recovery should the glider accidently enter a stall.

b. **What to Look For** - The ASCOT check must be completed before entry. If multiple spin/spiral/stalls are to be flown, repeating the ASCOT between every manoeuvre is not always necessary, although a traffic check may be applicable if other aircraft are near. Various entries may be used but the emphasis should be on recognition. After the first demo, recovery at the first sign of stall (in most cases the buffet) should be encouraged rather than waiting for the nose to drop. Simple releasing of back pressure is preferred for recovery. Pitching the nose forward is not preferred but acceptable.

c. **Common Weak Areas** - Not strapped in properly (Poor ASCOT). Using aileron to level the wings. Waiting for the nose to drop before recovering. Not transitioning to a climb attitude after recovery thus not regaining altitude.
2.12. **Slipping** (Forward Slip) – A Manoeuvre.
   a. **Why Assess** - To ensure the student is competent at increasing the rate of descent while maintaining a straight path over the ground.
   b. **What to Look For** - Forward Slip - When practiced, a target should be determined prior to entry. The attitude should be adjusted before entering the forward slip. Since forward slips are most often used in the circuit where spoilers are the first tool used to lose altitude, spoilers should be deployed prior to entry, but this is not mandatory. It is preferable to enter with the into-wind-wing down, but not mandatory. As with turns, rudder and aileron inputs should be coordinated. It is preferable to select full rudder then control track with angle of bank, but this is not mandatory.
   c. **Common Weak Areas** - Waiting for the ASI to read the required airspeed before entering the manoeuvre. Entering too aggressively; ‘flipping’ the glider on its side. Unable to maintain track over the ground often because of rushed/aggressive control inputs.

2.13. **Slipping** (Side Slip) – A Manoeuvre.
   a. **Why Assess** - To ensure the student is competent in maintaining a desired path over the ground while countering a crosswind during approach.
   b. **What to Look For** - When practiced, a target should be determined prior to entry. The into-wind-wing must be down. Some opposite rudder will be needed to maintain the desired path over the ground.
   c. **Common Weak Areas** - Angle of bank does not match force of crosswind.

2.14. **Slipping Turn** – A Manoeuvre.
   a. **Why Assess** - To ensure the student is competent at increasing the rate of descent while turning.
   b. **What to Look For** - Control inputs should be smooth. Fluctuations in airspeed is common although can be avoided through use of forward pressure during cross control inputs. Entry into the turn then followed by input of full opposite rudder for the slip is acceptable. The ability to enter a slipping turn direct from straight flight is indicative of an alert/advanced student. Combining with spoilers is common but not mandatory.
   c. **Common Weak Areas** - Allowing the nose to drift up during entry (not enough forward pressure).

2.15. **Straight Glide** – A Manoeuvre.
   a. **Why Assess** - To ensure the student is competent at tracking over a desired path while losing minimal altitude.
   b. **What to Look For** - Control inputs should be minimal. Airspeed should be constant. Fluctuating airspeed is often a sign of poor use of trim and trying to fly an exact airspeed rather than flying by attitude. The VSI should be included in the instrument crosscheck. Drift should be corrected by use of Crab but a Side Slip might be acceptable in some circumstances. At altitude or in the circuit, crab is preferred since it is a coordinated manoeuvre resulting in less altitude loss. Being able to maintain track and airspeed while completing the pre-landing check is an important indicator of a student's understanding and progress.
   c. **Common Weak Areas** - Allowing the glider to drift with wind currents. Chasing the airspeed indicator. Not using trim. Steering with rudder pedals instead of using coordinated inputs to make small heading corrections. Difficulty in Straight Glide is indicative of poor learning during the early stages of flight training. Repeating the air lessons of Attitudes and Movements may be needed. Inability to maintain track is very serious and indicative of a student who is not entirely in control of the aircraft.

2.16. **Gentle/Medium/Steep Turn** – A Manoeuvre.
2.17. **Downwind – A Procedure.**

a. **Why Assess** - To ensure the student is competent at establishing the glider in a position to make a successful landing while not endangering other aircraft with the same intent.

b. **What to Look For** - The glider circuit is all about making decisions, projecting an outcome, assessing results, and adjusting if required. Downwind should start somewhere near 45 degrees upwind of the intended landing area, and far enough out that the intended landing area is 2/3 of the way to the top of the strut. In most cases, the best altitude for starting the downwind (IP) is 1,000 ft AGL. The IP and strut reference may be adjusted as required for wind and convective conditions. Beginning the downwind directly across the intended landing area, or even closer to the Base Turn, is acceptable and in some cases might be necessary. Track over the ground should be parallel to the landing area using a distant object as an aiming point. Crab should be used to counter any crosswinds since it is a coordinated manoeuvre resulting in less altitude loss. Cross-controlling or holding in a bit of rudder to counter crosswinds is acceptable but not preferred. If cross-controlling is used, the resulting increased descent rate may disrupt the student's circuit plan. Airspeed should be constant at L/D. Higher airspeeds or airspeed changes may be acceptable in some circumstances. The VSI should be included in the instrument crosscheck. Once abeam the landing area, if there are multiple landing lanes, the landing lane should be selected and verbalized. Spoilers, side slips, or forward slips may be used as required. Other aircraft in the circuit should be monitored and the circuit plan adjusted as required. Similar to assessing emergencies during air tow, when assessing Downwind, separate the ability to plan, set up and fly Downwind from the ability to conduct the Downwind Check. It is not important that the student's Downwind matches what the instructor would do, but it is important that the student has a plan of action, enacts that plan, and adjusts as required. The ability to complete the full Downwind Check before abeam the intended landing area is indicative of an alert/advanced student.

c. **Common Weak Areas** - Not being able to identify or describe an acceptable IP. Flying back to the IP used last flight while a different IP would be more appropriate for the present flight. Not using an object on the horizon to assist with maintaining track. Not adjusting for crosswinds. Erratic airspeed often associated with poor use of trim or concentrating on the Downwind Check to the detriment of flying.

2.18. **Base Leg – A Procedure.**

a. **Why Assess** - To ensure the student is competent at establishing the glider in a position to make a successful landing while not endangering other aircraft with the same intent.
b. What to Look For - The glider circuit is all about making decisions, projecting an outcome, assessing results, and adjusting if required. In calm to 5 knot winds, the Base Turn should occur somewhere near 45 degrees past the intended landing area. Higher winds and crosswinds often necessitate an earlier turn. Traffic may also necessitate an earlier turn. Turning beyond the 45 degrees is not encouraged and should only be used if extremely high. Turning beyond the 45 degrees disrupts the standard circuit pattern and introduces more complexity to the decision making needed. The turn should be coordinated. Airspeed should be increased to the intended landing airspeed, although this may occur at any stage during Base, including the Base Turn, Base Leg, or Final Turn. Decisions based on descent rate should incorporate any head or tail winds encountered during the Base Leg. Spoilers, side slips, or forward slips may be used as required. It is not important that the student's Base matches what the instructor would do, but it is important that the student has a plan of action, enacts that plan, and adjusts as required.

c. Common Weak Areas - Uncoordinated turn. Turning too early/late for conditions. Turning at the same location used last flight while a different turn location would be more appropriate for the present flight. Not recognizing a head or tail wind condition and the result on descent rate. Not adjusting for crosswind and getting blown out from the planned Final Turn spot. Not making an earlier spoiler decision resulting in the need for a forward slip during Final Approach. Making aggressive spoiler movements instead of using smaller spoiler adjustments.

2.19. **Final Approach** – A Procedure.

a. Why Assess - To ensure the student is competent at establishing the glider in a position to make a successful landing while not endangering other aircraft with the same intent.

b. What to Look For - The glider circuit is all about making decisions, projecting an outcome, assessing results, and adjusting if required. The Final Turn should be coordinated and timed to enable the glider to roll out of the turn and be lined up with the extended center line of the intended landing lane. A medium turn is preferred, but steep or gentle turns are acceptable and sometimes necessary to intercept the extended center line. The airspeed set on Base should be maintained through the Final Turn, although conditions may dictate an airspeed adjustment after the turn. If needed, either turns or side slips may be used to regain the center line or move to another landing lane if required. The ability to identify and verbalize the aiming point is indicative of an alert/advanced student.

c. Common Weak Areas - Not using an aiming point. Fluctuating airspeed, often caused by aggressive spoiler changes. Not adjusting for crosswinds.

2.20. **Landing** – A Maneuvre.

a. Why Assess - To ensure the student is competent at safely returning the glider to the ground at a predetermined location.

b. What to Look For - The flare or round-out should not be an abrupt movement but a smooth transition from nose low attitude to straight and level flight. Airspeed should be allowed to bleed off before touchdown although touching down at approach speed is acceptable and in some conditions, preferable. Wings should be kept level although if a crosswind is present the into-wind-wing should be held somewhat lower. It is acceptable to have the tail wheel touch down before the main wheel, although not preferable. After touchdown, directional control should be maintained with rudders. Having the into-wind-wing touch the ground first is preferable but it is acceptable if a crosswind causes the opposite wing to touch down first.

c. Common Weak Areas - Waiting until the last moment before starting the flare. Climbing (ballooning) due to large control column movements when trying to bleed off airspeed before touchdown. Closing spoilers due to fear of applying wheel brake. Touching down on the tail wheel, often caused by trying to bleed off airspeed by using a nose high attitude. Not using any control inputs once the main wheel touches down.

a. **Why Assess** - To ensure the student is competent at efficiently using the glider’s energy, stored in its altitude, to manoeuvre the glider from its release point then through various in-flight situations then to the beginning of the circuit all while remaining within a prescribed area and remaining clear of other air traffic.

b. **What to Look For** - Gliding is all about making decisions, projecting an outcome, assessing results, and adjusting if required. The student should be able to move the glider from one air task (ie steep turn) to the next (ie. stall practice) using their own assessment and decision making as to position, rate of descent, upper winds, conflicting traffic, etc. It is preferable to leave the student a few 100 feet at the end of required air exercises to provide them with the opportunity to practice/demonstrate their Flight Management abilities. Similar to the Circuit, it is not important that the student's decision matches what the instructor would do, but it is important that the student has a plan of action, enacts that plan, then make adjustments as circumstances require. Being able to anticipate the next stage of flight and pre-positioning the glider for the event is indicative of an alert/advanced student.

c. **Common Weak Areas** - Not being able to find the airfield. Not monitoring or adjusting for VSI and Altimeter readings. Not monitoring or adjusting for air traffic. Not monitoring or adjusting for upper winds. Not being able to anticipate the next stage of flight.

### 2.22. Airmanship – Pilot Decision Making.

a. **Why Assess** - To ensure the student is competent at planning, wind assessment, common courtesy, lookout, completion of required launch signals, ASCOT, and the Downwind Check.

b. **What to Look For** - The discussions held before the flight should include wind conditions and how/if the circuit might need to be adjusted. Take-off signals should be clear, in order, and done without aid. When inspecting the rope, the student can include a tactile check, although this is a preference not a requirement. Having the wing holder adjust the wing height to accommodate for crosswinds is a sign of a very alert/advanced student. Traffic lookout should be established soon after lift off. Continually looking toward the planned release point and associated practice area(s) to track other air traffic is a sign of a very alert/advanced student. The ability to complete the full downwind check before abeam the intended landing area is indicative of an alert/advanced student although this is graded under Airmanship. Completing the Downwind Check during Base is acceptable but not preferred.

c. **Common Weak Areas** - Not planning for the flight prior to lift off. Not discussing the weather conditions with other pilots prior to flight. Not using the placards for conducting checks. Concentrating on checks to the detriment of maintaining course, airspeed, and altitude.
Section 3 - Applying Proficiency Levels

3.1. Introduction

Throughout this Flight Instructor Guide there is a lot of information about what is a proficiency level and what is a sequence, as well as the errors you may make in grading. Here we are going to put it all together and look at how to actually use the Proficiency Levels to rate the performance of a student.

3.2. Analyzing a Sequence

In order to analyze a sequence you need to know what you are looking for. To keep this relatively simple we will use straight glide as an example. From the previous section one definition is:

*Straight Glide* – Is a manoeuvre where the glider is flying towards a fixed point. Straight glide includes maintaining a constant attitude, coordinated flight, with wings level, a constant track, and a constant airspeed.

When you look at the definition you see that we use straight glide to fly toward a point. Everything should remain constant throughout the manoeuvre. You would task your student to fly straight glide at 50 mph toward a recognizable landmark; such as the control tower. During the straight glide the attitude should result in a 50 mph glide, the wings should be level, the glider should remain coordinated.

Now you need to look at what the student actually did and ask yourself some questions. Sometimes the student will fly the sequence exactly as they should. For our example, if the student flew a 50 mph glide right towards the control tower with the wings level and the yaw string was pointed straight back all the time then your job is easy. You compare the performance to PL 5 from section 7:

*Level 5* - “Student completed the task without assistance and without error.”

The result of our example is the student meets the requirements for a PL 5. Most of the time pilots do not perform to a PL 5. If the student made some type of error we need to determine the nature of the error and what is causing the student to make these errors. Do they seem to understand what they are trying to do or do they seem to be lost and not making appropriate responses? Does the error jeopardize the safety or the successful completion of the task or is it merely a minor deviation from the ideal?

We now return to the straight glide example with the same task to fly towards the control tower at 50 mph, except this time the student is not doing a very good job of keeping the wings level. In fact the only time the wings are level is when they are passing though level from a left bank to a right bank or vice versa. You also notice the student is not using any aileron and is only trying to control the glider with the rudder. It would not be unusual to have to take control a couple of times to reset the student.

The first question you would probably ask yourself is: *does this really look like straight glide?* Nothing seems to be constant and you are not flying straight to the control tower. Are the errors being made jeopardizing safety or successful completion of straight glide? It is probably not dangerous, but it really doesn’t look like the definition of Straight Glide so we can call it a Major Error. Once we have determined that it is a Major Error we need to decide if further instruction or further practice is required. The student was only using rudder to control the glider. This is not the proper way to level the wings during straight glide so we will have to teach them some more about straight glide. At times you may have to ask a student why they did something to ascertain if they understand what they are trying to do or if they need more instruction. As a result of the student's performance described in this example, a PL 1 is appropriate. Compare the performance with PL 1 in Section 7:

*Level 1* - “Student was not capable of completing the task. Student required verbal and/or physical assistance to avoid making major errors. Further instruction is required.”

As you can see the student was not able to complete Straight Glide and you had to intervene to ensure that their errors were not detracting from the successful completion of Straight Glide. Finally, the inappropriate use of rudder and complete lack of use of ailerons indicates there is something missing from their knowledge and they must receive further instruction before they will be able to successfully complete straight glide.
We stay with the Straight Glide example with the same task to fly towards the control tower at 50 mph, except this time the student is not doing a very good job of holding a constant airspeed. They are changing speeds from 43 mph to 62 mph and the speed never seems to be constant for more than a second. However, when they are prompted to check their airspeed they always make the pitch change in the correct direction; they just can’t seem to get the glider to settle at 50 mph.

Again the first question you would probably ask yourself is: does this really look like straight glide? The attitude and airspeed is not constant and is varying widely. So again the errors are probably not dangerous, but are preventing the successful completion of Straight Glide. At this point the instructor is probably prompting a lot and may also limit how far the student is moving the control column. But what’s different with the last example is they are always pitching in the right direction; just not the right amount. A couple of questions would probably confirm that in this case the student understands what needs to be done but just hasn’t quite translated that into precise movements of the controls, and more practice will probably help. You don’t need to do a lot of teaching on what is the appropriate way to correct when the attitude changes, but you do need to allow the student to practice so they can work it out. A PL 2 is appropriate for this performance. Compare the performance with PL 2 in section 7:

**Level 2 - “Student completed the task but required verbal and/or minor physical assistance to avoid making major errors. Further practice is required.”**

You would have flown towards the control tower in this case but your speed was varying a lot. You could probably talk the student through this most of the time as their response was always right when you told them to check their airspeed; but they do need more practice before they can effectively fly Straight Glide.

Keeping with the straight glide example with the same task to fly towards the control tower at 50 mph, except this time the student is only having slight dips of the wings that might not be corrected right away and the speed is varying by a couple of mph and might not be corrected without prompting.

Again the first question you would probably ask yourself is: does this really look like Straight Glide? The errors are detracting from the ideal but it still looks and feels like Straight Glide. This is a big difference from the previous two examples. If the instructor wasn’t in the cockpit, these errors would not prevent the task from being completed; but we are still not ideal. The errors are not being corrected all the time. A PL 3 is appropriate for this performance. Compare the performance with PL 3 in section 7:

**Level 3 - “Student completed the task, making only minor errors. Student required minimal verbal cues to analyze and/or correct errors.”**

The Straight Glide looked and felt like Straight Glide so you can say the task was completed and the errors were Minor in nature. The student didn’t always pick up that they were making Minor errors but they required minimal verbal cues to analyze or correct their errors.

For a final time we return to the Straight Glide example with the same task to fly towards the control tower at 50 mph, except this time the student is only having slight dips of the wings that are being corrected right away and the speed is varying by a couple of mph and that too is being corrected without prompting.

Again the first question you would probably ask yourself is: does this really look like Straight Glide? The errors are detracting from the ideal but it still looks and feels like Straight Glide. The difference from the previous example is the student is identifying and correcting the errors without help of the instructor. A PL 4 is appropriate for this performance. Compare the performance with PL 4 in section 7:

**Level 4 - “Student completed the task without assistance, making only minor errors. Student was able to self-analyze and correct errors.”**

The performance wasn’t perfect but the student identified and corrected the errors without assistance. The student could see what was going wrong and fixed it. This is the highest level of performance that will ever be expected of any aircrew. We will all make small mistakes but we are expected to identify and correct them before they become dangerous of prevent the task from being performed.
3.3. **Considerations**

The above examples were written to specifically outline the differences in the PL levels and to give you a method to see how the different Proficiency Levels can be applied. The errors were kept clearly defined to illustrate differences. In the real world you will have to balance multiple errors within a single sequence and look at the overall performance. It will take practice to become proficient at assigning a PL to each sequence but after you see some flying you will quickly discover most students make the same errors. There are exceptions, but it will become routine on a lot of flights.

When you run into difficulties, look at it from the perspective of the student. What do they need to be successful? Do they need more instruction or more practice? Are they catching their own errors or do you have to tell them every time? This perspective will help you assign an appropriate proficiency level for each sequence.

3.4. **Conclusion**

Students make a lot of mistakes while they are learning. It is expected, and it is the role of the instructor to determine the nature of the mistake and document it. This helps to guide the student’s future training. The Proficiency Levels are a system to help identify how well the student is performing and what type of help they need to be successful in the future.
Section 4 - Safety Limits

4.1. Introduction

Safety is the primary consideration in all aspects of the ACGP. Training ab-initio students is made safer by the attention of the instructor to all aspects of the student's instruction and flying.

Safety limits are the boundaries which an instructor must impose on a student's practice in order to ensure that the safety of the flight is never compromised. A good instructor recognizes that a student must have opportunities to make and correct errors, but evaluates the learning value of allowing the student to continue against the possible threats to the safety of the flight. This section will deal with identifying safety and learning limits and possible instructor reactions.

4.2. Factors to Consider

Proper ground preparation by way of briefings, scenarios and questioning can help to identify both the correct procedure for a sequence and corrections to potential student errors. A student who understands an error and its possible correction in advance of trying a sequence for the first time can often contribute to the safety of the flight. The instructor does not always have sufficient time to explain a necessary correction while airborne, and advanced preparation can give the student the tools to respond correctly to an error the first time it is encountered.

The safety limit is the point at which the instructor acts to prevent an unsafe condition from occurring. Instructors must include a margin for error within their safety limits in order to ensure that the glider is never placed in a situation that may result in an incident or accident. The safety limit then is not the last possible moment to act in prevention of an unsafe condition, but is a time when the instructor has sufficient opportunity to easily correct the error.

The learning limit occurs prior to the safety limit and is primarily concerned with student learning. A student who is unable to correct an error is unlikely to be able to correct an increasingly larger error, and at this point the instructor takes control and corrects the error before returning control of the glider to the student.

As previously discussed, it is important to know at all times who is in control of the glider. This is normally done through the formal transfer of control using the "I have control, you have control" method.

While there is not a constant point for each manoeuvre where the safety limit is reached, there are indicators that can be used to identify the limit for each different occasion. Eventually instructors develop experience in evaluating a situation, but generally they consider the following factors:

- The phase of flight. Generally, errors made close to the ground or on tow have less of an opportunity for correction than errors made while in the practice area. Instructors may need to immediately take control without providing an opportunity for verbal assistance to the student. An abrupt climb during the take off that has the potential to cause tow plane upset needs to be corrected immediately and there is often a limited opportunity for any verbal input from the instructor. An attitude change while practicing turns or straight glide, while not ideal, is unlikely to cause immediate danger to the glider and gives the instructor more time to react before the safety limits are reached.

- Student reactions. If you provide clear and accurate verbal assistance, your student will often be able to follow your directions and correct their errors. In some cases however, your student may misunderstand or misapply what you have told them. A student who reacts incorrectly, or who fails to react to your verbal direction may be an indication that the situation is approaching the safety limit. For example, a student who does not react to your direction to open the spoilers when significantly high on base may be placing the glider in a position that is quickly approaching the safety limit and has likely exceeded the learning limit. A student who incorrectly uses significant aileron input during a recovery from an incipient spin may cause the glider to enter an unwanted spin.

- Magnitude of the error. The size of a student’s error, or the length of time for which they have been making the error without a suitable correction should be considered. Often, this will be an indicator of the student approaching their learning limit, however in some situations, it may be a precursor to
reaching the safety limit. A student who has completed the first several minutes of tow and is unable
to keep the wings level to maintain a steady position has not necessarily passed the safety limit. If
the student is not making progress with their skill on tow, they may have reached their learning limit.

4.3. Practical Application

This is the instructor's dilemma. Consider the following:

- **Allow the student time to analyze and correct errors.** The instructor will probably pick up a
deviation (a need for correction) before the student will. Immediately directing the student to make a
correction will violate this first premise. Allow students an opportunity to correct mistakes themselves
before doing it for them, as long as safety is not compromised.

- **Do not allow the students to exceed their capabilities or deviate from normal parameters if the
learning value has been lost.** The student does not learn anything by maintaining airspeeds lower
than the correct ones. Even if the situation is within safety of flight parameters, there will always be a
point where the student must correct a consistent error.

- **Do not allow the student to go to the extent that someone else’s training time suffers.** This
concept is readily apparent in a busy traffic pattern. Do not let the student deviate from the pattern
such that it causes another student to alter his or her circuit.

- **Do not allow the student to exceed the limits of the glider.** Glider limits can be exceeded without
warning, especially during manoeuvres such as unusual attitudes, spin recoveries and spiral dives.
Instructor vigilance is very important.

- **Do not allow the student to do anything illegal or unsafe.** Excessive deviations during tow, poor
altitude management in the training areas and large deviations in the circuit can place the glider in a
situation that may preclude the instructor in effecting a safe recovery. The execution of prohibited
manoeuvres shall not be tolerated.

4.4. Conclusion

Safety and learning limits are important for effective training. An unsafe flight may result in harm to the crew,
aircraft, or others. Considering the only reason to conduct an instructional flight is to transfer skills and knowledge
to the student any training done beyond the learning limit is wasted time and resources. It is important to conduct
the entire flight so it is safe and the student has the greatest chance of learning the most material.
Section 5 – Airsickness

5.1. Introduction

Airsickness is the most common Aeromedical problem in flying training. While considered by most to be solely a medical problem to be handled by the Flight Surgeon, the Glider Instructor will see the problem first, and how it is handled may have a profound effect on the eventual outcome.

It is estimated that one or two of every five pilot trainees will suffer from minor airsickness symptoms sufficient to interfere with performance in the air and that one or two of every 20 pilot trainees will have a major problem with airsickness, which may seriously jeopardize their continued training. How the problem is handled by the Glider Instructor and the Flight Surgeon can make the difference between a minor and a major problem.

A Glider Instructor does not always recognize that a trainee is suffering from airsickness, and, because airsickness is seen by many to be a moral weakness, the student may not advise the instructor of feeling sick until it can no longer be disguised. Airsickness does not always culminate in severe nausea and vomiting, but can be confined to headache, stomach upset, mild nausea, and general discomfort, which may appear to the Glider Instructor to be lack of interest, preoccupation, lack of motivation, or simply poor performance on the student's part. While one cannot excuse poor performance or lack of motivation for any reason, both can be associated with airsickness. In nearly all cases, real airsickness is treatable, and it is therefore important to make the distinction between lack of motivation and poor performance caused by airsickness, and lack of motivation and poor performance which is caused by some other reason or situation.

5.2. DO’s and DON’Ts

There are some important DO’s and DON’Ts that the Glider Instructor should keep in mind:

- **DO** recognize that airsickness is a common and natural problem. The two major components that contribute to it, motion and anxiety, are inherent in the flying training environment and anyone can be made airsick under certain conditions. In the past, an aerobatic team leader suffered severely from airsickness in training. Space sickness, an analogue of airsickness, is a major problem even in the highly selected cadre of astronauts and cosmonauts.

- **DO** be prepared to discuss the problem in a relaxed and understanding fashion with the student after a flight, if he or she has been airsick. **DON’T** discuss the problem before flights or during the flight. There is good evidence that over concern with, or anticipation of, symptoms leads to a more rapid onset of sickness.

- **DON’T** demonstrate any aggressive manoeuvres on the first couple of flights, even if the student asks for it. Some students feel that they are obligated to ask for such manoeuvres even if they don't feel up to it. If they are made sick on the first couple of flights, this may set the scene for a continuing problem.

- **DON’T** let a student go flying smelling of vomitus!

- **DO** observe the student carefully during the pre-solo trips for signs of airsickness, such as heavy breathing, sweating, preoccupation or lack of interest, reduced look-out, and otherwise unexplainable reduced performance. If any of these symptoms are noticed, **DO** ask if the student is feeling all right. **DON’T** ask if the student is feeling sick. If the student is asked to concentrate on and report symptoms, the problem may be aggravated.

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- **DON’T** assume that all sickness in the air is airsickness. **DON’T** ensure that it is simply a case of airsickness. **DON’T** assume that all sickness in the air is airsickness. **DON’T** assume that all sickness in the air is airsickness. **DON’T** assume that all sickness in the air is airsickness. **DON’T** assume that all sickness in the air is airsickness. **DON’T** assume that all sickness in the air is airsickness. **DON’T** assume that all sickness in the air is airsickness. **DON’T** assume that all sickness in the air is airsickness. **DON’T** assume that all sickness in the air is airsickness. **DON’T** assume that all sickness in the air is airsickness. **DON’T** assume that all sickness in the air is airsickness.

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- DO guard against the student hyperventilating, a problem which is commonly associated with airsickness and which can produce a real physiological emergency.

- DO give the airsick student control of the glider. DO direct the student to fly straight and level. DO give the student a mental task on which to concentrate, such as reciting a check or answering questions about the glider; a demand of this sort redirects mental activity and tends to alleviate the symptoms of airsickness. DON'T overstress the student, since this may increase the anxiety component and aggravate the problem.

- DO tell the student to stop moving his or her head and to fix his or her gaze on the distant horizon, at least temporarily. Advise that look-out will be momentarily excused. Advise the student to hold his or her head steady and to carry out visual tasks with eye movements only. DO advise the student that in future when doing look-out, to be cautious not to move his or her head while rolling into or out of turns. Advise that any head movements should be slow and in only one plane at a time.

- During the debriefing, DO be prepared to discuss airsickness as a naturally and commonly occurring problem which in all probability will resolve itself, and attempt to emphasize any positive aspects of the mission both of these points will tend to reduce the student's anxiety level. One of the student's greatest sources of anxiety is attributable to the desire to please the instructor; if this anxiety can be reduced, the airsickness will be reduced.

- DO consult with the Flight Surgeon at any time. A student who is airsick on three or four consecutive flights or on more than one in every four flights should be referred to the Flight Surgeon.

- DON'T "carry" a student who has a low airsickness threshold by avoiding certain necessary or critical flight manoeuvres early in training. Not only might this develop an undesirable behaviour pattern in the student but also the problem will likely come to attention later when it may be more difficult to deal with it.

5.3. Conclusion

Airsickness is most common during initial flights; there may be minor recurrences on later flights when spinning and advanced manoeuvres are introduced. Real airsickness either resolves itself (with the Glider Instructor's help), or it is treatable (with the Flight Surgeon's help). Airsickness that manifests itself in severe nausea or vomiting is readily recognized and can be dealt with. Airsickness that is not recognized by the Glider Instructor may be misinterpreted as primary lack of ability or motivation. It is important, therefore, to make this distinction, which requires both directed attention and experience. Making a student airsick during early training by an overaggressive or unsympathetic Glider Instructor will, in all probability, impede progress by engendering anxiety and eroding the student's confidence in his or her ability to become a successful pilot.
Section 6 - When to Ask for Help

Giving flight instruction is not an exact science. People all learn things differently and a technique that works well with one student may not work for another. This means that we, as flight instructors, have to tailor our instruction to the person that we are instructing. Also, we need to understand that, with experience, our instruction will get better and we will have more ways to adapt and tailor our instruction for our students. Another aspect is that until you gain experience, it can be difficult to properly evaluate students.

As instructors, it’s important to acknowledge these facts and to actively mitigate them by regularly discussing the performance of your students with your peers, instructors with more experience, and your superiors. As a new instructor, it is normal to frequently ask for help with different aspects of flight instruction. It is also important to know that if you ask for help it is not considered negatively; on the contrary, it demonstrates your willingness to learn.

When students fail to reach required levels, it is obvious that asking for help could be advantageous. However, the real challenge is getting help before the student fails. For example, if your student does not react like you expected following a demonstration, asking for help could be in the student’s best interest. Someone else may have already seen this type of reaction and have a solution for you. Another example is giving instruction at an airfield that is not familiar to you. It is expected of you to ask someone for the peculiarities of the circuit, training area, landing zone, etc.
CHAPTER 3
SUPERVISOR ADMINISTRATION

Section 1 - Counselling and Interviewing

1.1 Introduction

There may be times when students require formal counselling. Counselling may occur for any number of reasons, i.e., discipline, personal issues, or instructional problems. The objective is to eliminate roadblocks that prevent the student from functioning properly in the instructional environment. Counselling is an investment that may pay dividends in the long term. Numerous people can look back to a point in their lives when someone took the time to intervene and counsel them over inappropriate behaviour that, had it not been addressed, would have prevented them from achieving their full potential. Given the proper motivation and support, people can change and improve.

1.2 Chapter Objectives

Upon completion of this chapter, the Flight Instructor should be able to:

- Describe the purposes of interviewing and counselling;
- Identify the instructor’s responsibility and limitations regarding counselling and interviewing;
- Describe three approaches to counselling; and
- Describe the processes used in the preparation, conduct, and follow-up to a participative counselling session.

1.3 General

The primary purpose of counselling is to assist the student in solving problems that are affecting his/her performance. Inappropriate behaviour is often a sign of an underlying problem(s). When a student's inappropriate behaviour is such that it reduces his/her performance or is affecting others, it should be dealt with. Not every problem, however, requires counselling. If an instructor brings inappropriate behaviour to the student’s attention, and it is corrected, there is likely no need to proceed further. If the student does not correct the problem, or the student is indulging in inappropriate behaviour that is so serious, or so obviously inappropriate as to warrant immediate intervention, then counselling is warranted. Not only does this ensure that action is taken to resolve a serious problem, it also ensures maintenance of an administrative record of that intervention should follow-up action be required.

Before a student can be effectively counselled, both the student and the instructor must clearly identify the underlying problem. This is done through interviewing. An interview is a process of seeking information.

Once the underlying problems are identified in the interview, counselling can take place. Counselling is a discussion with subordinates about their problems or deficiencies with the intention of arriving at a solution.

Effective interviewing and counselling benefits students in the following ways:

- Identifies and clarifies underlying problems;
- Assists the student to attain the course objectives; and
- Assists the student to correct undesired behaviour.

1.4 Instructor Responsibilities and Limitations

The Canadian Cadet Organization (CCO) places the immediate responsibility for counselling directly on instructors and supervisors.
To be effective, they require:

- A clear understanding of their roles as counsellors; and
- Basic counselling skills.

### 1.4 Responsibilities

One of the most significant responsibilities you will have is to help students overcome difficulties. You are often the first to notice a problem. The sooner a problem is addressed the better. The longer a problem continues, the more severe it is likely to become.

You can and should counsel students without hesitation on such matters as:

- Student progress;
- Student motivation;
- Student study habits; and
- Student discipline.

### 1.4.2 Limitations

You must recognize your limitations as a counsellor. If initial attempts at counselling are unproductive, or if you believe that a student has deeply-rooted or complex problems, you must direct the problem up the chain of command to the instructor-supervisor so that he/she can arrange appropriate specialist assistance. Examples of problems which should be forwarded up the chain of command include such suspected factors as lack of aptitude, drug/alcohol abuse, dysfunctional personality, family problems, child abuse, poor health, etc.

### 1.5 Approaches to Counselling

There are three basic approaches to counselling. In real life, an approach is not likely to be used in its pure form; however, you should be familiar with each process so that you can employ whatever mix is required to fit the situation.

You should be aware that no one approach is appropriate for every situation. Avoid using exactly the same counselling approach with every student or situation. No two students react the exact same way in similar circumstances. Therefore, every counselling situation should be tailored to meet the student's specific needs.

The table below describes the three approaches and basic requirements for the use of each.

<table>
<thead>
<tr>
<th>METHOD</th>
<th>EXPLANATION</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directive</td>
<td>Counsellor describes the problem and suggests a solution to student</td>
<td>For solution, counsellor uses own knowledge of student behaviour and information from student records</td>
</tr>
<tr>
<td></td>
<td>Counsellor assumes initiative and responsibility for success of counselling</td>
<td></td>
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</tbody>
</table>
### Non-directive

| Counsellor encourages student to discuss problems | Student must come up with own solution |
| Student attempts to deal with own problems | Counsellor does not diagnose or act as expert or evaluator |
| Counsellor provides minimal guidance or assistance | May require lengthy time period for success |

### Participative

| A structured combination of directive and non-directive approaches, providing greater flexibility | Students must be willing to work at solving their own problems. |
| Student and counsellor work as team to diagnose and solve problems | The counsellor may provide input or act as a "sounding board". |

### 1.5.1 The Participative Counselling Approach

For most issues, you will no doubt use the participative approach. Both you and the student participate fully in the counselling process. Although you take the lead, the student is actively involved. You work closely together to determine the best corrective action(s) to remedy shortcomings in training performance or minor personal issues.

Because the student plays an important role in solving his/her own problems, he/she will be more committed to their resolution. Also, since you play an equally important role in guiding them towards the best solution, it likely will be more acceptable than one arrived at by the student alone.

### 1.5.2 Approach

The participative counselling approach is deliberately structured. It requires the counsellor and student to engage in a stepped process aimed at helping the student to correct his/her problem. The objectives and recommended procedures for achieving them are as follows:

<table>
<thead>
<tr>
<th>STEP</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>Communicate shortcomings</td>
<td>Document student's shortcomings.</td>
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<tr>
<td></td>
<td>Inform them of shortcomings.</td>
</tr>
<tr>
<td>(1)</td>
<td>Inform them of requirement to address shortcomings.</td>
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<tr>
<td></td>
<td>If considered necessary, explain possible consequences of not doing so.</td>
</tr>
<tr>
<td>Step</td>
<td>Activity</td>
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<td>------</td>
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</tr>
<tr>
<td>(2)</td>
<td>Explore possible corrective actions</td>
</tr>
<tr>
<td></td>
<td>- Invite the student to give reasons, if known, for shortcomings.</td>
</tr>
<tr>
<td></td>
<td>- Have them describe all corrective actions they have already taken to deal with shortcomings.</td>
</tr>
<tr>
<td></td>
<td>- Have them list other possible actions they could take to correct shortcomings.</td>
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<td></td>
<td>- Suggest additional corrective action(s) they have not thought of.</td>
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<td></td>
<td>- Together, discuss “pros and cons” of each possible remedial action.</td>
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<tr>
<td>(3)</td>
<td>Obtain student commitment to Remedial Action Plan (RAP)</td>
</tr>
<tr>
<td></td>
<td>- From among possibilities listed on previous page, have student propose best course of action to correct shortcomings (RAP).</td>
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<tr>
<td></td>
<td>- Constructively critique this proposal and offer advice as necessary to ensure that proposal is realistic.</td>
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<td></td>
<td>- Have them propose a realistic due date for completion of RAP.</td>
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<td></td>
<td>- Ask student for commitment to proposed RAP and its timeline.</td>
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<tr>
<td>(4)</td>
<td>Oversee progress on RAP</td>
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<td></td>
<td>- Ensure necessary assistance or resources are available to the student.</td>
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<td></td>
<td>- Regularly review their progress toward goals and provide encouragement and recognition as needed.</td>
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<td></td>
<td>- Help them make “mid-course corrections” to RAP where needed.</td>
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<tr>
<td>(5)</td>
<td>Communicate success/failure of RAP</td>
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<td></td>
<td>- Assess success/failure of student at achieving RAP goals.</td>
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<tr>
<td></td>
<td>- Document their success/failure.</td>
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<td></td>
<td>- Inform student of assessment.</td>
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<tr>
<td>(6)</td>
<td>Recommendations</td>
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<tr>
<td></td>
<td>- Recommend follow-up action:</td>
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<tr>
<td></td>
<td>- Continue training without further counselling;</td>
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<td></td>
<td>- Continue training with further counselling; or</td>
</tr>
<tr>
<td></td>
<td>- Cease training.</td>
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</table>
1.5.3 The Interview (Counselling Session)

The purpose of any counselling interview is to identify and solve a problem. Sessions involving discipline may involve mainly one-way discussion from counsellor to student and the atmosphere may be quite tense. Nevertheless, the focus should be on problem solving.

There is no set list of methods that apply to any given interview. However, it is possible to consider the interview as having three phases and to consider the basic factors and activities that apply to most interviews.

<table>
<thead>
<tr>
<th>PHASE</th>
<th>ACTIVITIES</th>
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<tbody>
<tr>
<td>(1) Preparation and planning</td>
<td>Establish purpose of interview.</td>
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<tr>
<td></td>
<td>Review student background for:</td>
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<td></td>
<td>• previous problems;</td>
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<td></td>
<td>• training and experience; and</td>
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<td></td>
<td>• interests, strengths, weaknesses.</td>
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<td></td>
<td>Develop an overall plan.</td>
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<td></td>
<td>Consider possible goals.</td>
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<td>Establish time limit.</td>
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<td></td>
<td>Prepare for counselling by:</td>
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<td></td>
<td>• arranging seating to ensure good eye contact;</td>
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<td></td>
<td>• ensuring pleasant surroundings;</td>
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<tr>
<td></td>
<td>• minimizing distractions or interruptions; and</td>
</tr>
<tr>
<td></td>
<td>• ensuring privacy.</td>
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<tr>
<td>Opening</td>
<td></td>
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<tr>
<td>-----------------------------</td>
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</tr>
<tr>
<td>• Welcome the student in a pleasant manner;</td>
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<tr>
<td>• Invite student to be seated;</td>
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<tr>
<td>• Explain purpose of interview; and</td>
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<tr>
<td>• Get to the point quickly.</td>
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<table>
<thead>
<tr>
<th>Discussion</th>
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<tr>
<td>• Organize interview in logical fashion;</td>
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<tr>
<td>• Encourage them to express ideas and feelings, but maintain control of interview;</td>
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<tr>
<td>• Ask only one question at a time;</td>
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<tr>
<td>• Allow them to answer questions completely;</td>
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<tr>
<td>• Explore reasons for statements and answers; and</td>
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<tr>
<td>• Use effective listening techniques to let the student know you are concerned and encourage them to continue.</td>
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<thead>
<tr>
<th>Closing</th>
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<tr>
<td>• Summarize what you are hearing from time to time and at the end of the interview;</td>
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<tr>
<td>• Help them plan the action to solve the problem;</td>
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<tr>
<td>• Refer them to supervisors if a specialist is required such as:</td>
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<tr>
<td>- padre;</td>
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<tr>
<td>- medical officer;</td>
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<tr>
<td>- policing agency; or</td>
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<td>- social worker.</td>
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<tr>
<th>Record</th>
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<tr>
<td>the following interview data:</td>
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<tr>
<td>• Date;</td>
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<tr>
<td>• Major problems;</td>
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<tr>
<td>• Suggested corrective action; and</td>
</tr>
<tr>
<td>• Time line for corrective action.</td>
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</table>

Follow up with student to ensure action taken is adequate and useful.
1.6 Effective Interviewing Skills

Applying the following interviewing skills should assist you to determine the major issues involved in a student's inappropriate behaviour:

- **Listening.** “Everyone has two ears, two eyes, and one mouth. They should be used in that order and proportion.” This saying is particularly appropriate for interviewing. The purpose of the interview is to determine the root cause(s) of inappropriate behaviour. This requires listening, not talking. There is a difference between really listening and only hearing. You want to draw out the student’s perspective on the problem.

- **Attending behaviour** is principally about showing that you are genuinely interested in hearing the student and helping to solve his/her problem(s). Appropriate body language and eye contact are critical elements of attending behaviour. Looking or acting bored while verbally encouraging a student to express his/her problems is not going to work.

- **Questioning techniques** are very important. Open questions, such as “What effect do you think this behaviour has on the other students?”, gives a wide latitude for response. Closed questions, such as “Did you study for this examination?” force a single response. Probing questions, such as “Do you think Captain Bloggins was fair about assigning that extra work?”, encourage the interviewee to express his/her feelings about a situation. One type of question is that should be avoided is the leading question, which forces the respondent into a no-win situation. The classic example is “Have you stopped beating your dog yet?”. Another might be, “When are you going to start taking this course seriously?”

- **Minimal encouragers** are merely small signs which encourage an interviewee to continue. Some examples include nodding the head, saying, “yes, go on.” Murmuring “hmm-hmm”, repeating key words, “the test was difficult?”; even body posture and silence may encourage the interviewee to continue.

- **Paraphrasing** is simply repeating a portion of the interviewee’s statement back to him or her. It can be very effective. “So you did not have time to review the chapter?”

- **Reflection of feeling** is similar to paraphrasing however it involves feelings rather than statements of fact. “So you feel like you have not been treated fairly?”

- **Evaluation** is making a judgement on something just stated. Normally this should be avoided as the objective is to get the student to express his/her problems. Judging him or her is likely to stop the communication process. If, however, the student will not recognize an inappropriate behaviour it may be necessary. Evaluation should be used rarely and only as a last resort.

- **Summarizing** is a very effective interviewing tool that can be used at certain junctures to refocus and re-clarify the situation. It reviews the information presented to date. This allows the flight instructor and the student to confirm that they are in agreement with the facts of the situation.

1.7 Possible Causes of Inappropriate Behaviour

It is important to treat the cause of inappropriate behaviour, not the symptoms. The student may be performing poorly in class. We have to determine why the student is performing poorly in class. In many cases, stress is an underlying and complicating factor causing inappropriate behaviour. For example, a student may be using alcohol in an attempt to reduce stress. Both issues have to be addressed. It must be determined what is causing the stress, then the student must either reduce or learn to deal with the stress in an acceptable manner. There are an unlimited number of possible causes of inappropriate behaviour. Some of the most likely causes are listed below:

- alcohol and drugs;
- financial problems;
- marital and/or personal relationships;
- personality issues;
Note: The instructor must be aware that he/she is not equipped to handle some problems. Alcohol and drug abuse, relationship problems, and financial problems are examples of issues which the average instructor should be referring onward for expert intervention.

1.8 Effective Counselling Practices

Certain practices are important for a counsellor to “display” in order to be effective. Successful counsellors recognize the value of these practices and work to develop and maintain their skill levels. It would be a good idea to review Section 9.2. This chapter covered techniques that, while applicable in a classroom, are also very useful in a counselling/interviewing scenario, i.e., body language, use of voice, and effective listening techniques.

Following are some of the practices that enable a counsellor to best meet student needs.

- **Plan and prepare.** As always, planning and preparation is a major factor in the success of any endeavour. Gain a background knowledge of the individual and the issues. Never wing it. This is an important process for the student. Use forms, guides, notes or whatever, to ensure you follow your plan for the interview while trying to keep your actual note taking to a minimum. Plan your questions and approach in order to achieve the objective.

- **Communicate skilfully.** Instructors need to use all the tools at their disposal to communicate with the student. Listening and questioning techniques are key elements, as is body language. Encourage students to discuss their problems openly. Show that you are listening and that you understand what the student is trying to say. Provide feedback in a clear, conversational manner.

- **Show empathy.** Flight instructors should demonstrate that they understand the student’s point of view even though they may not agree with it or accept the behaviour associated with it. This does not mean that standards of behaviour or performance can be compromised.

- **Provide a supportive environment.** Show respect for the student. Let them know that your objective is to help him/her solve a problem. Show genuine interest in helping by paying attention to the student, eliminating distractions, and putting effort and concentration into the problem. Be patient.

- **Share responsibility.** The idea is for the instructor (counsellor) to assist the student to take responsibility for solving the problem. If the student is involved in the process and comes up with the solutions then he/she is more likely to be motivated to follow-through and succeed.

- **Follow through.** This is a very important, and most likely to be neglected, part of the process. Counselling is not a one-time event. It can be a lengthy process and progress may be made in small steps. If the flight instructor says that he/she will do something, then they must do it. If they direct some sort of remedial action, then they must ensure that the student is implementing the agreed to solution. Flight Instructors should remain in contact with, and monitor, the student; and if necessary initiate follow-up interviewing and counselling sessions.

- **Show respect for confidentiality.** This is a critical and ethical element of the interviewing and counselling process. Treat all information gained in a session as privileged information and let the student know that you intend to do so. Never disclose information to anyone not strictly required to have it.

Remember: It is counterproductive to berate, belittle, or badger the student. Sarcasm and ridicule are not good instructional techniques and they are not good interviewing and counselling techniques. Students will not participate mentally in an interviewing counselling session that uses these techniques.
### 1.9 Interviewing and Counselling Overview

The first step in the counselling process is to **Recognize the Problem**. Until the individual, peers, or supervisors recognize that a student is having a problem, it cannot be addressed. Sometimes the student will not recognize the problem until forced to confront it during the interviewing stage. The next step is that the student must **Accept the Need for Change**. Until the need for change is accepted, the student will only pay lip service to direction or pressure to change. No real changes will take place and the problem is then likely to resurface at a later date. Once the student accepts the need for change, the student and the instructor will work together to **Generate Possible Solutions**. Together they will agree on a solution(s) that they believe will address the problem. When solutions have been identified, the next step is to **Create the Climate for Change**. It is often not enough to make a commitment to change. Usually the environment must be changed to support the effort to change. Finally, if the desire and support exist, the student will **Change**.

Remember that this process is well established and it works. Students that go through this process are usually able to address the problems and see significant improvement in their performance.

### 1.10 Interview Guide

1. Place student at ease.

2. State purpose of the interview.

3. State the reason for the interview.

4. Provide outline of the interview process (discussion, possible corrective actions, an action plan and follow-up).

5. Use questions to get the student to discuss his/her perspective of the problem.

6. Exploration (how does the student feel about the following).

<table>
<thead>
<tr>
<th><strong>Canadian Cadet Organization:</strong></th>
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<tr>
<td>Their progress through the course:</td>
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<tr>
<td>The course:</td>
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<td>The instructors:</td>
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<td>Their peers:</td>
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<td>Study Habits:</td>
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<td>Academic Background:</td>
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<td>Health:</td>
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<td>Social Life:</td>
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<td>Others:</td>
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7. Provide a summary of the exploration.

8. Define the problem (Go into details over and above what was discussed in step 3).

9. Explain the consequences of the problem as applicable (may be Retest, Return to Unit, disciplinary or administrative action).

10. Allow the student to determine possible solutions to the problem (Non-Directive):
    a. 
    b. 
    c. 

11. You suggest possible solutions to the problem (Directive Approach):
    a. 
    b. 
    c. 

12. Discuss the pros and cons of the possible solutions.

13. Have the student propose a “best solution” and discuss merits of this choice (lead them to another solution, if more practical).

14. Have the student detail the steps he/she will take to implement this solution and its timelines (and get the student’s commitment to this Remedial Action Plan (RAP)).

15. Take any questions from the student.

16. Summarize what was discussed and your expectations of the student. Discuss consequences of success and failure of the RAP.

17. Re-motivate the student. (Do not let him/her leave feeling discouraged. You want the student to have a positive attitude regarding the process he/she just went through, and the consequences of successfully completing the RAP.)

18. Discuss your “follow-up plan” with the student (What’s next?)

19. Ease out.

1.11 Chapter Summary

The primary purpose of student counselling is to make the student a more effective learner by helping them cope with training and/or personal issues.

The responsibility for basic counselling and interviewing of students has been placed upon you by the Canadian Cadet Organization. In order to meet this responsibility you must have:

- An understanding of your role as a counsellor, and
- Basic counselling skills.

There are limitations with respect to the kinds of problems you can or should handle, such as those cases dealing with severe family problems, alcohol or drug
related problems, finances etc. In those cases, you should consult your supervisor and refer the student to specialists.

**Approaches to Counselling** fall into three general categories.

- **Directive Approach.** In this approach the counsellor describes the problem and suggests solutions. The benefit of this approach is that it exploits the instructor’s knowledge and experience.

- **Non-directive Approach.** In this approach the counsellor encourages the student to discuss the problems, likely causes, and possible solutions. The benefit is that the student plays an important role in developing solutions and will be more likely to commit to them.

- **Participative Approach.** This is the most commonly used approach and combines the benefits of the directive and non-directive approach, allowing for instructor input, yet allowing the student to provide input and commit to a solution they helped determine.

The **Counselling Session** (Interview) has three phases associated with it.

- **Preparation and Planning.** Develop an approach to the session; do not ‘wing it.’

- **The Session** itself as per the example guide.

- **Follow up** which is basically all of those activities done by you after the session has been completed (progress monitoring, documentation, recommendations).

**Interviewing Skills** are critical to the success of the session. There are several listed in the chapter however they all revolve around actively listening to the student and encouraging them to open up and communicate in order to identify the problem.

It is important to identify the **causes of inappropriate behaviour**, not the symptoms. It is important to remember that some of these problems are outside the area of expertise of the instructor and require referral to the proper authority.

There are a number of **effective counselling practices** that will assist in completing a successful session; make every effort to use them.
Section 2 - RGS Administration

2.1 Introduction

While the extent and nature of student administration will differ from training unit to training unit, there are some general considerations that flight instructors should be aware of. Experienced instructors will know that the administrative aspect and responsibility for students can be demanding. This chapter will discuss some of the considerations you should be aware of, while specific policies will be provided by your unit.

2.2 Section Objectives

Upon completion of this section, the Flight Instructor should be able to:

- Describe the typical training unit organization; and
- Describe Regional Gliding School directed student progress review procedures.

2.3 School/Unit Organization

Socrates may have simply gathered his students under a tree to conduct his question and answer lessons, but if his student numbers had risen to thirty, he probably would have needed to form two serials and some form of organization. In this section, we will take a quick look at some common characteristics of training schools, a typical organization and school responsibilities.

2.3.1 Common Principles/Functions

Like most training units, training establishments should employ the following basic principles of organization:

- **Definition of Responsibility.** You should know what your functions are and how they fit into the organization;
- **Unity of Command.** You should have only one immediate superior and know to whom and for what he or she is responsible;
- **Span of Control.** This refers to how many subordinates each superior should have under them. It will vary according to the circumstances, but not less than three (3) and not more than seven (7) is a ballpark figure;
- **Rational Assignment.** All functions required to accomplish an aim should be homogeneously grouped and assigned, e.g., training, evaluation (testing), improvement of instructor performance (monitoring) and administration; and
- **Delegation of Authority.** If someone assigns you a responsibility, he/she should also grant you the required authority to see it through. There are three common functions performed by almost all training units. They are:
  - Command and Control (Management);
  - Training Operations; and
  - Quality Control (Standards).

2.3.2 Structure

We know that a small school graduating 30 students per year will not have the same structure as one that conducts ten (10) serials producing eight (8) different types of graduates. Your training establishment will provide you with an organizational chart that will apply to your situation. Here we wish to discuss in general the duties within a typical school to help you understand how your own school operates.
2.3.3 School Responsibilities

Individual position responsibilities should be promulgated in unit orders or in terms of accountability. Here, we simply want to provide you with an introduction to what may be considered typical in training organizations. In the event you have to liaise within your own school or with others, it is good to be able to know who is responsible for what and to whom you should be speaking.

- **CO RGS.** Responsible for all planning and activities required to meet the taskings provided by higher Headquarters (the Region Cadet Support Unit);
- **School Warrant Officer.** Responsible for the standard of dress, deportment and discipline of all staff and cadets. They act as the CO’s principal advisor on all matters pertaining to other ranks and report directly to the CO.
- **Chief Flying Instructor.** Acts as chief training officer and is responsible for the ongoing operation of the school. This includes being involved in almost all aspects, including planning, scheduling, and resolving personnel and resource problems;
- **Standards.** Performs the main design and quality control functions in the school, such as instructor monitoring and student evaluation. One of the fundamentals of any organizational structure is that quality control should be independent of other functions. This implies that the standards functions be displaced or separate from the conduct of training. This allows the standards section to be more objective in their observation, measurement, evaluation, and recommendations for improvement. The Standards Officer or Flight Commander reports directly to the CO;
- **Administration Officer.** Responsible for developing and implementing school administrative policies and procedures on behalf of the CO. Acts as the focal point for all external administrative correspondence, reports and returns, and is normally the Unit Security Officer;
- **Training Support.** Includes operations staff, technical support, etc.
- **Flight Commanders.** Responsible to the Chief Flying Instructor for the supervision of training in their respective flight. They oversee the conduct of training, the training and assignment of instructors, the monitoring of instruction for improvement of instructional techniques, instructor PERs, and provide input to revisions of course training documentation.
- **Maintenance.** Includes an Engineering Officer, licensed Aeronautical Engineers, apprentices, supply technicians, and may include some general helpers who might overlap with Training Support items.

2.4 Orders and Regulations

As orders and regulations are subject to change there is no point in covering them in this Flight Instructor Guide. You will need to be aware of the various regulations and orders which apply to training and student administration. In addition, you may find yourself in need of general administrative information in order to deal with some student issues. They might look to you to answer basic administrative questions since they may not have the experience or knowledge to find the answers. You may encourage the students to "look it up"; however, you will also increase your own credibility by being able to advise and inform them of pertinent orders and regulations. All of the following orders and regulations are available at your unit, and you should become familiar with them.

This list is a basic requirement, and your unit will undoubtedly have other documents with which you should also become familiar.

- QR&O/CFAO/DAODs;
- CATOs;
- A-CR-CCP-242/PT-005;
- School Standing Orders and Flying Orders; and
- Training Plans.
2.5 UCP and Course Failure

2.5.1 Introduction

Each flying training course within the ACGP has a Training Plan (TP) which was based on a Qualification Standard (QS). A QS “describes the minimum acceptable level of performance expected of an individual qualified to undertake a specific job or activity that requires training”, 1 Cdn Air Div Orders, 5-020. The TP describes how to deliver the course by outlining the details of each PO and individual lesson(s), identifying the EC and PCs, describing the pass/fail criteria, and laying out any administrative requirements. The QS is developed at higher headquarters. Instructors use the TP. As stated in Section 8, the purpose of Progress Monitoring is to ensure the student is being trained IAW the TP.

In order to properly evaluate student progress, a standardized structure for progress monitoring was designed. It is important to understand that this process was created with the best interest of the students in mind.

Each training unit should follow an effective model in dealing with student progress review. This model or procedure is discussed in this section. It is very important for you to be aware of the process used by the ACGP as you will undoubtedly have occasion to use it. It is in the interest of both the program and our students that a fair process is adhered to. There are normally three levels in the ACGP student progress review system.

2.5.2 Regular Progress Review

First and foremost is the feedback the student receives through verbal debriefs and trip assessments on his/her performance for each and every mission. In addition, instructors, course directors or section heads (as applicable) monitor daily student progress and prescribe basic remedial instruction to address student difficulties as they occur. For example, remedial training would likely be given in the case of an UNSAT trip, if so indicated in the applicable TP.

2.5.3 Independent Review (IR)

There are three purposes of an Independent Review. First and foremost are to identify the cause of the problem and prescribe corrective measures. The final purpose is to review the student’s training to ensure that nothing has been missed.

An IR consists of a review of the student’s training with prescribed corrective measures. Where applicable, an interview with the student and/or instructor may be conducted. The record of the IR is most often entered into the student’s progress book or ground school file as applicable. IRs resulting from flight training are normally completed at the gliding site. IRs should be conducted in sequence. Personnel responsible for each IR, and the prescribed corrective measures are most often found in the applicable TP. An example follows:

- **IR (example)** – Conducted by a person authorized by the CO RGS. One rewrite, or up to two extra duals may be prescribed. The prescribed corrective measures shall be approved by a Flight Commander, or higher.
- **IR (example)** - Conducted by a person authorized by the CO RGS. One rewrite, or up to two extra duals may be prescribed. The prescribed corrective measures shall be approved by the Chief Flying Instructor/Chief Ground School Instructor, or higher.

If at any time it becomes evident that the IR process will not address the student’s difficulties, the person conducting the IR may recommend that a Progress Review Board (PRB) be convened.

2.5.4 Progress Review Board (PRB)

The PRB is held when there are significant decisions to make regarding the disposition of a student.

In most cases, the outcome of a PRB will be one of the following recommendations:

- Continue with remedial training;
- Recourse; or
Cease Training.

At an RGS, the CO RGS will make the final decision regarding student disposition. During training other than an RGS, this decision will most often fall to the RCA Ops O. If the decision is made to recourse the student (this is normally not an option for Air Cadets but may be for CF members on other courses), negotiations may be required among various agencies, such as higher HQ and career management.

The PRB is a much more involved and resource intensive process than the IR. Previous reviews (IRs) exist to address those problems that can be resolved at lower levels and more efficiently than by going through a PRB. It must be emphasized that the CO RGS or RCA Ops O can convene a PRB at any point deemed necessary. There is no requirement for an IR to precede the PRB should serious issues arise concerning a student’s performance. Normally, the PRB will deal with issues that have not been resolved by the preceding IR(s), and as well as when any course failure criteria has been met. Under no circumstances should a student “cease-training” without the benefit of a PRB. It is an obligation, not a “nice to have!”

The PRB will consist of members as directed by your training unit. It will review all course files, the Pers File (if required) and will interview staff and students, as required. In order to encourage candid assessments from interviewees, interviews will not be conducted in the presence of the student in question. After the PRB has completed its process, the board chair will conduct a final interview with the student. The chair will completely disclose the board’s findings and recommendations to the student before they are presented to the CO RGS or RCA Ops O. This procedure allows the student to see all the information used in assessing his/her course status. The timing of this disclosure affords the student an opportunity to correct, interject, question or provide counter-arguments to all the board’s findings. Such inputs can then be addressed and incorporated into the PRB report and explained to the student prior to being forwarded to the CO RGS or RCA Ops O for final decision. If the CO RGS or RCA Ops O does not take the board’s recommendation and decides on another course of action, then the student will be advised and given another opportunity to respond before any final decisions are carried out.

A PRB is an essential component of the instructional system. It will assist in determining student weaknesses, aptitudes and motivations. An informed recommendation or decision would not be possible without such information.

2.5.5 Removal From Training

In accordance with Cadet Administrative and Training Orders and the Air Cadet Gliding Program manual, the CO RGS or RCA Ops O may direct that a member be removed from training for such items as:

- When the student’s progress is below the minimum standard and there is no likelihood that the required standard will be attained;
- When the student’s continued presence on the training program is adversely affecting the training, safety, or morale, of the other students;
- For administrative or disciplinary reasons; and/or
- Repeated air sickness.

It is important to note that throughout all these review levels the student is continuously advised and updated on the status of his/her course standing. This process, when used effectively, has resulted in almost nil student grievances in the past, as it ensures that the student is given full information on the process, and also ensures that the training school has abided by ethical and well-established guidelines.

2.6 Summary

Each unit will have its own specific administrative system and organizational structure. You need to know just what is expected of you by the unit and your supervisors. If you have questions, ask your supervisor! It is important that you get up to speed and feel comfortable with your responsibilities as quickly as possible.

Questions of a unit-specific nature, such as student record-keeping procedures, log books, leave policies, illness, grounding procedures, etc., will not be addressed here. Your unit will inform you concerning these issues.
As you gain experience you will become comfortable with the administrative duties to which you have been assigned. Rather than by learning through osmosis or waiting for things to happen, in order to learn how to deal with them, take the opportunity to acquaint yourself with your duties. Ask lots of questions. By studying your unit’s procedures, you are in effect becoming a more valuable part of the training team. Ask the standards instructors any questions you might have. They are experienced and knowledgeable, and have the answers you need.
Section 3 - Training an Adolescent

3.1 Introduction

Training an adolescent is very different than training either a child or an adult. Adolescents are going through many changes physically, mentally, emotionally, and socially. This chapter will provide a brief discussion of the many issues that an instructor may have to deal with, and provide some advice on how to deal with those issues.

This section will focus on the following areas:

- Background Factors
- Socio/Emotional Behaviours
- Locus of Control
- The Adolescent Perspective

3.2 Background Factors

There are many background factors which may affect the learning of an adolescent. Ethnic background is generally seen today as a large factor. However, other factors may include scholastic, geographical, and socio-economic backgrounds. Note that unless the student is a recent immigrant or a first generation Canadian, the ethnic background factors may not be an issue.

3.2.1 Ethnic Background: Cultural Requirements

One of the most important concepts for an adolescent to grapple with is a sense of identity. Generally they will default to their ethnic identity as a baseline. It is important for an instructor not to challenge this sense of identity. However, a person’s ethnic background can present some challenges for the instructor.

One of the challenges which may arise from certain ethnic backgrounds is cultural requirements. The good news for the instructor is that many of the challenges associated with cultural requirements (such as specific dietary needs) will have been mitigated or addressed by higher authorities. Some examples of those things which might still be dealt with by the instructor are language, religion, source of motivation, perception of physical contact, and reception of feedback.

Considering Canada’s multi-cultural population it is not unreasonable to think that students will have a first, and possibly second, language which is neither English nor French. This can present a communication barrier for the instructor. The instructor will have to engage the student to ensure comprehension. The best way of doing this is to get the student to respond to questions in their own words, as they may simply be regurgitating the source material otherwise. This is in fact a good practice for all students. Another strategy, best used in a one-on-one situation, is to keep language simple. Avoid jargon until you are confident that the student does in fact comprehend.

Certain students will have specific religious beliefs. Canadian societal norms are still based predominantly on Christian values, and the majority of Canadians hold those values. It is possible to have a student who practices a different religion, and whose practices could pose a student management issue. Examples include specific prayer times, worship protocols, dietary constraints, and perhaps even dress. The last three examples are normally managed by the organization. The issue of prayer times however could impact student management as far as scheduling is concerned. The best example of this would be someone who practices Islam. There is a requirement in Islam for the practitioner to pray 5 times per day, at specific times. The instructor can manage these issues by learning about them and ensuring that the prayer times will not be conflicted by flying times.

A student’s ethnic background may influence the motivation of the student. Though not limited to a specific culture, it is generally more common in Eastern cultures. A student who comes from this environment will have both strong intrinsic and strong extrinsic motivation. Intrinsically, the student will have been taught to achieve perfection in everything and always work hard. This is normally seen by an instructor as a good thing, but it can be a detriment as well. If the student is experiencing difficulty this may cause a negative response including frustration and questioning their instructor’s ability. Extrinsicly, the student will likely feel a lot of pressure for
success, especially from family. This may produce a greater fear of failure, since failure may lead to loss of face in the eyes of family. The best way to deal with this is to remain firm, and provide remedial training as required. Also, during the debrief, ensure the student that it is the task performance which is being critiqued, not the individual student. Be careful with the tone you use in encouraging this student, as it could be seen as condescending and demeaning if you are too gentle.

The gliding field can be a very physical environment, including how people interact with each other. It is especially important that instructors be able to read body language and be attuned to personal space. While this is not necessarily a culturally specific idea, there are some cultures that have different ideas on what is acceptable or normal when compared to Canadian norms. One example is eye contact. In North America, it is an accepted norm that eye contact is required in order to show engagement in a conversation. However, people of Asian and African cultures will avoid eye contact as a sign of respect; which could be a point of frustration for an instructor who is trying to ensure comprehension. A second example is physical contact. North Americans and southern Europeans are generally more liberal in their definition of appropriate physical contact. Meanwhile, people from other cultural backgrounds have a more limited view of appropriate contact, especially contact between different genders. The only real strategy for dealing with these situations is to simply acknowledge the differences and respect them.

3.2.2 Ethnic Background: Response to Direction

While it may not be correct to single out certain ethnic groups, experience has shown that different cultures exhibit different responses to direction, and different responses to being in situations where they have to make decisions for themselves. This is related to LOCUS OF CONTROL, discussed later in this chapter. The ethnic groups which tend to exhibit these responses are African and Asian, particularly female. In these cases reception of direction is normally very good. However, once they are required to make decisions on their own they will exhibit hesitation, lack of confidence, and insecurity. This behaviour stems from being a part of a culture where decisions are made for the person by others. A simple strategy to mitigate this behaviour is to engage your students in flight management decision making early on in their training; including both air lessons and ground briefings.

3.2.3 Scholastic Background

The biggest challenges presented to an instructor insofar as a student’s scholastic background is concerned are that the styles of assessment and the classroom management are both different.

Most students will not have written a multiple choice exam, and those that have will not have written one designed to the complexity of the TC GLIDE exam, or any of the phase exams which are used throughout the RGS ground school. Most students will see a 10-15% decrease in marks compared to what they would normally get at school. In fact, some students may actually see their first failing grade while at RGS. A strategy which instructors can use with their students is to review some sample questions and some “best practices” for writing multiple choice exams.

The instructor should also explain the concept of IRs, EDs, and UNSAT OFRs. In relation to a school assignment the UNSAT would be seen as a failure, and the student will not see the EDs as an opportunity to redo the assignment; they will simply see it as part of the failure process. It is important that the instructor ensures that the student understands the true purpose of the EDs, and that the IR process is a method of finding the best way to enhance the students training.

How we manage our classroom environment at the RGS is also different then most students will be familiar with. In this case, classroom is not limited to ground school, but also includes air lesson briefings, and debriefings. While the students will be familiar with a large class size of 25-30 students, they are for the most part unfamiliar with sitting through hours of lectures. Also, in small group environments students are generally used to being more active than passive. In these cases, the instructor needs to focus on being more dynamic and should refer to the alternate methods of instruction presented by the RCIS during the OCC course. In the end, ensure that your students are engaged.

3.2.4 Geographic Background

While not always an issue, most instructors will notice a difference between students who come from a rural setting versus an urban setting. Rural students tend to have a better work ethic and easier time transitioning from
a group mentality to being an individual. The urban student generally tends to be more academic and will be strong either as an individual or in a group, but not necessarily both. Instructors will also notice a marked difference in how a student from each group handles failure. The rural student is more used to being in a situation that doesn’t work out, whereas the urban student generally does not see those situations. The last major difference that an instructor will notice is that urban students tend to have a higher sense of entitlement, meaning that they might take the opportunity for granted.

While it may seem like the rural student is the better choice, bear in mind that when someone who is used to doing something all day has nothing to do, they will find something to do. This can lead to disciplinary issues in the barracks.

3.2.5 Socio/Economic Background

While no Canadian would readily admit to a social class system existing in Canada, there are definitive lines drawn between people based on income and social standing. It is possible that the uniformity of the cadet program allows us to forget, but we do need to remember that cadets are not all the same. Some may come from a standard nuclear family, whereas others may come from broken homes, and some may even come from foster homes or shelters. Some may have parents who are highly educated and professional (such as doctors) while some may come from a family where the parents are working two jobs just to stay above the poverty line.

The socio/economic background may determine motivation, sense of support, ability to deal with stress, sense of self-worth, confidence (or at least perceived confidence), ability to work as a team, perceived ability to fit in, as well as other traits. An instructor will need to be sensitive to these factors to avoid putting the student in an embarrassing situation. Embarrassing situations could be as simple as a teasing comment made in jest, or taking your students to the local fair at their own expense. Maybe the student can’t afford as much at the fair as their peers or had other plans for that money, and now feel pressured to spend it. Maybe that teasing comment about never having seen a particular show makes them feel stupid, all because their parents won’t let them watch it, or they can’t afford more than basic cable.

3.2.6 Socio / Emotional Background

Adolescents are at a stage in their lives where their behaviour isn’t necessarily congruent with society’s norms and expectations. They are constantly striving to find their place in society and will behave in extreme ways in order to be accepted by their peers.

3.3 Socialization

Strictly speaking, socialization is the process by which members of a society are taught the rules and acceptable behaviours of that society. Within general society, adolescents learn basic concepts which allow them to interact with peers, more junior members and more senior members. Within the CCO, adolescents learn more specific norms which allow them to function within this more stringent society.

Sometimes adolescents will challenge the socialization process, or certain norms which are presented. This behaviour may be drawn from a conflict of information, peer pressure, or a false sense of needing to stand out.

3.3.1 Emotional Behaviour

Adolescents are in a transition between childhood and adulthood. This transition causes many biological changes including body growth and hormonal imbalances. There currently is no single coping strategy for hormones, but hormones will lead to some very interesting situations which can be dealt with as they arise.

During this transition period, adolescents will constantly try and fit in with others. Normally, socialization allows for easy relations. However, hormones can confuse the issue making the adolescent behave in an irrational manner. This is exasperated when an adolescent does not receive a normal socialization, or has been taught differently than the majority of the group.

A general example of this behaviour happening on the airfield would be “friendly challenges”. When a peer or group of peers start talking about the “extreme” manoeuvres that they have performed, someone trying to fit into
that group will likely try and one-up them all. This would likely lead to someone who normally knows their limits
performing a relatively dangerous manoeuvre which could end poorly.

3.3.2 Dealing with Socio / Emotional Behaviour

The only real strategy is to address the specific infraction. Make sure that they understand what they have done
wrong and why it is wrong. A good tactic is to have the student participate in devising a resolution. This will allow
the lesson to sink in more.

3.4 Locus of Control

Locus of control is the concept of someone’s ability to control the events in their life. The locus of control can be
internal or external but the two are not mutually exclusive and the degree of an internal or external locus of control
will depend on the situation and the individual.

Some students will have an internal locus of control. These students believe that they can influence the world
around them. These are ones who, for one or more of the reasons discussed earlier, have previous experience
with decision making and coping with difficult situations. As they progress through training and graduate to solo
status they will be able to make sound decisions on their own with very little input from the instructor.

Some students will have an external locus of control. They believe that they have little or no influence on the
world around them and tend to accept what is put before them as the end-state. These are the ones who, for one
or more of the reasons discussed earlier, have little or no previous experience with decision making or coping with
difficult situations. As they progress through training, they will respond well to direction and may give a false
sense of readiness when solo time approaches. However, these students may exhibit poor decision making skills
while solo, and will likely have difficulty transferring knowledge from situation to situation. The result is that they
may not be able to apply solutions from past problems to a new problem. This can cause safety concerns.

Instructors must brief good flight management and decision making early on in the course, and ensure
comprehension. Students should progressively be required to make more decisions as they approach solo
checks, and be debriefed on both good and bad decisions. Instructors must ensure that students are constantly
engaged during these briefings and debriefings.

3.4.1 The Adolescent Perspective

Without question, the adolescent has a unique perspective of the world around them. There are three common
descriptors which can be used to define an adolescent’s perspective: search for purpose, sense of invulnerability,
and faith in society.

3.4.2 Search for Purpose

The biggest source of fear for an adolescent is lack of purpose in life. While this focus is predominantly in the
present tense, older teens will start to look forward and wonder what they are going to do for the rest of their lives.
The hope is that the ACGP will give them purpose, at least for a little while. However, it can take some time
before the adolescent sees that purpose come to fruition.

In an ideal world, the cadets that come to an RGS will be full of purpose and goals, and carry forward through life
without any fear of losing those goals. Even after the first “failure”, a glider candidate may not be shaken. As the
second “failure” looms though, and as they see themselves fall further behind their peers, they may question their
purpose and wonder if their goals are achievable.

One of the tasks resting on an instructor is to keep their students motivated. This is easy at first, but can be more
difficult as pressures mount. Properly briefing the IR process and ending all debriefings, especially UNSAT flights,
on a positive note will help keep the student motivated. As discussed under debriefs, an instructor should always
end on a positive note.

3.4.3 Sense of Invulnerability
The greatest strength of an adolescent can also be their greatest weakness. Going through flight training without fear will allow the student to better learn the capabilities of the glider and better test the theories they learn in ground school. However, this same perceived invulnerability may impede the adolescent’s ability to recognise a bad situation before it happens. This has sadly led to many unnecessary fatalities in aviation.

One thing which is important to remember is that many of the new instructors will technically, if not legally, be adolescents as the definition of adolescent is not based on age. This means that many young instructors will also have degrees of this sense of invulnerability. Being aware of this trait is valuable to instructors as it will assist in defining safety limits.

3.4.4 Faith in Society

Adolescents will have a varying degree of experience and socialization. This can affect how much faith they have in the institutions which are trying to teach them. By virtue of the CCO, cadets will automatically have some level of faith in the instructors. However, instructors should be reminded that there is a difference between individual authority and institutional authority.

Some students, particularly older ones, will be critical of everything they learn. This could be because they have experienced situations of misinformation or it could be based on an upbringing of questioning everything. This student could be a potential disciplinary problem, though they will not normally go past the point of disrespect. They simply will not accept certain concepts blindly. They may challenge the authority of the institution, but not normally the individual.

Some adolescents will have absolute faith in everything told to them. These are generally the younger students or the meeker students. They will accept the information provided to them without question. They rely on rote learning to get through. These students will easily get frustrated with the critical student’s constant questioning as they see it as an interruption of the lesson. These students will take care not to challenge authority.

Some will be faithful until they see a lack of knowledge on the part of the instructor and then become critical. The instructor needs to be careful here, as how the instructor deals with this kind of situation can also affect the instructor’s individual authority.

The best way for an instructor to deal with all three of these situations is to be prepared for the lesson. The instructor must ensure that they have the most up-to-date information, that they have anticipated some of the questions which might be asked, and researched the answers. This enables the instructor to avoid the third scenario, and be better prepared for the first.

3.4 Conclusion

Despite the homogenous nature of the CCO, it is unrealistic to expect that all students are the same. An instructor’s relationship with their students will rely on a thorough understanding of the students’ backgrounds. A good instructor will develop umbrella strategies which meet all of the needs of their students. A great instructor will be able to develop strategies which meet the needs of each individual student without publicity, and without singling a student out.