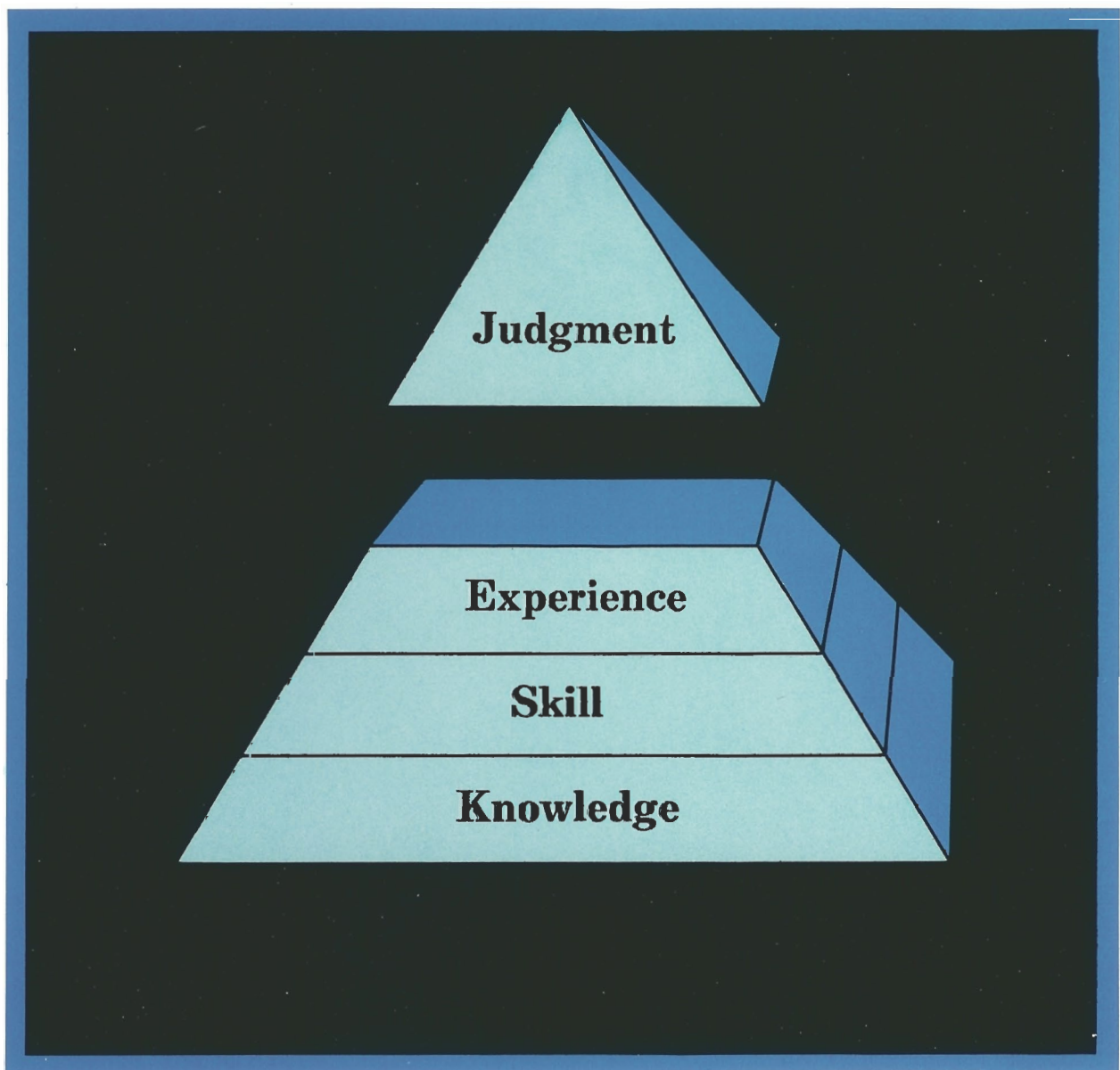


# Judgment Training Manual for Instructor Pilots

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A cooperative project by the:  
Federal Aviation Administration  
Transport Canada  
General Aviation Manufacturers Association



## Foreword

This manual is part of a prototype judgment training program developed by the Federal Aviation Administration (FAA), Transport Canada, and the General Aviation Manufacturers Association (GAMA) in an effort to improve general aviation safety. This manual contains the necessary background material to help prepare you to teach effectively the subject material contained in the companion publication entitled "Judgment Training Manual for Student Pilots." If this program proves successful, similar advanced training materials may be developed for private/commercial/instrument pilots and for those who operate multi-crew aircraft.

This judgment manual was prepared under the technical direction of the following individuals; your comments regarding this pamphlet are solicited and should be directed to them:

Alan Edward Diehl, Ph.D.  
Department of Transportation  
Federal Aviation Administration, Attn: AAM-540  
800 Independence Avenue, S.W.  
Washington, D.C. 20591

or

Georgette de Bagheera Buch, Ph.D.,  
Supervisor  
Training Systems Evaluation—Civil Aeronautics  
Transport Canada, Attn: LICT  
Place de Ville  
Ottawa, Ontario  
Canada, K1A0N8

or

Gary Spencer Livack  
Manager of Technical Activities  
General Aviation Manufacturers Association  
Suite 801  
1400 K Street, N.W.  
Washington, D.C. 20005

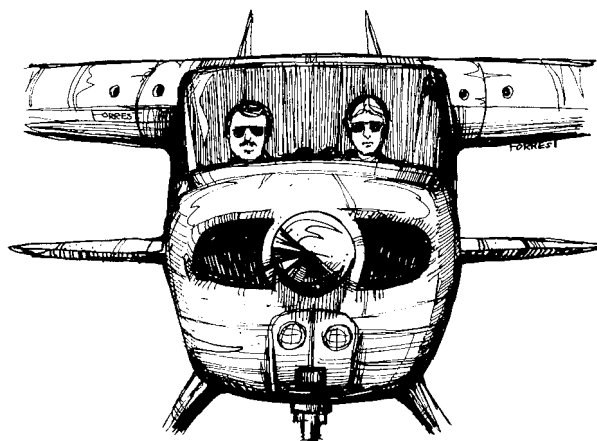
## Acknowledgments

This training manual is the result of extensive revisions to the FAA report "Pilot Judgment Training and Evaluation, Volumes I-III," (DOT/FAA/CT-82/56), Embry-Riddle Aeronautical University, June 1982.

Many individuals participated in the development of this judgment training manual:

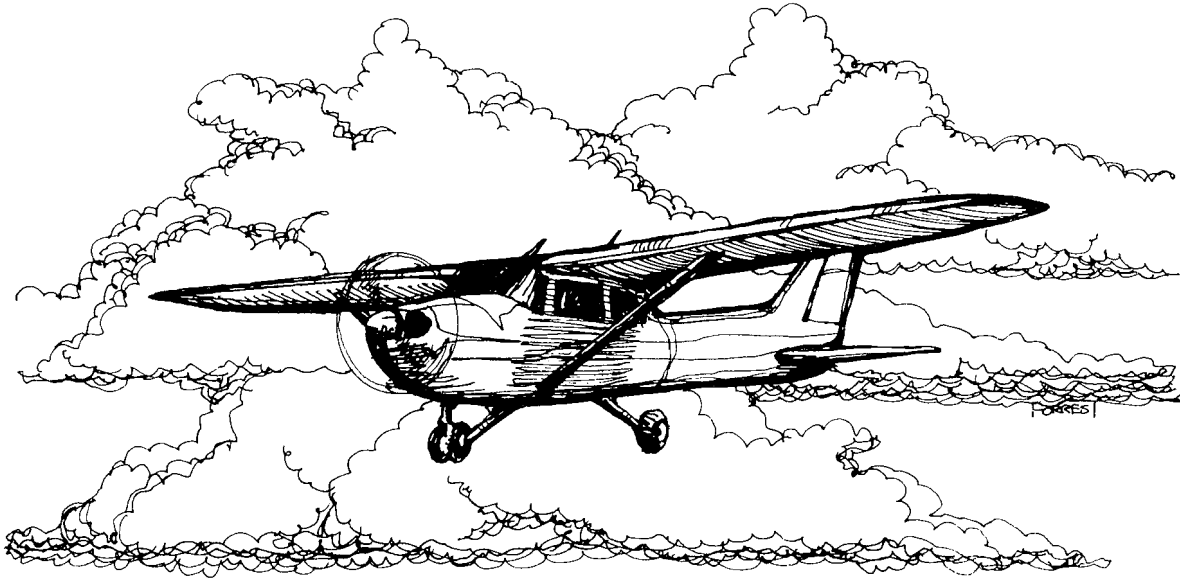
Robert A. Alkov/U.S. Naval Safety Center  
Jerome I. Berlin/FAA Eastern Region  
Denis A. Caravella/FAA Great Lakes Region  
Irvin B. Charnock/Teledyne Continental Motors  
Phyllis A. Duncan/FAA Office of Flight Operations  
Robert A. Ewing/Edo Corporation  
Bernard A. Geier/FAA Office of Flight Operations  
Eric V. Gruber/FAA Eastern Region Consultant  
Douglas P. Harvey/FAA Eastern Region  
Kenneth W. Johnson/AVCO Lycoming Division  
Arthur C. Jones/FAA Office of Flight Operations  
David D. Thomas/GAMA Consultant

Their contributions are gratefully appreciated.



June 1, 1983

# Judgment Training Manual for Instructor Pilots



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# 1 Introduction

This **INSTRUCTOR MANUAL** contains directions for administering the judgment training program described in the publication "Judgment Training Manual for Student Pilots." This manual supplements the Student Pilot Manual and is **not** designed to be used on its own.

**Learn the Student Manual!** The material contained in the Student Manual constitutes about 80 percent of the judgment training course. This manual outlines the Student Manual, explains how to present the material to your students, and provides guidance on how to resolve student difficulties.

The Instructor Manual will not, however, teach you the material that students must learn from the Student Manual. **You, too, must carefully study and complete all of the lessons contained in the Student Manual.** This material is critical to the success of the judgment training program.

Note that the Student Manual requires a minimum of study and memorization. By reading the various chapters and completing the exercises,

you, as well as your students, will learn most or all of the material.

**Use the "situations" to full advantage.** The Student Manual contains numerous examples and "situations" taken from reports of actual accidents and incidents. Some have been slightly altered to fit the requirements of each section. Use these scenarios in two ways.

First, emphasize to the student the reality of the situations—stress that they are not like practice exercises for algebra. Rather, they are actual flight judgment situations that continue to occur. Second, discuss the scenarios and the accompanying exercises with your students. If possible, enrich these discussions with **examples** from your own experiences. This is encouraged because discussion of actual incidents and personal experiences may lead the student to improve his or her own judgment.

**The flight training is entirely up to you.** This Instructor Manual contains two sets of training activities not in the Student Manual which should be presented to the student during flight train-

## Basic Principles of Judgment Training

- The Student Manual is simple and repetitive for two reasons: 1) the simplicity provides frequent positive reinforcement; 2) the repetition builds good judgment habits and refreshes memory so that information can be readily recalled in a variety of circumstances, even when under stress.
- The true stories contained in the Student Manual should stimulate the student's interest and appreciation of the need for good pilot judgment. Discussions of these stories and similar ones from your repertoire of personal experiences are more important for developing the student's judgment.
- The instructor—you—profoundly affects the student as a role model and as an opinion shaper. Instructor attitudes toward safe flying and toward this judgment training material may influence the student much more than actual flight training. Furthermore, instruction is greatly improved when the instructor acts as coach and consistently uses effective educational principles.
- Use of "Special Concepts" to guide conversations with the student focuses the instruction on judgment-related training and increases the student's ability to provide self-generated feedback upon which good judgment depends.
- Knowing how to recognize and respond to hazardous thinking and high stress is very important to exercising good pilot judgment. The instructor should encourage the student to develop these skills but in doing so should never attempt to analyze or modify the student's personality.
- The student learns concepts and behavioral techniques, then repeatedly applies this learning to relevant flight situations during ground and flight training. Through repeated reinforcement and continued student involvement the judgment program builds new behavior habits. Spaced practice which includes repetition, feedback, and positive reinforcement is essential to the success of this judgment training program.

ing. Although these lessons require student-instructor interaction, no learning of new material is necessary. In this way, the student can begin to apply what has been learned to actual flight situations.

Knowing the principles upon which this entire judgment training program is founded will help you present the material more positively to your students. Indeed, **it is important that your students perceive your attitude toward this training as most positive.** Although a discussion of each principle listed below is presented within the body of the Instructor Manual, this summary may help you to understand each segment of the program more clearly.

## The Instructor's Role in Training

Although this curriculum is designed to help pilots overcome a variety of circumstances which may result in poor pilot judgment, you, the flight instructor, are the key element of this program. Your attitude and your approach to flying may often influence your students more than any specific lesson. By always setting a good example and by giving students support and encouragement throughout this program, you help them develop good judgment and sound flying practices.

To help prepare yourself for this role, think about the difference between the instructor as evaluator and the instructor as coach. The evaluator sees his or her role as one of telling the student what to do then monitoring the student's performance. Most of the time is spent making assignments, watching performance, answering questions, measuring performance, and making positive or negative evaluation. The amount of learning actually accomplished is up to the student.

In contrast, think of the instructor in a slightly different perspective—as “coach,” as someone who actively stimulates learning. The instructor not only makes assignments and observes the results, he or she also helps the student learn through demonstration and personalized instruction. The instructor-coach does more than just answer questions and point out errors, he or she also asks pertinent questions to stimulate the student's thought processes and encourages correct ways of doing things by helping the student analyze mistakes.



How do you instruct as a coach? First, be actively involved with your students as people. A student learns more when he realizes that his instructor respects him as a unique individual. Show the student that you know and care about him or her and can respond to day to day changes in the student. One day a student may be alert and ready to learn; another day the student, for whatever reason, may be unresponsive. Students may often find it difficult to tell you what is on their minds. Listen and respond constructively to help a student learn to be more open.

## Use Sound Educational Principles

A good coach uses sound educational methods based on principles of psychology. In general, it is best to deal only with the actual behavior of the student. Make no attempt to guess motives, change ideas, or develop willpower. Focus your attention completely on what the student actually says or does. When they relate directly to specific observable actions or statements, your responses are the most effective.

The basic educational principles which follow are simple, but application does take some practice. When you first try to apply them you may feel somewhat awkward, but eventually you will become more comfortable with them. After a few months the use of these principles will become automatic.

## Basic Educational Principles

1. The first principle is:

### BEHAVIOR POSITIVELY REINFORCED WILL CONTINUE

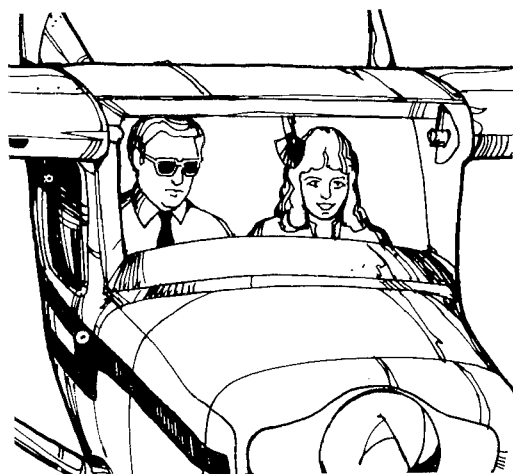
Simply put, reinforcement is anything desirable that follows a specific behavior. This may consist of such ordinary things as a smile, a word of praise, or simply letting the student know he or she has done something correctly.

2. The second principle is:

### BEHAVIOR FOLLOWED BY PUNISHMENT MAY DECREASE

Generally, punishment is not an effective way to correct erroneous or undesirable behavior. True, potent punishment will reduce the likelihood of repeating undesirable behavior, but it does not teach the student to substitute the correct response. The student would be just as likely to substitute a different mistake as he or she would be to learn the correct response. Yet, mild punishment may be equally ineffective in achieving the desired response. The student may associate the attention received with an error and may actually be more inclined to repeat the mistake.

In addition, **any type of punishment may have many undesirable side effects** which could range from discomfort to active anger to actual hostility directed toward the flight instructor.



## How to Apply These Principles

- **BE VERY CLEAR ABOUT LEARNING OBJECTIVES.** Exactly what do you want the student to learn? This judgment training program spells out many specific objectives, for example, the three subject areas and the six action ways.

- **IN THE BEGINNING REINFORCE GENEROUSLY,** since the entire course of learning is influenced by its early stages. In the first part of any sequence, look for responses that can be rewarded, then proceed slowly, reinforcing or rewarding as frequently as possible. After a firm beginning, later stages can be handled more quickly and simply.

- **SHIFT SLOWLY FROM CONTINUOUS TO OCCASIONAL REWARD.** At first all correct responses should be rewarded, but as time passes and responses become automatic, you should gradually decrease the frequency of your praise or attention. If continuous reward persists, the student performs only for the reward without actually experiencing any learning. However, if the student comes to expect continuous rewards that suddenly cease, there is a good chance that the established pattern will break down and that learning too will cease. The ideal sequence is where reinforcement gradually becomes less and less frequent, and behavior will more easily come under control of the student's own satisfaction or competence.

• **SHAPE EXISTING BEHAVIOR INTO DESIRED BEHAVIOR.** You cannot wait for the desired behavior to occur and then reinforce it. Rather, it is necessary to shape current behavior into the required form.

For example, in learning to taxi an airplane, students cannot transfer automobile driving experiences to the aircraft where feet and hands are used quite differently. Shape the desired behavior by reinforcing first the behavior nearest the desired performance, then gradually increase the performance requirements until the desired behavior is reached.

Remember, though, that to be successful in shaping this desired behavior, **critique and correct the behavior, not the person.** Tell the student specifically what needs to be changed to meet the objective, and do not make general statements of disapproval or correction.



## Summary . . .

- 
- Behavior positively reinforced will continue.
- 
- Behavior followed by punishment may decrease. Punishment also does not help the student substitute the correct behavior for the error.
- 
- Be very specific about learning objectives.
- 
- Reinforce generously in the early stages of learning.
- 
- Shift slowly from continuous to occasional reinforcement.
- 
- Shape existing behavior into desired behavior.

# 2

## Judgment Concepts In The Student Manual

### Objectives

Note: At this time, you should read and complete the entire Student Manual before proceeding further.

Traditional pilot training emphasizes the pilot's knowledge about the aircraft and the flight environment. Judgment training focuses on the pilot's additional need for accurate and complete self-knowledge. The success of this training course thus greatly depends upon teaching the student to think more carefully and thoroughly about his attitudes and behaviors.

The terms and concepts introduced in Chapter 2 of the Student Pilot Manual have been especially designed to help you guide the student toward patterns of thinking that produce better judgment. It is essential that you, too, know this new terminology before initiating any instruction, since it provides the most concise, objective means possible of discussing pilot behavior in judgment-related situations.

Students should learn the terms and concepts by carefully studying the Student Pilot manual. Although Chapter 2 contains no student exercises, and memorization is not required, the exercises which follow are intended to reinforce the concepts and will be used throughout the flight training portion of this program.

After your students have completed Chapter 2, you may wish to give them a brief **oral quiz** to be certain that they understand the material. Be prepared to discuss any problems and clear up any confusion. If a student does not clearly understand, review as necessary.



### Completion Schedule

The material in Chapter 2 should be completed early in the standard ground school training curriculum.

### Overview:

### Key points from Chapter 2 of the Student Manual

### Subject Areas

Chapter 2 introduces the three subject areas relevant to pilot judgment: the Pilot (P), the Aircraft (A), and the Environment (E). Conventional flight training generally focuses on subject areas A and E. Judgment training, however, deals with the pilot's need to know more about area P and how it interacts with the aircraft (P/A), the flight environment (P/E), or both (P/A/E).

### Action Ways

This chapter also presents easy-to-learn terms for six decisive actions, called "Action Ways," which result from pilot judgments:

- DO** = The pilot did something which he should not have done.
- NO DO** = The pilot did not do something which he should have done.
- UNDER DO** = The pilot did not do enough when he should have done more.
- OVER DO** = The pilot did too much when he should have done less.
- EARLY DO** = The pilot reacted too early when he should have waited.
- LATE DO** = The pilot reacted to late when he should have reacted sooner.

The repetitive use of these action ways will assist you in teaching the student to substitute the desired response when an error is made. Use these action ways when you discuss with the student his or her performance in the handling of various judgment situations.





### Poor Judgment Behavior Chain

Chapter 2 also introduces the Poor Judgment Behavior Chain. Once a poor judgment (PJ) is made, it is likely that another PJ will follow until a sequence of poor judgments (a PJ Chain) is established. As the PJ Chain grows, the number of safe alternatives available to the pilot diminishes rapidly. However, if the PJ Chain is broken early, the pilot may have more alternatives for successful recovery. The judgment training program teaches the student what must be done to break the PJ Chain.

### Three Mental Processes of Safe Flight

The student is taught to understand and apply the Three Mental Processes of Safe Flight—automatic reaction, problem resolving, and repeated reviewing. The pilot who consistently exercises good judgment is engaged in at least two of the three processes at all times during flight, and you will train the student to utilize these skills.

“Automatic Reaction” (AR) is the first of the three processes. One type of AR concerns maintaining positive, on-going control of the aircraft with a minimum of attention, while the other concerns an automatic response to unusual or emergency situations.

The second mental process is called “Problem Resolving” (PR), the mode of thinking a pilot uses to overcome undesirable situations by means of the following step-by-step process:

#### Step 1

Uncover, analyze, and define the problem.

#### Step 2

Consider methods and possible outcomes of potential solutions.

#### Step 3

Apply the selected solution.

#### Step 4

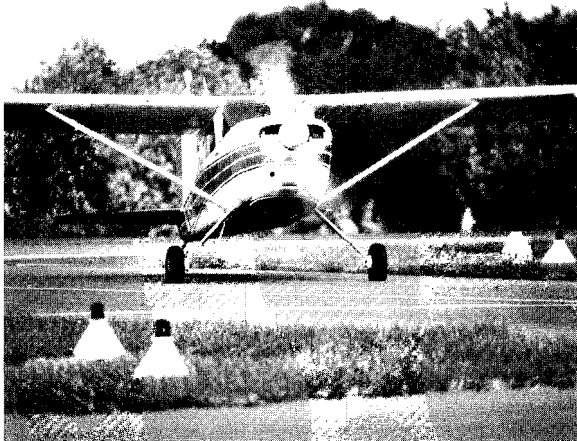
Obtain feedback about how the solution is working.

You may already have a successful approach to teaching problem resolution in the aircraft. Use whichever you prefer, but be certain that the student learns to view Problem Resolving as a **mental process** and not just an instant reaction with no forethought.

Finally, there is “Repeated Reviewing” (RR), the mental process that keeps the pilot constantly aware of all factors (Pilot/Aircraft/Environment) that contribute to safe flight. The pilot uses “Repeated Reviewing” to find or anticipate situations that may eventually require Problem Resolving or Automatic Reaction.

# 3

## Teaching the Behavioral Aspects of Good Judgment



### Objectives

Two approaches are presented in the student manual to promote the pilot's consistent use of good judgment. One approach (Chapters 3, 4, & 5) addresses the pilot's hazardous thought patterns—identifying hazardous thoughts and substituting ones which promote good judgment. The second approach (Chapter 6) deals with overcoming of high stress which reduces judgment-making abilities.

### Completion Schedule

**Students must be exposed to this material early on in their pilot training process**—ideally during the first quarter of the student's standard private pilot training course. There is no material in this unit which requires advanced knowledge from the ground school training curriculum or from flight experience, but the sooner the students know this foundation material, the sooner the knowledge can be put to use in regular flight training.

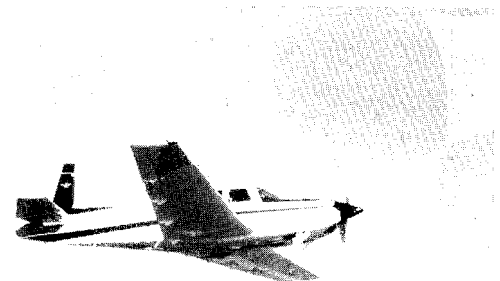
### Description of Material in the Student Manual

#### Chapter 3

Chapter 3, entitled "Self-Assessment of Hazardous Thought Patterns," contains a brief self-assessment inventory to help the student identify the relative degree to which each hazardous thought pattern affects their thinking. If you have not as yet done so, please complete and score your own inventory before continuing. You will find the experience helpful in understanding the program and in assisting your students.

The inventory is scored by the student, and the score remains confidential. It provides an indication of the relative strength of each hazardous thought for that person at that time, and it helps to personalize the program by suggesting which thoughts are most likely for each individual. **Under no circumstances should it be used to label a student.** The instructor should be prepared, however, to answer any questions the student might have about how to complete the inventory.

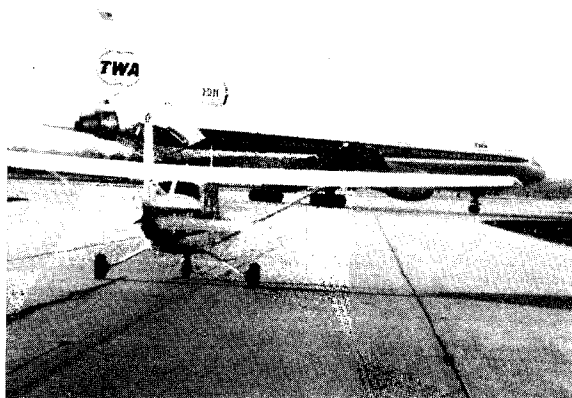
So that your students will feel free to answer the items truthfully, reassure them that they will not be asked to reveal their scores to you or anyone else. Yet, be sure each student realizes the seriousness of the task. Completion of this inventory by the student is **critical** in redirecting the student's awareness toward a greater concern for the "Pilot" subject areas. Help students see that while the tendency to use these thoughts is commonplace, it is a habit to be broken, not an insurmountable fault. It is important that the instructor guide students without condemning them for having hazardous thoughts. Indeed, **we all may experience each of the five hazardous thoughts at one time or another.** You are not to analyze how students think or try to "cure" them of hazardous thinking. This chapter's only purpose is to make the student pilot aware that various hazardous thought patterns exist which are likely to affect safe flying and that the student can move away from such hazardous thinking.



#### Chapter 4

Chapter 4 teaches students to identify and understand the five hazardous thoughts. This chapter uses an educational concept known as "programmed text learning," allowing each stu-

dent to proceed at his or her own pace. The programmed text calls for a student response to each paragraph. The student selects one of the alternatives given and is then directed to turn to the appropriate response list. If the correct alternative has been chosen, the student will be directed to proceed to the next paragraph or situation. If not, the student is told that the answer is incorrect, given the reason why, and directed to return to the same situation to select another alternative. The process is repeated until the correct alternative is chosen. Students who select the correct alternative on their first try will go through the lesson very rapidly, and if a student needs more practice, he gets it. If you have not completed Chapter 4, do so at this time. (Although anyone who reads and follows the directions carefully should be able to work through the material, some students may have difficulty with the format and will require assistance.)



## Chapter 5

Chapter 5, entitled “Antidotes for Hazardous Thoughts,” is important because it specifies substitute thoughts, called “antidotes,” for the five hazardous thoughts. The tendency to act on hazardous thoughts can be reduced once the pilot is aware of them, but, first, the student must have a viable alternative to the hazardous thought.

### **STUDENTS MUST MEMORIZE THE HAZARDOUS THOUGHT ANTIDOTES.**

Merely being familiar with them is not enough: **They must be memorized word for word.** Help your students understand that memorization is absolutely necessary so they can quickly and automatically substitute the new good judgment thought when appropriate.

After the antidotes have been memorized, assign “Exercise 2—Antidote Identification,” part of Chapter 5. The student will read a description of a pilot’s thoughts and actions in a particular situation. The student identifies actions representing a hazardous thought and writes the name of that hazardous thought and its antidote on the right side of the page. Be sure that the student completes this exercise in its entirety, because **repetition aids learning.** Only with repeated practice will the student reach a point in learning where, the instant a hazardous thought comes to mind, the antidote will also come to mind. Explain this to the student—and keep him working. The Student Manual includes a “key” for the student to use in grading the exercise.

When discussing the answers with the student, bear in mind that there is some room for differences of opinion. Thus, the student may attribute some action to a hazardous thought which the key has not identified. Because he or she has identified a hazardous thought that the key has not does not mean the student is entirely incorrect. If, through your discussion, the two of you decide it is acceptable, the student’s choice may show a deeper understanding of the hazardous thoughts and their antidotes.

Although the student may find some extra instances of hazardous thoughts, he should not continue if any are left out. Also, the correct antidote must be supplied word-for-word in each case. Review the student’s work to be certain these requirements have been met before assigning Exercise 3 of Chapter 5.

Exercise 3, “Recognizing and Replacing Hazardous Thoughts” reinforces the student’s knowledge about replacing hazardous thoughts with antidotes. Situations are presented where the pilot must make and implement a decision. From the description of the pilot’s thinking, the student identifies the hazardous thought, indicates the appropriate antidote, and writes a brief description of good pilot judgment for the same situation.

It was previously mentioned that discussion with an experienced teacher helps improve a student’s judgment. The effectiveness of this material, therefore, greatly depends on your discussion of the answers with the student. There are no absolutely right answers, and no answer key is provided. As you reason with the student in discussing the answers, you should be convincing and should eliminate any confusion or uncertainty on the part of the student. Use your judgment to decide if the student needs practice beyond Exercise 3.



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## Chapter 6

Chapter 6, entitled "Identifying and Reducing Stress", deals with the causes of stress, stress-related problems, and coping techniques. Physical, physiological, and behavioral symptoms of stress are identified and the pilot shown how the destructive aspects of stress can reduce one's judgment-making abilities. Inadequate coping with stress actually creates additional stress which intensifies as the inadequate coping continues—ultimately incapacitating one's decision-making process. Chapter 6 examines stress and coping in three time-related contexts: 1) long-term stresses which often involve issues such as life style, domestic and job related stress, 2) techniques for the pre-flight adjustment of one's mental condition, and 3) methods for dealing with inflight stress.

### Progress Check

After the initial judgment training material has been completed, administer a "progress check," using at least two of the postcheck exercises contained on pages 51-57 of this Instructor Manual, to see if the student has retained his or her mastery of the ideas presented. (For master copies of the forms, see pages 46-50.) This postcheck form contains six scenarios like those the student is already familiar with. Have the student work in a quiet place and assign at least **two** of these postcheck exercises. Allow the student as much time as needed. Score the form using the keys at the rear of this manual (pages 58-63).

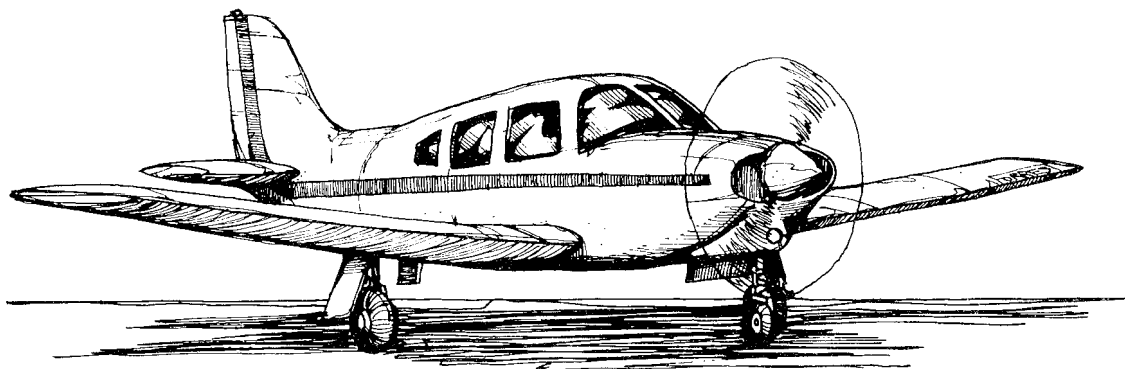
The postcheck is successful if the student:

- 1) has not omitted more than three of the keyed responses for any two exercises, and
- 2) has responded at least once to each of the five hazardous thoughts, correctly producing the proper antidotes.

**If both of these grading criteria are not met,** tell the student that he or she will be checked again at a later date. Suggest that the student review the appropriate materials and remind the person of the seriousness of the training. Use your own judgment when grading the postcheck. Extra responses should not be penalized unless they are clearly incorrect.

If a recheck is needed assign other postcheck exercises. Keep in mind that this postcheck material is to be presented as an additional learning experience, not just an evaluation. Help the unsuccessful student learn all the material in a particular chapter before allowing him or her to move on.

Remember that your utmost concern as a flight instructor is the safety of your students. The material in the Student Manual has been carefully designed to make students aware of some thoughts that could endanger them and to help them deal with stressful situations. The success of this part of their training experience will depend largely on your own attitudes, for your students take their cues from you. Through your support and assistance, they will make the greatest gains possible.



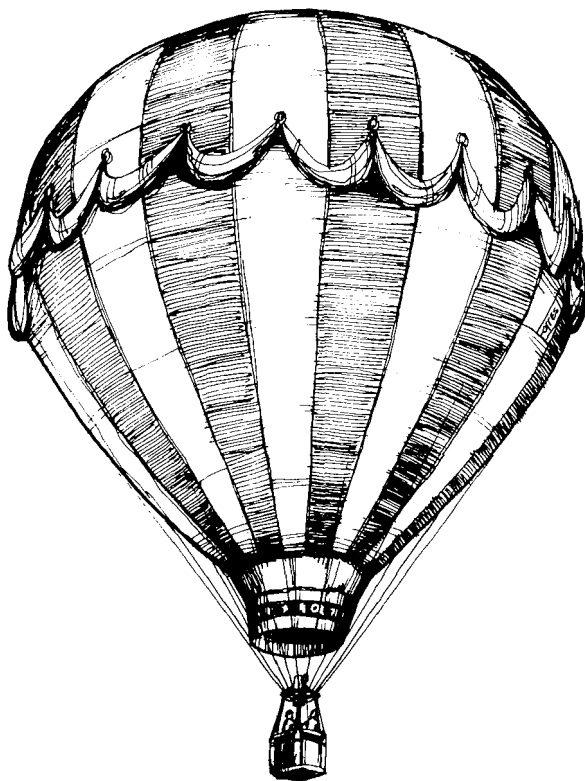
## 4

# Teaching the Application Exercises

## Objectives

The material contained in Chapter 7 of the Student Manual, entitled "Some Further Reinforcement," relates the academic concepts discussed earlier in the student manual with actual real world flight situations. No new judgment information is taught. Rather, this material is intended to reinforce the student's understanding and appreciation of the importance of judgment training by integrating its concepts with real-life examples.

The scenarios used in the student manual are based upon official reports of actual occurrences but have been modified to fit the needs of this training program. Stress to your students that the **scenarios provide opportunities to learn from the mistakes of others**, and relate some of your own or other student experiences to appropriate scenarios in the student manual.



## Completion Schedule

The material contained in Chapter 7 of the Student Manual should be integrated where appropriate into the topics of the conventional ground training syllabus. The following list of topics is representative:

1. **The aircraft**—Components and types, aerodynamics and basic performance
2. **Aircraft systems**—flight control systems, flight instruments, the reciprocating engine, fuel systems, and electrical systems
3. **Airports and communications**—runways, lighting, radio communications, and air traffic control
4. **Weight and balance theory and calculations**
5. **Weather theory, weather reports, and forecasts**
6. **Aviation regulations**
7. **The Airman's Information Manual (In Canada—Airman's Information Publication [AIP])**
8. **The flight computer**
9. **Basic navigation**—aeronautical charts (sectional and world aeronautical charts), airspace utilization, plotter and wind triangles
10. **Radio navigation**—VOR navigation, DME and area navigation, ADF and radar, and transponders
11. **Medical factors of flight**—oxygen and altitude, vertigo, vision, alcohol and drugs.
12. **Cross-country flying**—flight planning, pilotage, dead reckoning navigation, flying a VFR trip, and night operations

It is suggested that this material in Chapter 7 be integrated into the conventional ground school syllabus as follows:

- The section on "Judgment Related to Preflight and Aircraft Systems" after aircraft and aircraft systems.
- The section on "Judgment Related to Weight/Balance and Performance" after performance and weight and balance
- The section on "Judgment Related to Official Procedures and Communications" after airports and communications, aviation regulations, and the Airman's Information Manual (In Canada—AIP)
- The section on "Judgment Related to Cross-Country Flying" after basic navigation and radio navigation
- The section on "Judgment Related to Physiological Factors and Night Flying" after medical factors and cross-country flying.



## Description of Material

Each section of Chapter 7 contains an introduction which identifies each area to be addressed. The sections relate to the types of poor judgments which pilots may make in each area. The accompanying exercises require the student to use the terms and concepts learned in all previous lessons. Encourage the students to review earlier material as necessary.

After the student has completed each section, discuss the answers. No answer key is provided, and bear in mind that, although responses to most of the questions may be relatively obvious, there

are no absolutely right or wrong answers.

These exercises are intended to stimulate learning in two ways. First, having the student look for the subject areas and action ways in "real life" flight situations reinforces knowledge of these concepts and their relevance in redirecting the judgment process. Second, your interaction with the student should improve student awareness of the judgment aspects of all flight situations. Use these exercises to teach your students that there is not always a clearly defined right or wrong answer to every problem encountered while flying, but, the use of the judgment training concepts will allow the pilot to arrive at the best answer possible.

## 5

## Inflight Instruction: The “Lessons Plans”



How does a flight instructor combine educational principles with judgment concepts to help students learn better judgment? By giving your students a series of practical, “hands-on” lessons in which you observe their performance and respond to specific behavior. Do not comment on intentions or motivations. Use rewards (praise) frequently, and avoid criticism (punishment) as much as possible. Errors, or “misjudgments,” by the student are to be seen as opportunities for learning, not as occasions for criticism.

### Introducing the Lessons

In this unit, while on routine training flights you will give your students “activities” designed to further develop their appreciation for Automatic Reaction (AR), Problem Resolving (PR), or Repeated Reviewing (RR), based upon an actual preflight or inflight “hands-on” experience. Each activity is designed to focus on one of these pro-

cesses but may include elements of the others. After observing the student’s response to your instructions, use the subject area, action way, and PJ Chain concepts in giving positive reinforcement. When pointing out an error, consider which of the six action ways and three subject areas is involved. When one error follows another, point out that this is of a poor judgment chain. **Continued reference to these terms and concepts will keep your instruction focused on pilot judgment and not purely on flight skills.**

Take 15 minutes or so for your own preparation the first few times you work with each lesson. As with any new activity, you should allow yourself two or three trials with each lesson before it becomes established as a solid part of your instructional technique. After that, you will feel much more comfortable teaching these lessons, and you will need less preparation time. Remember that your style of delivery and your professional approach is critical.



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## When to Begin

When the student has the ability to control the aircraft confidently during the most basic maneuvers, start the lessons. Use your own judgment, but a suggested starting point is about three flight lessons before you expect the student to solo. The student must have completed at least Chapter 2 of the Student Manual before beginning work on this unit.

## Using the Lesson Plans to Teach the Three Mental Processes

At least three lessons are needed to teach each mental process—a total of nine. Each lesson should take no more than five minutes and should be integrated into the normal one to two hour flight training period. **Do only one lesson per training flight.** However, one of these lessons and one judgment training scenario from Chapter 6 of this manual may be covered on the same flight.

At the end of this chapter, you are provided with 18 lesson plans for inflight teaching of the three mental processes. These lesson plans are designed to help you and your student structure each lesson. As part of your lesson preparation, you may wish to copy the essential information from the lesson plans onto a separate sheet of paper for possible later reference in the cockpit. However, we discourage extensive paperwork or note taking in the cockpit as such practice may be intimidating to the student.

The 18 sample lessons do not include every valid way to accomplish this unit's training objective. You may wish to modify or substitute parts of these sample lessons or develop your own lesson plans to suit your student and your own style of teaching. This is perfectly acceptable, as long as you meet the objectives of this unit. Blank forms are provided in the back of this manual for you to develop your own lessons. Regardless of which approach you take, be sure to observe the principles of lesson delivery listed below.

### Principles of Lesson Delivery

- Assign an activity to develop one specific mental process: This is the lesson's focus, not the flight activity.

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- Monitor the student's behavior in terms of the objective: Does the observed behavior indicate success in using the mental process being developed?

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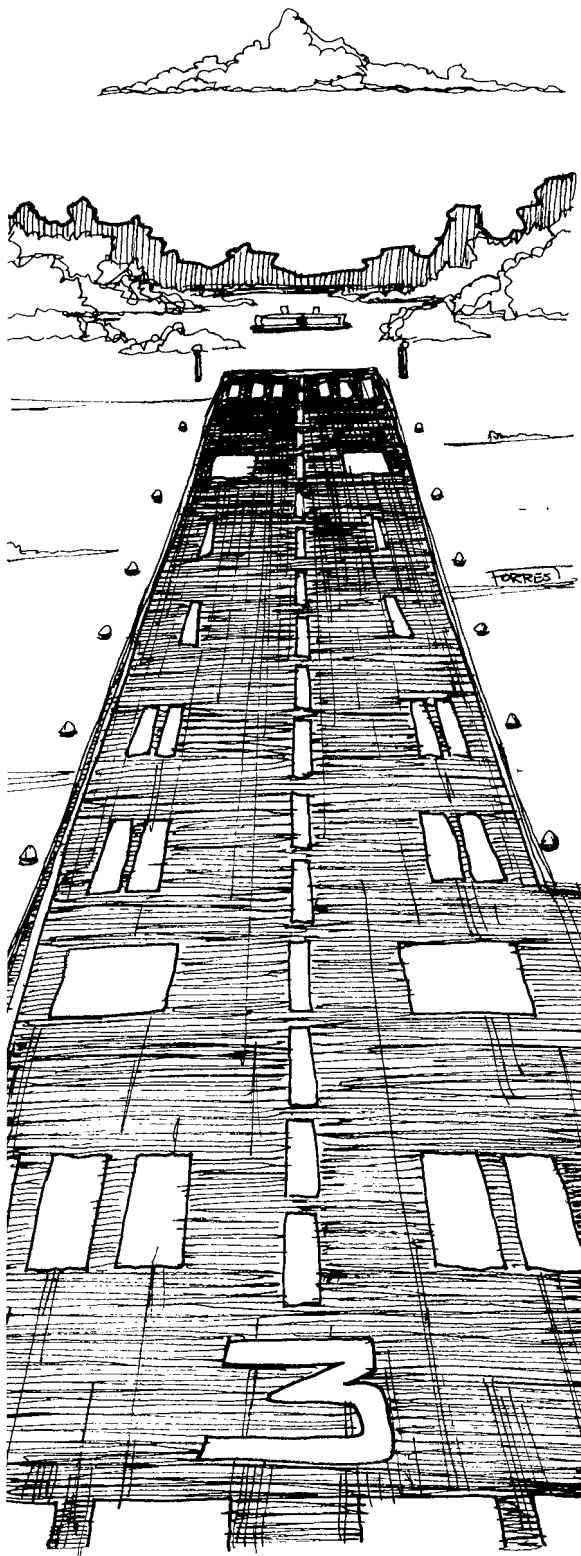
- Praise correct behavior (reinforcement).

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- Coach the student to correct errors, relying on the three subject areas, the six action ways, and the poor judgment chain concepts. At the same time occasionally offer some sort of reward (not punishment).

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- Encourage the student to maintain his or her self-awareness of hazardous thoughts and high stress levels.



## Individual Lesson Content

Before meeting your student for the flight, select the lesson plan you want to use. Review it carefully as follows:

- **Objective.** Know which mental process you are going to present.
- **Activity.** Where will this activity best fit into the rest of the flight? You may want to handle the judgment concepts early in the lesson so that you can work with the student later in the lesson if additional practice is needed.
- **Observable Behavior Sought.** Be sure you know exactly what you expect the student to do when he or she is correctly demonstrating the selected mental process. Evaluate other flight skills as well during this time as long as you make sure to reinforce the student for demonstrating the desired judgment behavior.
- **Reinforcement.** Be prepared to give the student **positive** reinforcement, using the three subject areas as a focus for finding a reason to give the student positive feedback. Although the sample lessons provide reinforcements for each subject area, you do not need to give the student two or three reinforcements for each activity. Sincerity and appropriateness are the most important factors for choosing reinforcements: quality not quantity. Also if the student's stress level appears high, call attention to the stress reduction techniques.
- **Making Corrections.** If the student's performance is unsatisfactory in some way, describe it in relation to the six action ways and three subject areas and relate how the behavior could develop into a PJ Chain.
- **Student Debriefing.** After the flight lesson, discuss the overall performance with the student to determine whether he or she was aware of any hazardous thoughts during the exercise. Do not try to figure out why a hazardous thought may have occurred. Simply make the student more aware of the need to monitor and control his or her own behavior by the self-awareness of hazardous thoughts.

## Lesson Plan #1

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Use of trim control*

### III. Observable Behavior Sought:

*The student consistently makes immediate and appropriate corrections to the trim to maintain a constant airspeed and rate of descent when the flaps are moved to the various settings.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You showed that you can handle the aircraft properly while your attention was directed to the flap operations.*

**2. Aircraft:** *You are handling the aircraft well as the flaps change. Your airspeed control is excellent.*

**3. Environment:** *You did a good job of watching for other traffic in the area as you were doing this.*

## Lesson Plan #2

### I. Objective:

- Automatic Reaction\*
- Problem Resolving
- Repeated Reviewing

\* Could be all three depending on stage of training

### II. Activity:

*Stall entry, recognition, and recovery*

### III. Observable Behavior Sought:

*The student can identify the cues of a stall and recover from a full stall.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You realized that not only a nose-high attitude can lead you into a stall. You were not afraid of the aircraft today.*

**2. Aircraft:** *You maintained directional control with rudder instead of doing your usual aileron "trick."*

**3. Environment:** *You flew well clear of the airport traffic area before commencing stall practice. You also maintained an excellent collision avoidance scan.*

## Lesson Plan #3

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Simulated power loss at altitude.*

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---

### III. Observable Behavior Sought:

*The student immediately lowers the nose and sets up best power-off gliding speed.*

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### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You remembered to lower the nose to prevent a stall.*

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---

**2. Aircraft:** *You quickly recalled the power-off best gliding speed.*

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**3. Environment:** *You immediately looked for a suitable landing area.*

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## Lesson Plan #4

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Transition from cruise to level flight at minimum controllable airspeed using various flap settings.*

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### III. Observable Behavior Sought:

*The student automatically coordinates pitch and power for various slow flight configurations to maintain level flight.*

---

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### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *I believe you understand the pitch-power relationship.*

---

---

**2. Aircraft:** *You remembered to adjust power before pulling back the yoke and entering slow flight. The airplane did not stall.*

---

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**3. Environment:** *You cleared the area for traffic while setting up for slow flight.*

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## Lesson Plan #5

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Control the aircraft's pitch attitude in level flight by using the available pitch instruments.*

---

---

### III. Observable Behavior Sought:

*The student properly interprets the trend indicated by the instruments and immediately corrects for deviations.*

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### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You seem to understand that "Aircraft pitch control and power control equals aircraft performance."*

---

**2. Aircraft:** *You made smooth adjustments and did not over-control.*

---

**3. Environment:** *You showed me a good scan between instrument references and external visual cues.*

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## Lesson Plan #6

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Control the aircraft bank angle by using only one of the available bank instruments (Repeat using a second instrument if time allows.)*

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### III. Observable Behavior Sought:

*The student properly interprets the trend indicated by the instrument and immediately corrects when the aircraft strays from the desired bank angle.*

---

---

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You have shown me that you thoroughly understand the information available from this instrument.*

---

**2. Aircraft:** *You made positive corrections for each instrument and its trends.*

---

**3. Environment:** *You kept a good scan for traffic while practicing turns.*

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## Lesson Plan #7

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Electrical system failure simulation. (Pull circuit breakers or fuses, as appropriate.)*

### III. Observable Behavior Sought:

*The student continues to fly the aircraft in straight-and-level flight, maintaining attention to safe operations, while he or she searches for the cause of the electrical problem and resolves it.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You did not get rattled when you realized you had electrical problems, and you did a fine job of locating the cause.*

**2. Aircraft:** *You noticed the pulled circuit breaker or fuse and compensated for it.*

**3. Environment:** *You did well by avoiding any situation that required the use of failed system(s).*

## Lesson Plan #8

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*The student will experience a simulated **total** loss of communications equipment.*

### III. Observable Behavior Sought:

*Student demonstrates correct procedures to find the source of failure and takes proper actions to determine the extent of the failure.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You quickly and accurately recognized the equipment failures and proceeded to check it out and confirm the extent of the problem.*

**2. Aircraft:** *You landed the aircraft and then notified ATC of the problem.*

**3. Environment:** *You interpreted the light gun signals correctly and maneuvered the aircraft accordingly.*

## Lesson Plan #9

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*VOR orientation and tracking*

### III. Observable Behavior Sought:

*The student quickly orients himself without being distracted from flying the aircraft. He or she intercepts the desired radial smoothly and tracks within acceptable limits.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *By remembering your procedures, you were able to fly the airplane to your intended destination.*

**2. Aircraft:** *You started your turn to roll out on the desired radial and did not fly through the course.*

**3. Environment:** *You avoided obstructions, clouds, traffic, etc., when you needed to and still flew the proper course.*

## Lesson Plan #10

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Wake turbulence avoidance*

### III. Observable Behavior Sought:

*The student demonstrates an awareness of the presence of wake turbulence and alters his flight path to avoid it.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You told me about the other aircraft's wake turbulence and then avoided it. That was excellent!*

**2. Aircraft:** *You landed on another runway to avoid the jet's vortices. Nice job!*

**3. Environment:** *It was a good idea to land on an adjacent runway.*

## Lesson Plan #11

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Transition through various pitch-power combinations without the use of trim.*

### III. Observable Behavior Sought:

*The student correctly and consistently transitions from one flight attitude to another and maintains the new flight attitude, despite resistance of the aircraft.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You seem more confident of yourself in controlling the aircraft without using trim.*

**2. Aircraft:** *You made the aircraft do what you wanted it to.*

**3. Environment:** *You remained aware of the outside environment even though you were having a difficult time flying the airplane.*

## Lesson Plan #12

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*The student will experience a **simulated** communication failure.*

### III. Observable Behavior Sought:

*The student quickly and accurately completes a process to confirm that radio communication has been lost while maintaining safe control of the aircraft.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You seemed confident in taking the proper action.*

**2. Aircraft:** *You knew which switches and fuses to check to try and solve the problem.*

**3. Environment:** *You were alert for other aircraft. You took the proper actions to inform the tower of your problem prior to landing; i.e., you made a low approach and rocked your wings.*



## Lesson Plan #13

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing\*

\* Once again, elements of the other two mental processes are present

### II. Activity:

*Control of aircraft in gusty crosswind conditions.*

### III. Observable Behavior Sought:

*Student should correct for wind while maintaining the proper ground track.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You did a good job of adjusting for the effects of wind.*

**2. Aircraft:** *You knew how to control the aircraft to establish the proper track over the ground.*

**3. Environment:** *You knew how to check the wind direction and how to tell if you were making the proper corrections.*

## Lesson Plan #14

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Traffic pattern entry and landing at a controlled airport.*

### III. Observable Behavior Sought:

*Constant checking of the aircraft's track for conformance to the pattern. Regular observation of traffic and areas of potential traffic conflict. Continual attention to radio transmissions.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You did a nice job in keeping ahead of the aircraft.*

**2. Aircraft:** *You managed your approach and descent very well.*

**3. Environment:** *You were very observant of other traffic in the pattern, and you responded well to instructions from the controller.*

## Lesson Plan #15

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Identification of all traffic in the immediate vicinity.*

### III. Observable Behavior Sought:

*The student scans for aircraft in his immediate vicinity and takes the necessary evasive action when required.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

*1. Pilot: You were more observant of the traffic today.*

*2. Aircraft: You were aware of your aircraft's blind spots. You turned away from one aircraft that you felt was on a collision course.*

*3. Environment: You looked for traffic entering and departing the pattern before turning downwind.*

## Lesson Plan #16

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*You (or ATC) will provide suggested headings to the student, and the student must maintain basic VFR.*

### III. Observable Behavior Sought:

*The student will make proper diversions from clouds and rising terrain to maintain basic VFR.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

*1. Pilot: You were confident in the actions required to maintain basic VFR. You exercised your prerogatives as pilot-in-command, and requested a heading change when necessary to keep us out of weather.*

*2. Aircraft: You began your "roll-out" sufficient before reaching the assigned heading.*

*3. Environment: You saw that the weather was deteriorating and started back to the airport.*

## Lesson Plan #17

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

### II. Activity:

*Practice ground reference maneuvers.*

### III. Observable Behavior Sought:

*The student selects a field that will permit a safe landing, if necessary. The student continually scans the area and the aircraft for hazardous conditions while performing the maneuver.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You have learned how to transfer ground reference practice to the traffic pattern.*

**2. Aircraft:** *Your scanning between visual and instrument references was good.*

**3. Environment:** *I like the field you choose.*

## Lesson Plan #18

### I. Objective:

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing\*

\* May also be considered as Problem Resolving

### II. Activity:

*The student will taxi the aircraft, positioning ailerons and elevators for existing wind conditions.*

### III. Observable Behavior Sought:

*The student correctly positions the control yoke into a quartering headwind or away from a quartering tailwind while taxiing.*

### IV. Positive Reinforcements:

(Focusing on the three subject areas)

**1. Pilot:** *You remembered to correct for wind while taxiing*

**2. Aircraft:** *You correctly positioned the yoke while turning to compensate for a new wind vector.*

**3. Environment:** *While taxiing, you were aware of the wind direction and speed and properly adjusted the ailerons and elevators.*

# 6

## Inflight Instruction: The Judgment Training Scenarios

The purpose of this chapter is to stimulate the student to depend on himself to use good judgment. Your role is to encourage the student's self-reliance by again providing coached practice. This material has appropriate practical situations for your use, which you may modify or replace as you desire. Just be certain that what you do meets the section's objectives.

Your duties are two-fold. First, you must set up the situation to start the student's judgment-making process. Second, you must respond to the student's behavior in a manner that discourages poor judgment and encourages good judgment.

Practice situations, provided at the end of this section, create circumstances that may actually encourage the student to make a poor pilot judgment or series of poor judgments. Why? Because it is important for the student to become skilled at recognizing and replacing hazardous thoughts and poor judgment tendencies with good judgment behavior. It does little good to teach students about the principles and importance of good judgment. Rather, **good judgment must become a habit, and habits are formed ONLY by practicing the desired behavior in realistic situations.**

### Caution

Judgment instruction like other types of flight training may involve "tampering" with an aircraft to teach a point. However, great care must be exercised to ensure the aircraft is not inadvertently operated in an unairworthy condition.

## Setting Up the Situations

### When to Begin

This phase of judgment training should be introduced when the student has established his or her ability to act as pilot-in-command to your satisfaction and feels confident about his or her knowledge and understanding of pilot operations. A good starting point may be after the student has flown solo three or four times. Also, material through Chapter 6 of the student manual must be completed before you work with the student on this unit.

### What to do First

Advise the student that, after **one** briefing session, you will be introducing practice behavioral situations during training. There will be **no further notice**, and the practice situations will be in-

jected randomly. This will keep the student alert for possible poor judgment situations without further prompting.

It is very important that: 1) the student be given **only one notice** about the practice situations; 2) the situations be presented randomly; and 3) the student understands you will not allow him or her to become endangered at any time. When you tell the student that you will sometimes be leading him or her into a poor judgment situation, **you should also arrange a clear signal to end the evaluation** so he or she will do as you say immediately and without questions, relinquishing control of the aircraft to you as necessary.

## Introducing the Sessions

Read over the situation you are planning to use, keeping the following in mind:

- What materials do I need?
- How must I act to make the student believe that the situation is "for real?" (The better you prepare and the better actor you are, the better your chances of success.)
- How might the student react?
- At what point do I end the practice and review it with the student?

Set the situations up in a realistic manner. In some cases, you may wish to prepare the aircraft as well before the student arrives but **not** "sabotage" it. For example, check the oil in an aircraft after returning from a flight. If you find it is low, leave it alone for your next student to discover during the preflight. Or, if your operation has several aircraft at its disposal, you may wish to assign the student first to an aircraft that is awaiting maintenance for an obvious discrepancy, such as a flat tire.

Many of the behavioral situations will benefit by your making the student cope with typical distractions and pressures (i.e., stressors), so it is important that you continually occupy the student's attention with customary flight training activities. For example, by giving the student cause to hurry the preflight or changing your mind about what heading you want the student to fly, you will force the student to handle both the usual and unusual in the scenarios you present. In general, try not to deviate too much from your normal personality when doing these lessons but challenge the student to think for himself by making him or her feel your control and guidance is somewhat inadequate or misleading. Occasionally tell the student to act as if you are just a **passenger**.

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## Responding to the Student

### Why Response Is Important

Chapter 2 of the student manual emphasizes that breaking a poor judgment chain requires feedback about the judgment. Generally, a fledgling pilot's first feedback comes from an outside observer—the instructor. Thus, your response to the student's pilot judgment is important for two reasons: First, you are teaching the student to recognize what is good judgment and what is poor judgment, and second, you are setting a standard for the student to copy when providing his or her own feedback. The material in this section not only furnishes judgment behavior practice for the student, but it also challenges you to influence the student's judgment favorably by providing the best possible feedback.

### When to Respond

Stop the practice session and begin giving feedback immediately at **one** of these two points:

**1. The student has recognized the situation as one inviting poor judgment** and has objected to following your suggestions or to continuing the situation.

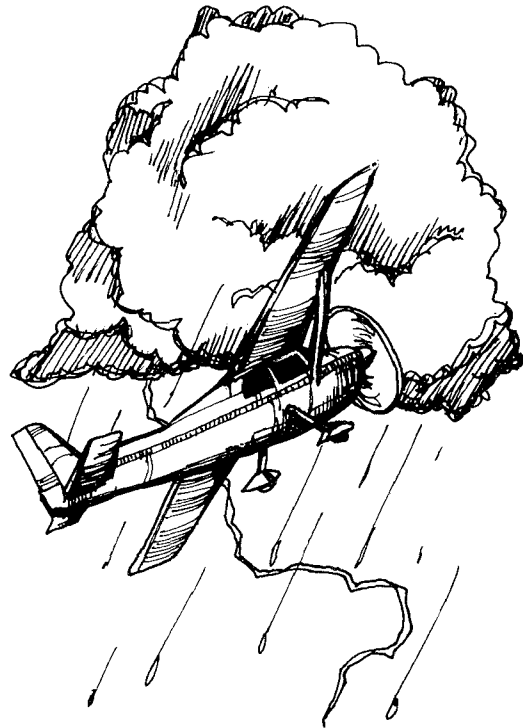
Praise the student for recognizing the practice situation. Discuss it briefly, using the judgment concepts. Point out the "worst possible case" that could have resulted for a pilot who began a chain of poor judgments in a similar situation.

You do not have to reveal the practice situation immediately when the student first challenges you. Force the student to continue pressing the issue, especially when he or she is certain that the situation shows poor judgment. Part of good judgment is to be **assertive**, when appropriate, against the suggestions of others—even authority figures such as flight instructors.

For example, you meet the student and convince him you are in a hurry and suggest a preflight inspection would take considerable time. If the student concurs and begins to board the airplane you should remind him that you were only evaluating his judgment. He should never be talked out of an important safety function such as the preflight. Of course, if the student objects to skipping the preflight, you compliment his good judgment.

Explain to the student that you will be evaluating his judgment at other times in the future by making requests similar to those often made by passengers, pilots, controllers, and others, and that it is up to you as pilot-in-com-

mand, to make the proper decisions regarding safety of flight. Such instructor suggestions are not meant to be viewed as tricks, but rather training for real world situations that the student will face later in his flying career.



**2. The student fails to recognize a potentially hazardous practice situation and makes a decision representing poor judgment.** Allowing the student to continue will present no further opportunity for judgments related to the situation or will possibly allow the student to get into a dangerous or unauthorized circumstance.

First, ask why he or she has made the decision or is taking the action. Try to give the student the opportunity to explain his or her reasoning based on general pilot knowledge. If the student becomes caught up in contradictions due to incorrect judgments, announce that this was a practice situation and that the student failed to demonstrate good judgment. Follow with a discussion of the student's judgment based on the judgment concepts, the possibility of hazardous thinking, and the influence of high stress levels. Also, suggest solutions to specific problems.

## How To Respond

Your responses should use the educational principles presented earlier to provide the best feedback. Remember, punishment does not help—positive reinforcement does. You are correcting specific poor judgment actions in order to shape existing behavior into desired behavior. Do not generally criticize the student's judgment-making abilities, and do not indicate disappointment in the student's flying skill and aviation knowledge. You are acting as a coach to reinforce the necessity and importance of the student providing self-generated feedback.

At some point, the student may question legitimate suggestions that you make even when you are not involved in judgment training. When this happens you will have an excellent opportunity for a short discussion of why the student feels this way. This is a valuable learning aid and indicates the student's judgment-making process is beginning to operate independently of yours.

Always try to include some sort of positive reinforcement in your responses to student questions about a real or perceived judgment situation. Remind the student that better pilot judgment comes through practice, and some errors are to be expected during practice sessions. That is what practice is for!

## Completion Schedule

The practice situations which follow are divided according to the phase of flight. Also, choose situations which match the student's level of experience.

Schedule the situations so that you finish as many as possible during the student's training. Use of twelve or more of the situations are preferable, and you can usually accomplish this by doing one or two per session. Develop and record a tentative schedule for introducing each situation. Keep in mind that you may need to change your schedule based upon each student's rate of progress. Remember, too, judgment situations should be distributed evenly over the student's flight training and yet presented randomly.

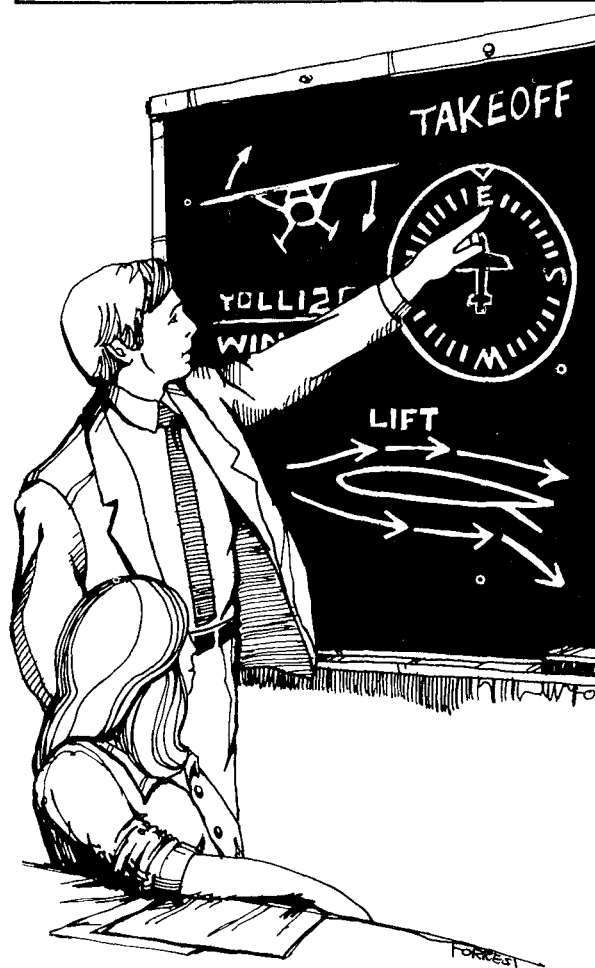
If the student has trouble identifying or understanding the situations, schedule more of them until he or she reacts properly. It is much better to have a student question too much than too little. At this stage in the training, it is important to keep the student aware of the judgment process and talk about it as much as possible. Your reinforcement is essential.

## The Judgment Training Scenarios

The following materials contain a series of candidate judgment training scenarios. Each scenario contains the applicable phase of flight for the situation, a brief description, and the observable behavior(s) which indicate the proper response. Use your own imagination and creativity to lead the student astray, to make it likely for him to overlook proper procedures, and to ignore previous training.

If you wish to make up your own situations, refer to page 50 for blank master copies of this form.

**CAUTION:** Do not permit any violation of airspace, air traffic control instructions, or good operating practices during execution of the following scenarios.



## Judgment Training Scenario #1

### Phase:

*Entire Flight*

### I. Title:

*Use of Checklists*

### II. Situation:

*Checklist use. Distractions are introduced at points where use of the checklist is required.*

### III. Critical Actions (Behaviors):

*Use the checklist throughout the flight.*

## Judgment Training Scenario #2

### Phase:

*Flight Planning*

### I. Title:

*Flight Planning, including getting a good weather and NOTAM briefing*

### II. Situation:

*Cross-country without flight planning.*

*“Reasons” are given to distract the student from the need to plan, including getting a good weather briefing. Selection of a destination airport with NOTAM hazards is encouraged.*

### III. Critical Actions (Behaviors):

*Complete required flight planning. Complete required weather and NOTAM briefing. If a flight plan is filed, assure that the flight plan is closed upon landing at the destination airport*

## Judgment Training Scenario #3

### Phase:

*Flight Planning*

### I. Title:

*Use of Outdated Charts*

### II. Situation:

*Out-of-date sectional. Have the student “borrow” an outdated chart from you or a third party. (Ideally, select either a NAVAID or destination airport that has undergone some significant change since the last revision of the chart).*

### III. Critical Actions (Behaviors):

*Replace the sectional. Also check other information sources for current NOTAMS.*

## Judgment Training Scenario #4

### Phase:

*Flight Planning*

### I. Title:

*Weather check Immediately Prior to Take-off.*

### II. Situation:

*At the destination airport, the weather is deteriorating and is worse than forecast. You provide “reasons” or circumstances that discourage the student from checking the weather.*

### III. Critical Actions (Behaviors):

*Check weather.*

## Judgment Training Scenario #5

### Phase:

*Preflight*

### I. Title:

*Aircraft Inspection*

### II. Situation:

*During a flight training session you intentionally select an aircraft due for a 100-hour inspection. On your way to the aircraft explain how to determine when an airplane is due for an inspection. See if the student follows your suggestions before you cancel the flight.*

### III. Critical Actions (Behaviors):

*Student states, "The aircraft needs an inspection." Terminate flight.*

## Judgment Training Scenario #6

### Phase:

*Preflight*

### I. Title:

*Use of Shoulder Harness*

### II. Situation:

*As flight instructor, make up a variety of excuses so as to avoid having to wear your shoulder harness.*

### III. Critical Actions (Behaviors):

*The student notes the appropriate regulations, and requests that you wear your shoulder harness for all takeoffs and landings.*

## Judgment Training Scenario #7

### Phase:

*Preflight*

### I. Title:

*Weight and Balance*

### II. Situation:

*The aircraft is loaded with fuel. Wait until the last minute to notify the student that passengers, cargo or both will be carried.*

### III. Critical Actions (Behaviors):

*Student suggests and performs weight and balance calculations.*

## Judgment Training Scenario #8

### Phase:

*Preflight*

### I. Title:

*Unsecured object in passenger compartment*

### II. Situation:

*Instructor, upon boarding airplane, places a heavy, unsecured object in an inappropriate location, i.e., a thermos bottle on the baggage shelf.*

### III. Critical Actions (Behaviors):

*The student recognizes the danger and requests that the object be removed or secured.*



## Judgment Training Scenario #9

### Phase:

*Preflight*

### I. Title:

*First Post-Refueling Check*

### II. Situation:

*Have the aircraft refueled after the preflight.*

*Let the student decide if and when he should recheck the fuel sumps.*

### III. Critical Actions (Behaviors):

*A pilot should always check the fuel sumps after each refueling.*

*(Note--it may take several minutes or longer for water or other contaminants to separate from the fuel).*

## Judgment Training Scenario #11

### Phase:

*Preflight*

### I. Title:

*Extra bolts on ground under airplane*

### II. Situation:

*The instructor places several extra bolts underneath airplane.*

### III. Critical Actions (Behaviors):

*Student should notice these bolts and recognize the possible safety implications.*

## Judgment Training Scenario #10

### Phase:

*Preflight*

### I. Title:

*Second Post-Refueling Check*

### II. Situation:

*Aircraft has to be refueled after the student has performed the exterior preflight. The student must decide whether or not to check the fuel caps a second time. Distract somehow.*

### III. Critical Actions (Behaviors):

*Student checks each fuel tank after refueling and reconfirms that caps are secured.*

## Judgment Training Scenario #12

### Phase:

*Preflight*

### I. Title:

*Loose Items*

### II. Situation:

*Loose articles in the cabin. Empty soda cans, paper, books, etc., spread about the cabin. Provide "reasons" for the student to hurry the preflight.*

### III. Critical Actions (Behaviors):

*Remove or secure such loose items.*

**Judgment Training  
Scenario #13**

**Phase:**

*Preflight*

**I. Title:**

*Required Aircraft Documents Missing*

**II. Situation:**

*Temporarily remove one or more requested aircraft documents from the airplane. Do this one after the student has become quite familiar with the preflight routine.*

**III. Critical Actions (Behaviors):**

*Point out missing documents. Replace them prior to flight.*

**Judgment Training  
Scenario #15**

**Phase:**

*Preflight*

**I. Title:**

*Low Tire or Oleo Pressure*

**II. Situation:**

*Select a trainer with low tire or oleo pressure and observe whether the student detects this during preflight.*

**III. Critical Actions (Behaviors):**

*Add air as required.*

**Judgment Training  
Scenario #14**

**Phase:**

*Preflight*

**I. Title:**

*Thorough Preflight Inspection*

**II. Situation:**

*The aircraft is being preflighted by the student. Distract by talking about unrelated things or asking questions that require detailed answers.*

**III. Critical Actions (Behaviors):**

*Conduct thorough preflight, with knowledge of oil and fuel levels, inspections due, etc., (in response to questions by instructor).*

**Judgment Training  
Scenario #16**

**Phase:**

*Preflight*

**I. Title:**

*Object in engine compartment*

**II. Situation:**

*Use an empty aluminum soda pop can and place in engine compartment.*

**III. Critical Actions (Behaviors):**

*REMOVE BEFORE FLIGHT. Explain that other common objects, such as bird's nests or wrenches are sometimes found here during preflight.*

## Judgment Training Scenario #17

### Phase:

*Preflight*

### I. Title:

*Simulated Hydraulic Leak*

### II. Situation:

*Hydraulic fluid on ground or brake assembly.*

*Pour fluid on ground in an appropriate area to provide "evidence" of a suspected leak.*

### III. Critical Actions (Behaviors):

*Inspect for obvious leaks. Suggest having a mechanic check the brake system for leaks and proper operation.*

## Judgment Training Scenario #19

### Phase:

*Preflight*

### I. Title:

*Low Oil*

### II. Situation:

*Low Oil – Engine oil quantity is marginal or low for normal operations. The student is assigned an aircraft already known to be low on oil.*

### III. Critical Actions (Behaviors):

*Check oil. Add oil as required.*

## Judgment Training Scenario #18

### Phase:

*Preflight*

### I. Title:

*Oil Leak*

### II. Situation:

*Oil on engine cowling and ramp. Smear oil on an appropriate spot to simulate "evidence" of a leak.*

### III. Critical Actions (Behaviors):

*Inspect the engine compartment for oil leaks. Inspect the oil filler cap area for signs of oil spill. Check the engine oil level. Student states, "Indications point to an engine oil leak--have a mechanic check it prior to flight."*

## Judgment Training Scenario #20

### Phase:

*Taxi*

### I. Title:

*Position of flight controls for existing wind conditions during taxi*

### II. Situation:

*The student is taxiing the aircraft in windy conditions (above 10 knots). Distract the student with conversation about other subjects.*

### III. Critical Actions (Behaviors):

*Student places aircraft controls as needed for the prevailing wind.*

**Judgment Training  
Scenario #21**

**Phase:**

*Taxi*

**I. Title:**

*Taxi Across Active Runway*

**II. Situation:**

*The instructor draws the student's attention to something inside the cockpit immediately prior to crossing an active runway.*

**III. Critical Actions (Behaviors):**

*Student must look outside the aircraft and down the runway to check for traffic, prior to crossing. Additionally, all runway crossings at controlled airports must be done in accordance with ATC instructions.*

**Judgment Training  
Scenario #22**

**Phase:**

*Takeoff*

**I. Title:**

*Aircraft Separation*

**II. Situation:**

*Suggest a takeoff from a busy, uncontrolled field right behind another airplane.*

**III. Critical Actions (Behaviors):**

*Student insists on maintenance of adequate aircraft separation. A delay off the runway may be required, especially in the case of touch-and-go landings.*

**Judgment Training  
Scenario #23**

**Phase:**

*Takeoff*

**I. Title:**

*Intersection Takeoff*

**II. Situation:**

*A departure from a runway intersection is suggested by the instructor. The runway remaining would make a safe takeoff marginal.*

**III. Critical Actions (Behaviors):**

*The student decides to use the full length of the runway.*

**Judgment Training  
Scenario #24**

**Phase:**

*Takeoff*

**I. Title:**

*Simulated Loss of Power*

**II. Situation:**

*Do not actually pull power on takeoff; suggest doing a 180° turn back to the airport. Select an altitude above the ground where a prudent pilot's only choice would be to land straight ahead.*

**III. Critical Actions (Behaviors):**

*Student responds and says he would land straight ahead.*

**Judgment Training  
Scenario #25**

**Phase:**

*En Route*

**I. Title:**

*Low-Speed Turns*

**II. Situation:**

*The aircraft is set up at low altitude (500-800 feet) and low airspeed (1.5 V<sub>SO</sub>). The need for a steep turn is simulated.*

**III. Critical Actions (Behaviors):**

*The student adjusts the aircraft bank angle to avoid a stall.*

**Judgment Training  
Scenario #27**

**Phase:**

*En Route*

**I. Title:**

*Over Water Operation*

**II. Situation:**

*Over water operations without floatation equipment. During practice, start to take the aircraft out over a large body of water.*

**III. Critical Actions (Behaviors):**

*Student does not fly farther than power-off gliding range of land.*

**Judgment Training  
Scenario #26**

**Phase:**

*En Route*

**I. Title:**

*VFR Altitude*

**II. Situation:**

*Improper VFR altitude. Using an appropriate reason (staying clear of clouds, smooth air, etc.), mention you would like to change altitude to one not correct for the heading.*

**III. Critical Actions (Behaviors):**

*Student pilot questions the incorrect altitude assignment.*

**Judgment Training  
Scenario #28**

**Phase:**

*En Route*

**I. Title:**

*Cloud Clearance*

**II. Situation:**

*Select a cloudy day and suggest a VFR cruising altitude which will violate cloud clearance regulations.*

**III. Critical Actions (Behaviors):**

*The student points out that he can not maintain legal VFR at that altitude.*

## Judgment Training Scenario #29

### Phase:

*En Route*

### I. Title:

*Simulated loss of power*

### II. Situation:

*Loss of engine power is **simulated** at a safe altitude. Only an expeditious turn towards an open field will produce a safe landing.*

### III. Critical Actions (Behaviors):

*Turning the aircraft towards the field and establishing the best glide speed before attempting a restart. Attempt a simulated engine restart only if altitude permits.*

## Judgment Training Scenario #31

### Phase:

*En Route*

### I. Title:

*Communications Versus Maintaining VFR*

### II. Situation:

*The aircraft is headed towards cloud formations at the time contact should be made with air traffic control.*

### III. Critical Actions (Behaviors):

*The student controls the aircraft to avoid the clouds before contacting the controller.*

## Judgment Training Scenario #30

### Phase:

*En Route*

### I. Title:

*Staying position oriented*

### II. Situation:

*The flight is being conducted in the local practice area. Distract the student with numerous heading changes or activities that are not related to staying position oriented.*

### III. Critical Actions (Behaviors):

*Constant awareness of the aircraft's location (in response to questions by the instructor).*

## Judgment Training Scenario #32

### Phase:

*En Route*

### I. Title:

*Clearing Turns*

### II. Situation:

*Student begins various flight maneuvers in the practice area. Instructor does not mention clearing turns.*

### III. Critical Actions (Behaviors):

*Execute clearing turns prior to certain flight maneuvers.*

**Judgment Training  
Scenario #33**

**Phase:**

*En Route*

**I. Title:**

*Suggest Stalls at Low Altitudes*

**II. Situation:**

*Suggest commencing stalls at low altitude—  
less than 1,500 feet AGL.*

**III. Critical Actions (Behaviors):**

*The student recognizes the conflict and climbs  
to higher altitude before initiating stall  
practice.*

**Judgment Training  
Scenario #34**

**Phase:**

*En Route*

**I. Title:**

*Suggest Maneuvers Over A Congested Area*

**II. Situation:**

*Suggest ground reference maneuvers over a  
congested area. Note such maneuvers are gen-  
erally done at 800 ft. AGL while regulations  
require that an aircraft must maintain at  
least 1,000 ft. AGL over congested areas.*

**III. Critical Actions (Behaviors):**

*The student recognizes the conflict and  
performs ground reference maneuvers over  
non-congested areas.*

**Judgment Training  
Scenario #35**

**Phase:**

*En Route*

**I. Title:**

*Traffic Avoidance*

**II. Situation:**

*Traffic avoidance vigilance is not emphasized  
by the instructor during the flight. Try to  
make the student feel that today's flight is  
a leisurely, unstructured one for general  
practice.*

**III. Critical Actions (Behaviors):**

*Maintain a continuous traffic avoidance scan.*

**Judgment Training  
Scenario #36**

**Phase:**

*En Route*

**I. Title:**

*Pilotage*

**II. Situation:**

*VFR checkpoints are being followed to navi-  
gate (pilotage). Use conversation to keep the  
student "inside" the cockpit.*

**III. Critical Actions (Behaviors):**

*Constant ability to pinpoint location of air-  
craft using charts, even between checkpoints.*

**Judgment Training  
Scenario #37**

**Phase:**

*En Route*

**I. Title:**

*Communications within TCA*

**II. Situation:**

*The route of flight passes through a Terminal Control Area (TCA). To distract from the need to communicate, suggest repeated course changes at the edge of the TCA.*

**III. Critical Actions (Behaviors):**

*Communication is established with ATC for approval to enter TCA.*

**Judgment Training  
Scenario #39**

**Phase:**

*Descent*

**I. Title:**

*V<sub>FE</sub> Limitations*

**II. Situation:**

*The instructor directs the flight so as to require a descent over a short distance. He tells the student to lower the flaps and suggests a descent at a rate that would cause V<sub>FE</sub> to be exceeded.*

**III. Critical Actions (Behaviors):**

*The student points out the conflict and does not exceed V<sub>FE</sub>.*

**Judgment Training  
Scenario #38**

**Phase:**

*En Route*

**I. Title:**

*Aircraft Endurance*

**II. Situation:**

*A local training flight. Begin the flight without giving the student an idea of how long the lesson will last.*

**III. Critical Actions (Behaviors):**

*Constant awareness of aircraft endurance based in amount of fuel on board at time of takeoff. (in response to questions by the instructor).*

**Judgment Training  
Scenario #40**

**Phase:**

*Landing*

**I. Title:**

*Collision Avoidance*

**II. Situation:**

*On base leg, the instructor directs the student's attention to the runway threshold.*

**III. Critical Actions (Behaviors):**

*The student should direct his visual attention to the **extended** runway centerline to check for conflicting traffic.*



**Judgment Training  
Scenario #41**

**Phase:**

*Landing*

**I. Title:**

*Non-Standard Approach Path*

**II. Situation:**

*Following a slip demonstration, the instructor lets the aircraft fly to the right or left of the runway centerline to a position which would make an attempted landing possible but dangerous. He gives control of the aircraft to the student.*

**III. Critical Actions (Behaviors):**

*Go-around.*

**Judgment Training  
Scenario #43**

**Phase:**

*Landing*

**I. Title:**

*Traffic on Runway*

**II. Situation:**

*An aircraft pulls out onto the runway (simulated).*

**III. Critical Actions (Behaviors):**

*Go-around.*

**Judgment Training  
Scenario #42**

**Phase:**

*Landing*

**I. Title:**

*Checklist Versus Communications*

**II. Situation:**

*After landing at an uncontrolled airport the instructor tells the student to call unicom prior to completing the after-landing checklist.*

**III. Critical Actions (Behaviors):**

*The student completes the after-landing checklist prior to calling unicom.*

**Judgment Training  
Scenario #44**

**Phase:**

*Landing*

**I. Title:**

*High Approach*

**II. Situation:**

*While demonstrating a situation (your choice) in the pattern, the instructor sets the aircraft up on an approach that is way too high, then turns the aircraft over to the student.*

**III. Critical Actions (Behaviors):**

*Go-around.*

**Judgment Training  
Scenario #45**

**Phase:**

*Landing*

**I. Title:**

*Extraneous conversation while in the airport  
traffice area.*

**II. Situation:**

*Distract the student with irrelevant  
conversation*

**III. Critical Actions (Behaviors):**

*Student to request holding irrelevant conversa-  
tion to a minimum.*

**Judgment Training  
Scenario #47**

**Phase:**

*Landing*

**I. Title:**

*Objects on Instrument Panel Glareshield*

**II. Situation:**

*During descent instructor places maps,  
manuals, etc., on glareshield, limiting  
forward vision.*

**III. Critical Actions (Behaviors):**

*Student requests objects be removed.*

**Judgment Training  
Scenario #46**

**Phase:**

*Landing*

**I. Title:**

*Traffic Pattern Entry*

**II. Situation:**

*Improper traffic pattern entry. At an uncon-  
trolled airport, student enters pattern too high  
or in a non-standard manner.*

**III. Critical Actions (Behaviors):**

*Enter the pattern at the proper location and  
at the correct traffic pattern altitude.*

**Judgment Training  
Scenario #48**

**Phase:**

*Landing*

**I. Title:**

*Aircraft Separation*

**II. Situation:**

*An approach to a runway is made with  
another aircraft ahead. The separation  
between the aircraft is continuously decreasing.*

**III. Critical Actions (Behaviors):**

*Corrective action should be taken, such as  
decreasing airspeed, "s"-turns on final, or a  
go-around.*

**Judgment Training  
Scenario #49**

**Phase:**

*Landing*

**I. Title:**

*Crosswind Landings at a Busy Airport*

**II. Situation:**

*A suggestion is made by the instructor to  
conduct landings on a crosswind runway at  
a busy, uncontrolled airport.*

**III. Critical Actions (Behaviors):**

*The student suggests that the landings be  
made on the runway being used by all other  
aircraft for safety reasons.*

**Judgment Training  
Scenario #50**

**Phase:**

*Landing*

**I. Title:**

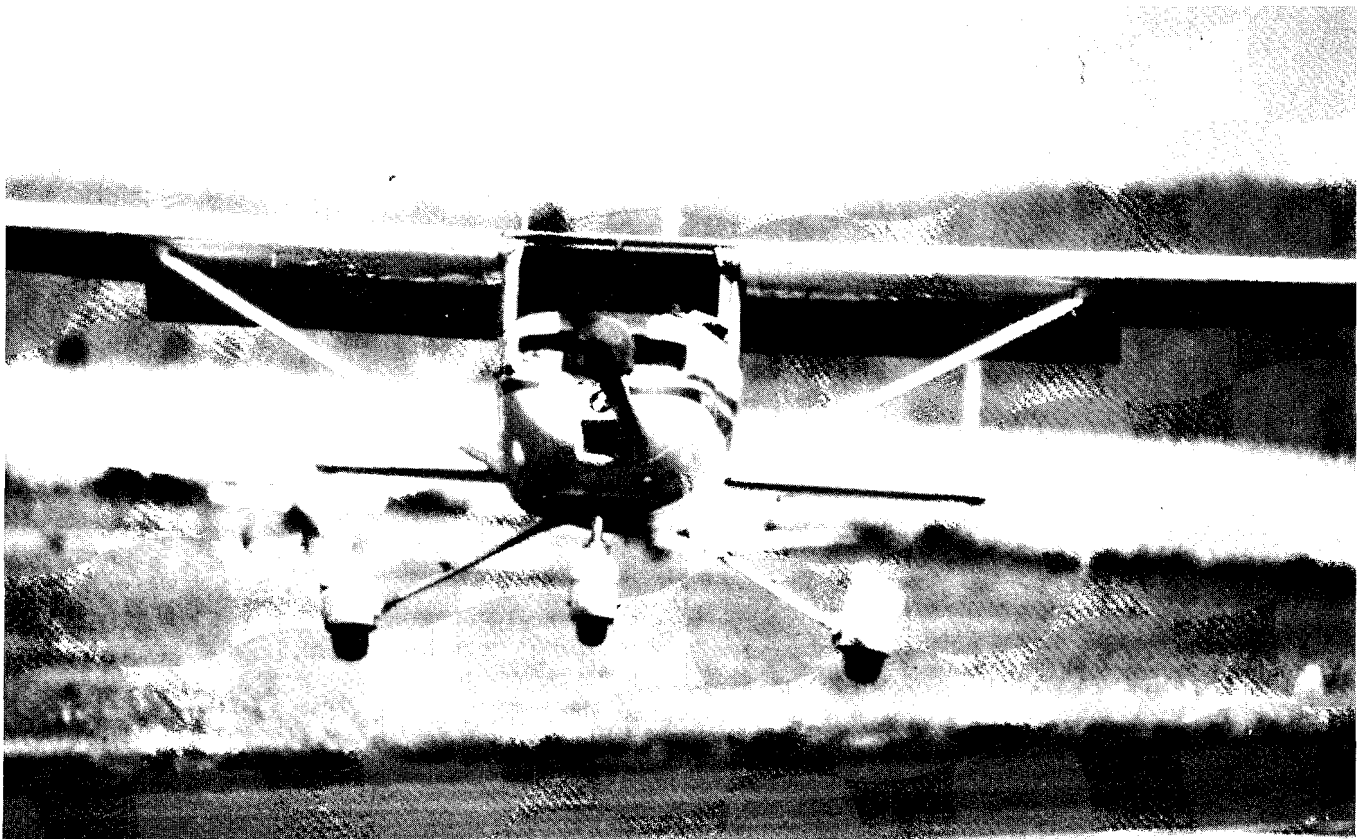
*Gusty Wind Conditions*

**II. Situation:**

*An approach is made in gusty wind condi-  
tions. The student is given minimum time to  
plan the approach.*

**III. Critical Actions (Behaviors):**

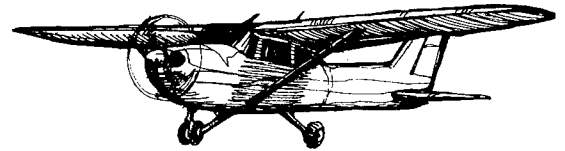
*Partial flap extension and a higher than  
normal approach speed may be required.*



## 7

## Typical Training Mission

The following is a narrative of a typical judgment training mission. You might find it useful in formulating your own ideas for conducting your own judgment training flights. As mentioned earlier, all necessary preparation should be completed **before** the student's expected arrival time.



### The Lesson Plan to be administered:

Title: Transition from cruise to level flight at minimum controllable airspeed using various flap settings. (Lesson Plan #4, page 18)

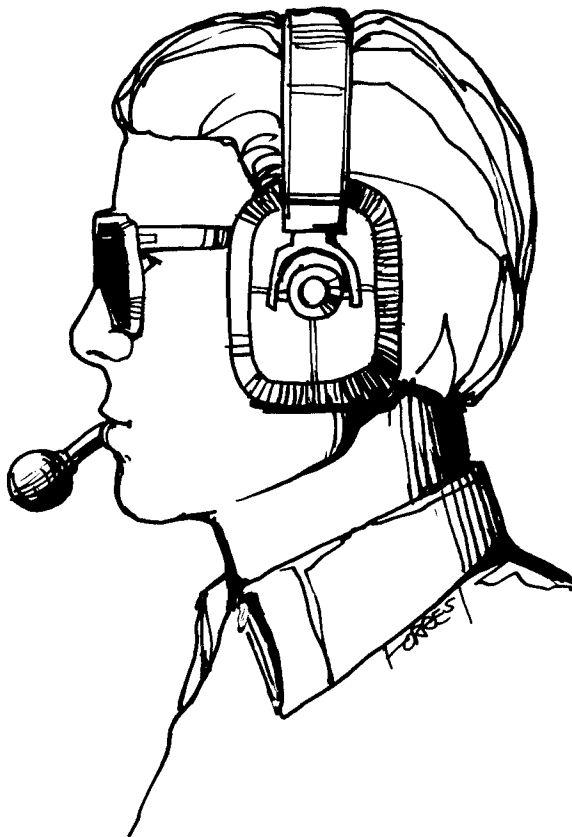
### Judgment Training Scenarios to be administered:

Title: Extra Bolts on Ground under Airplane (Training Scenario #11, page 31)

Title: Use of Shoulder Harness (Training Scenario #6, page 30)

### Instructor Preparation:

Place a few extra bolts under the aircraft. Stow shoulder harness.



### Mission Narrative

The instructor tells the student they will meet at 2:00 p.m. for training. The student is told to have the aircraft ready to fly. At the appointed time the instructor arrives and verifies that the student has the aircraft ready to fly. Intentionally, the instructor makes **no** attempt to release the stowed shoulder harness.

### Extra Bolts on Ground under Airplane

During preflight, the student advises the instructor that he has discovered a few bolts on the ground under the aircraft. The instructor offers positive reinforcement for the student's act of good judgement since he noticed the extra bolts and checked to see if they had come from the aircraft: "You were very alert. Good work."

### Use of Shoulder Harness

As a flight instructor, make up a variety of excuses so as to avoid having to wear your shoulder harness. During reading of the pre-takeoff checklist, the student notices that you are not using your shoulder harness. The student should say, "Are you aware of the regulations concerning use of shoulder harnesses?" As instructor, you should say "Don't let **my** poor judgement influence you. **You** must always make your own

judgements.” They both then fasten their shoulder harnesses and continue with takeoff preparations.

### Transition Using Flaps

Next, the lesson—transitioning from cruise to minimum controllable airspeed using various flap settings—is conducted. Emphasis is placed on developing the automatic reaction (AR) mental processes. The instructor provides positive reinforcement when appropriate, and when an error occurs, points out the subject areas and action ways in question.

The student is told to establish slow flight at minimum controllable airspeed (MCA), which he does by reducing power and extending flaps, adding power as MCA is neared to avoid a stall. The instructor queries the student, “Are you sure we are clear of other traffic in the area?” The student replies, “No, I should have made clearing turns while I was setting up the aircraft.” The instructor reinforces this, “You should have been more aware of your environment. What you are doing well, however, is understanding and controlling the pitch-power relationship.” The student replies, “Yes, I feel I am doing pretty well with that.” The instructor then says, “Very good. Now retract the flaps, maintaining your present airspeed and altitude.” The student retracts the flaps and reduces power as he increases the aircraft’s pitch altitude. Pointing to the altimeter, which reads 100

feet below target altitude, the instructor comments, “You should have raised your pitch a little more. Not a bad job though!” Recovery from slow flight is then initiated, and the airwork continues.

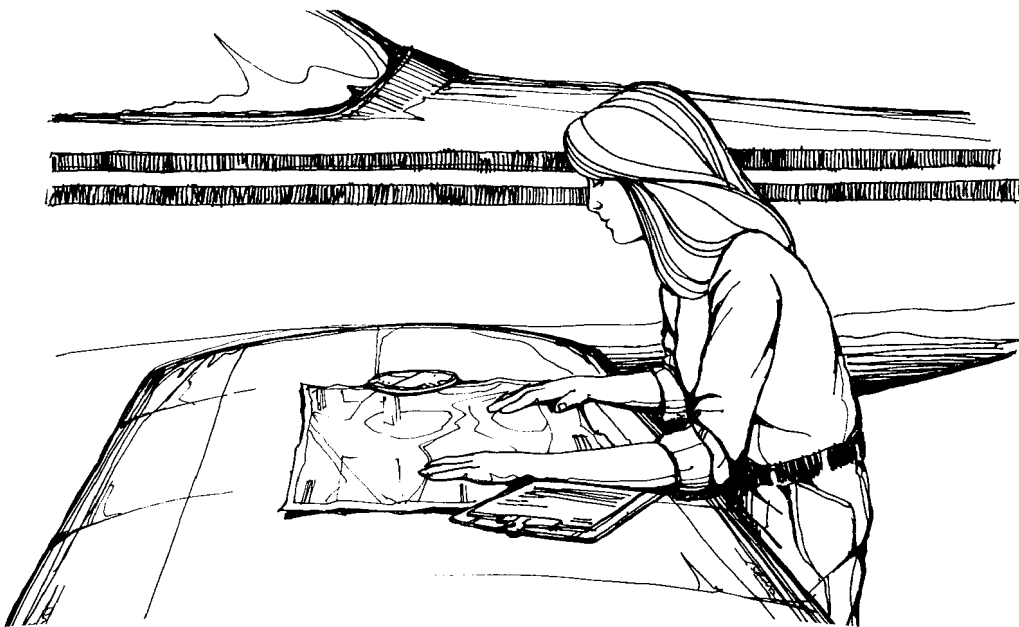
### Debriefing

On the ground the instructor and the student review the flight. The instructor begins by saying, “You did pretty well today. I planned three judgment training activities for you, and you handled them correctly for the most part. You did fail to make proper use of the shoulder harness.”

The instructor continues the discussion with the student about how a poor judgment chain could develop in similar situations.

At the end of the discussion, the instructor asks, “Do you remember having any hazardous thoughts during the flight?” The student says “No.” The instructor then asks, “How about your stress level? Did it ever increase to where you felt uneasy or distracted?”

The student says, “Most of the flight I was calm and doing fine. I did get a bit rattled when I realized I had lost some altitude when recovering from slow flight, but it didn’t last very long. I did think to myself to relax and to deal with the situation at hand.” The instructor positively affirms the student’s self awareness of a change in stress level, and they make arrangements for the next training session.



This judgment training program is more than just a collection of related facts and ideas for students to learn. **It is a carefully designed educational system.** Using this integrated system produces an overall result greater than that attainable by random presentation of the individual parts. To achieve the maximum benefits of this system, you must manage the instruction carefully.

The materials listed below are designed to aid both the individual instructor **and** the training supervisor for a group of flight instructors i.e., the chief pilot engaged in judgment training activities.



## Judgment Training Materials

- **SCHEDULE OF STUDENT WORK**.....Page 45  
A master plan for scheduling training activities for your students.
- 

- **SET OF MASTER COPIES**.....Pages 46-50  
Original documents of all the instructional materials and forms required to teach this training curriculum.
- 

- **ANSWER KEYS FOR THE POSTCHECK EXERCISES**.....Pages 58-63

## SCHEDULE OF STUDENT WORK

<b>GROUND TRAINING</b>			
<b>TRAINING SEGMENT</b>	<b>NUMBER OF IN-FLIGHT LESSONS</b>	<b>WHEN TO SCHEDULE</b>	<b>EXERCISES/ REVIEW</b>
Chapters 1-2 of the Student Manual	—	During student's early work on the standard ground school training curriculum.	None required; oral quizzing suggested
Chapters 3-6 of the Student Manual	—	During student's work on the first 25 percent of the standard ground school training curriculum.	Chapter 5
Chapter 7 of the Student Manual	—	At same time student is working on similar materials in standard ground school training.	Chapter 7
<b>FLIGHT TRAINING</b>			
Chapter 5 of the Instructor Manual	9 lessons total (3 on each mental process; one per regularly scheduled flight training period)	Randomly during flight training. Suggested starting point is about three lessons before the student is expected to solo. <b>PREREQUISITE:</b> Student Manual chapters 1 & 2.	Additional lessons as necessary
Chapter 6 of the Instructor Manual	12 or more lessons total (1 or 2 per flight training period)	Randomly during flight training. Suggested starting point is after the student has flown solo 3 to 4 times. <b>PREREQUISITE:</b> Student Manual chapters 1-6.	Additional lessons as necessary

## Set of Master Copies

Immediately following this page are the master copies of every form you will need to present this judgment training program. **BE VERY CAREFUL NOT TO MARK ON THESE MASTER COPIES!** You will probably want to remove the pages listed below and file them for safekeeping and easy access when you need to make more copies. It would be wise to remove them now and make copies to insert in the manual in place of the originals.

ITEM	QUANTITY NEEDED
1. Student Progress Record — Student Manual	one each per student
<hr/>	
2. Student Progress Record— Inflight training	one each per student
<hr/>	
3. Lesson Plan (Blank form)	one each Lesson Plan you develop yourself
<hr/>	
4. Judgment Training Scenario (Blank form)	one for each Judgment Training Scenario you develop yourself
<hr/>	
5. Postcheck Exercises For use after completion of the Student Manual (Note: Answer keys for these postcheck exercises appear beginning on page 58).	one complete set per student



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**PILOT JUDGMENT TRAINING**  
**STUDENT PROGRESS RECORD – STUDENT MANUAL**

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Student \_\_\_\_\_

Instructor \_\_\_\_\_

Chapter	Student Assignments	Date Assigned	Date Completed
<b>1</b>	Read.		
<b>2</b>	Read. Do drills.		
<b>3</b>	Read. Do Assessment Inventory and Profile Graph.		
<b>4</b>	Read. Do Situation Exercises.		
<b>5</b>	Do Exercises. Memorize antidotes.		
<b>6</b>	Read.		
<b>7</b>	Do Situation Exercises. Discuss.		



**Lesson Plan** # \_\_\_\_\_

**I. Objective**

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

**II. Activity:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**III. Observable Behavior Sought:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**IV. Positive Reinforcements:**

(Focusing on the three subject areas)

1. Pilot \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Aircraft: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Environment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Lesson Plan** # \_\_\_\_\_

**I. Objective**

- Automatic Reaction
- Problem Resolving
- Repeated Reviewing

**II. Activity:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**III. Observable Behavior Sought:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**IV. Positive Reinforcements:**

(Focusing on the three subject areas)

1. Pilot \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Aircraft: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Environment: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**JUDGMENT TRAINING SCENARIO**

# \_\_\_\_\_

PHASE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I. TITLE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

II. SITUATION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

III. CRITICAL ACTIONS (BEHAVIORS): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**JUDGMENT TRAINING SCENARIO**

# \_\_\_\_\_

PHASE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I. TITLE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

II. SITUATION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

III. CRITICAL ACTIONS (BEHAVIORS): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**JUDGMENT TRAINING SCENARIO**

# \_\_\_\_\_

PHASE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I. TITLE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

II. SITUATION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

III. CRITICAL ACTIONS (BEHAVIORS): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**JUDGMENT TRAINING SCENARIO**

# \_\_\_\_\_

PHASE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I. TITLE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

II. SITUATION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

III. CRITICAL ACTIONS (BEHAVIORS): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Postcheck Exercises for Use After Completion of the Student Manual

Student Name \_\_\_\_\_ Date \_\_\_\_\_

## INTRODUCTION

The following postcheck exercises have two purposes: to reinforce your judgment training; and to help you identify and remedy problems you may have with mastering any part of the material presented in the student manual.

## INSTRUCTIONS

You will recognize the form of the following six scenarios from chapter 5 of your earlier training. For all scenarios underline the hazardous thoughts. Write its name and the correct antidote to the right. There will be several hazardous thoughts in each. This is not a timed test, but it is important that you identify all of the hazardous thoughts. So check your responses after you have finished, then return the postcheck to your flight instructor for evaluation.



**Postcheck Exercise One**

On a pleasure flight with two passengers, the pilot was told that one of the passengers, who was a diabetic, had become very ill, apparently in shock. Unable to stand the pressure of the decision, the pilot asked the other passenger what to do. Should he continue the flight in the hope that the passenger would recover, or should he return home for medical attention? The other passenger became angry and said, "That is not for me to decide. Don't you have any regulations that tell you what to do in this situation? Call air traffic control for instructions." Since he was not sure what to do and since the passenger was so demanding, the pilot thought, "Yeah, I better call for instructions. No sense getting that guy more upset than he is."

He called air traffic control, and it was suggested he return to his departure point where an ambulance would be waiting to take the sick man to the hospital. He said to the other passenger, "I hate to inconvenience you this way. It's not my decision. I'm only doing what I'm told to do."

The passenger seemed surprised at this statement and became further irritated saying, "You're really some pilot! I'd hate to have my life in your hands if I got sick!"

The pilot became angry and said to himself, "Look, I'm the boss here, and what I say goes. The lives of everyone on board are in my hands now, and I'm the one who is handling this situation. Just because someone feels sick is no reason to change a flight plan. I don't care what ATC says. Those bureaucrats are forever making rules. Who are they to tell me when to turn back or continue?"

As he calmed down, however, he thought to himself, "Maybe the man is really sick; perhaps I'd better get him help immediately."

He returned to the departure airport and the sick passenger, who had lapsed into a coma, was rushed to the hospital.

The pilot was deeply disturbed by his near mistake and immediately decided never to fly again.

**Postcheck Exercise Two**

George and Jack are on a pleasure flight late in the afternoon. George, the pilot, has been flying for almost six months and he is feeling quite proud of his flying ability. He brags to Jack that he is one of the best pilots at the local airport and that he knows more about flying than a lot of the old timers who seem to be following the rules. He says, "Flying by the book is unnecessary. All of those regulations are devised by some petty bureaucrats who probably have never been in an airplane."

Jack has heard this from George before and is irritated by it. He feels that George brags too much, so he reminds him that he is not so great since he does not have much night time and is not instrument rated.

George is annoyed by this. He tells Jack that he has never had an accident and that he is sure that he never will. He decides to fly to another airport, two hours away, thinking, "I'll show him that I can handle night flying." He tells Jack that it would be better to fly on since the new destination has more "action" in its area than the airport they were originally headed for. Jack does seem to mind, though, and remarks that this will mean flying in darkness for a half hour. George says, "Don't worry; nothing bad can happen to us." They both have a laugh, and the decision does not bother Jack.

As they fly into darkness, George becomes a bit nervous since he cannot locate any checkpoints and thinks, "Why don't they provide better lighting in these areas so a pilot can see." He does not let Jack know his apprehension but continues to boast about how well he is flying his aircraft.

Finally, George sees an airport ahead and makes his approach, but he is so nervous that he hardly listens to his landing instructions. He lands without a problem and feels quite relieved. Jack apologizes to George, saying that he had underestimated his abilities.

As they taxi the airplane to the parking area, George realizes that he has landed at the wrong airport. Embarrassed and disgusted, he thinks, "You would think they'd identify airports better so pilots would not be misled."

**Postcheck Exercise Three**

The pilot and a companion had been drinking for two hours before their flight from a local airport. As they walked toward their airplane the pilot said, "I can drink with the best of them and still fly." Once airborne, she continued by telling her friend that there is less chance of having an aircraft accident than there is for car accident. "After all," she said, "there's nothing up here but fresh air. Who is going to run into us at this height?"

As the flight began, the pilot flew somewhat erratically, but neither one noticed it. So, they had a few more drinks and thoroughly enjoyed them. Then, the companion suggested the pilot do a few loops, just to keep the flight interesting. The pilot remarked, "Loops? I don't think I know how to do them. Ah, let's try a few anyway. After all, the only thing that could go wrong is for us to get dizzy."

She then started a loop without checking her altitude, which was quite low. The companion noticed this and screamed, "You're too low for this. You want to get us killed?" The pilot was very annoyed and answered, "Who is in charge of this airplane, you or me? I know what I'm doing. Now you just relax and watch me put the airplane through some action. If things go wrong, it's not our doing. It's in the cards if your time is up, but don't worry, Lady Luck is going to be with us."

Witnesses later reported that they had seen the aircraft making repeated loops at low altitude. During the last loop, the pilot exceeded the design limitations of the airplane and both wings separated from the aircraft. Both women were killed, and autopsies showed both had elevated blood alcohol levels.



**Postcheck Exercise Four**

On a flight from Baltimore to Hartford, the pilot neglected to get the most recent weather forecast. In fact, he left Baltimore in such a hurry that he did not take the time to do a proper preflight inspection of the engine. He wanted to arrive at Hartford before 4 p.m. so that he would not miss an important engagement. He dispensed with the preflight check and the weather briefing.

En route to Hartford, the weather became progressively worse; snow was beginning to fall, and ice was beginning to form on the aircraft's wings. This frightened the pilot, and he quickly descended to a lower altitude, hoping that this would help the icing problem, but ice continued to form. He was now flying at only 800 feet above the terrain.

He was not sure what to do. In fact, he was so frightened, he was almost unable to do anything. He thought, "Perhaps I should radio for help; no, I won't radio for assistance. What would they think of me if they know the problem I got myself into. Better to let sleeping dogs lie."

"But what if my carburetor starts to ice? I'm not even sure what procedure I should use in that situation. I better fly close to the ground so I can be sure of where I'm going." He descended even further, knowing that this violated regulations and jeopardized his safety even further. Now even more confused, he was still not certain what to do.

At one point, he narrowly missed a small mountain ridge. This panicked him further, so he decided to make an emergency landing. He began his approach even though he had not decided where to land.

Finally, at an altitude of 200 feet, he spotted a paved road. Without checking for car traffic, he made an emergency landing. Two cars on the road had to swerve to avoid colliding with the oncoming airplane. The pilot managed to stop the plane and left it on the road, cursing the bad weather that caused his problems.

**Postcheck Exercise Five**

While on a flight over hilly terrain, the pilot notices that his fuel gauge is not operating. He calculates that it will take approximately two hours to reach his destination, a small airport in western Pennsylvania, but because he neglected to refuel at the last airport, he is not certain of the amount of fuel in the tanks. Also, he has neglected to monitor the operation of the fuel gauge during the flight.

He thinks, "I should have topped off the tanks at the last stop. That would have given me plenty of fuel to make the trip, but who has time to follow all those procedures that are written for people who don't know anything about flying and make dumb mistakes. Besides, nothing has ever happened to me, even in situations worse than this."

He decides to keep flying, thinking that "If something goes wrong, well, that's life." Then, it suddenly occurs to him that he may be nearly out of fuel: "Maybe I have a fuel leak, and the fuel tanks are already empty!" He starts to make an emergency landing.

His descent is into a hilly and forested area, and he tells his passengers, "We're practically out of fuel, so I'm heading for that small clearing before the engines quit. Fasten your seatbelts and shoulder harnesses tightly and hold on, because it's going to be a very hard landing."

The left wing and the tail section is damaged on landing, but no one is injured. After he secures the airplane and gets out, he checks the fuel tanks and finds them half-full. He says to himself, "Dumb mechanics, if they did their job right, my gauge would not have broken, and this wouldn't have happened."

**Postcheck Exercise Six**

The pilot and his friend were flying a small, single engine aircraft 1,200 miles on a VFR cross-country flight to Toronto. Halfway to Toronto, the pilot noticed that the weather was deteriorating. He was concerned because he wanted to reach his destination that day. His fuel reserve calculations indicated that he had just enough fuel to make it, so he decided not to make a planned refueling stop. "What can go wrong?" he reasoned, "I should make it with time to spare. I'd rather get to Toronto right away than be stuck at some small airport waiting for weather to improve."

Nearing the Toronto area, he realized that the weather was much worse than he had anticipated, and strong headwinds had caused the airplane to use far more fuel than he had allowed for. He thought, "This crummy weather is really botching up my flight." Then his passenger remarked that he should have refueled. He answered, "Once I make up my mind that I have made the right decision, nobody is going to tell me differently."

As he made his approach to Toronto, he could not see the runway clearly. Instead of executing a go-around, he landed anyway. The aircraft was not aligned with the runway, and it ran off the hard surface into the grass. The pilot blamed the landing mishap on the bad weather and the distraction of arguing with this friend.

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## Hazardous Thought/ Antidote

**IMPULSIVITY:** "Not so fast. Think first."

**RESIGNATION:** "I'm not helpless. I **can** make a difference."

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**MACHO:** "Taking chances is foolish."

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## Hazardous Thought/ Antidote

### Postcheck Exercise Six

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