

Overview of the FAA's Fundamentals of Instruction

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by Ian Kluft

Sources:

*FAA Aviation Instructor's Handbook and the
FAA Flight Instructor Practical Test Standards (PTS)
for Single-engine Airplane*

credit to instructors:

Dean A White CFI/CFII/MEI/ATP, San Jose, California
and Sheble Aviation flight school, Kingman, Arizona

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Fundamentals of Instruction

Area of Operation I: Fundamentals of Instruction
PTS requires Task F and at least one other task

Tasks

- A) The learning process
 - B) Human behavior and effective communication
 - C) The teaching process
 - D) Teaching methods
 - E) Critique and evaluation
 - F) Flight instructor characteristics and responsibilities
 - G) Planning instructional activity
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Task A: The Learning Process

- Learning theory
 - Characteristics of learning
 - Principles of learning
 - Levels of Learning
 - Learning physical skills
 - Memory
 - Transfer of learning
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Learning Theory

- Explains how people acquire skills, knowledge and attitudes
 - Combined approaches of
 - **Behaviorism** – positive reinforcement and rewards accelerate learning
 - **Cognitive theory** – learning is a change in the way the student thinks
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Characteristics of Learning

mnemonic: *P E M A*

- **Purposeful** – students learn from any activity that furthers their purpose
 - **Experience** – learning comes from experience; learning a physical skill requires actually performing the skill
 - **Multifaceted** – verbal, conceptual, perceptual, motor, problem solving and emotional
 - **Active Process** – students need to react and respond, must interact with instructor and airplane
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Principles of Learning

mnemonic: *R E E P I R*

- **Readiness** – students learn best when ready to learn; implies a single-mindedness to learn
 - **Exercise** – things most often repeated are best remembered
 - **Effect** – learning is strengthened by a satisfying or pleasant experience
 - **Primacy** – things learned first are best remembered
 - **Intensity** – students learn more from the real thing than a substitute or simulation
 - **Recency** – recent learning is best remembered
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Principles of Learning: *Factors in how people learn*

mnemonic: P I M

- **Perception** – formed when giving meaning to sensory input: sight 75%, hearing 13%, touch 6%, smell 3%, taste 3%
 - **Insight** – grouping perceptions into a meaningful whole
 - **Motivation** – major force which governs progress and ability to learn
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Principles of Learning:

Factors which affect perception

- **Perception** – formed when giving meaning to sensory input
 - mnemonic: *P B G E T S*
 - **Physical organism** – ability to see, hear, feel and respond adequately during flight
 - **Basic needs** – self-preservation, desire to stay alive
 - **Goals and values** – things more valued are more pursued
 - **Element of threat** – narrows the perceptual field
 - **Time and opportunity** – senses/brain limited to how much material can be processed at once
 - **Self concept** – positive or negative self-image affects learning; negative image causes psychological barriers
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Principles of Learning: How to promote insights

- one of the instructor's main responsibilities
 - **Insight** - grouping perceptions into a meaningful whole
 - Point out relationships as they occur
 - Assist student in acquiring and maintaining a positive self-concept
 - Provide a safe environment in which to conduct training
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Principles of Learning: *Factors which affect motivation*

- **Motivation** – major force which governs progress and ability to learn
 - Desire for personal gain
 - Desire for comfort and security
 - Receive peer/group approval
 - Promise of achievement or reward
 - Threats, fear and anxiety (negative motivation) can be used with an overconfident student
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Levels of learning

mnemonic: *R U A C*

- **Rote** – able to repeat but not understand
 - **Understanding** – comprehend or grasp a meaning
 - **Application** – able to put understanding to use
 - **Correlation** – associating what has been learned, understood and applied with previous or subsequent learning
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Levels of Learning: Domains of Learning

- Additional categories of learning
 - Cognitive – for learning new knowledge
 - Affective – for learning attitudes, beliefs and values
 - Pshychomotor – for learning physical skills
 - Each has its own hierarchy of objectives also called a taxonomy of educational objectives
 - Systematic classification scheme
 - Ranks desired outcomes from least to most complex(each shown on following slides)
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Levels of Learning: *Cognitive (Knowledge) Domain*

- **Knowledge** (least complex)
 - Recall and recognition
 - **Comprehension**
 - Translate, interpret and extrapolate
 - **Application**
 - Use of generalizations in specific circumstances
 - **Analysis**
 - Determine relationships
 - **Synthesis**
 - Create new relationships
 - **Evaluation** (most complex)
 - Exercise of learned judgment
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Levels of Learning: *Affective (Attitudes/Values) Domain*

- **Receiving** (least complex)
 - Willingness to pay attention
 - **Responding**
 - Reacts voluntarily or complies
 - **Valuing**
 - Acceptance
 - **Organization**
 - Rearrangement of value system
 - **Characterization** (most complex)
 - Incorporates values into life
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Levels of Learning: *Psychomotor (Physical Skills) Domain*

- **Perception** (least complex)
 - Awareness of sensory stimulus
- **Set**
 - Relates cues, knows
- **Guided response**
 - Performs as demonstrated
- **Mechanism**
 - Performs simple acts well

(continued)

Levels of Learning: *Psychomotor (Physical Skills) Domain*

(continued)

- **Complex overt response**
 - Skillful performance of complex acts
- **Adaptation**
 - Modifies for special problems
- **Origination (most complex)**
 - New movement patterns, creativity



Learning physical skills

- While muscular sequence is learned, perceptions, attitudes and concepts change too
 - **Desire to learn** – improvement is most likely when there is intention to improve
 - **Patterns to follow** – provide a step-by-step example to follow; clear picture what to do
 - **Perform the skill** – student gains proficiency by doing the exercise; coordination of muscles, visual and tactile senses
 - **Knowledge of results** – correct or incorrect, let student know results of practice promptly to promote learning the correct methods

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Learning physical skills

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- **Progress follows a pattern** – initial rapid improvement is often followed by a learning plateau; it's normal and should be expected
 - **Duration and organization of lesson** – beginning students may tend to reach learning plateau quickly; more practice does not help, and may be harmful
 - **Evaluation vs critique** – evaluation is based on criteria; critique involves watching performance and coaching to eliminate errors; early on, critique is more useful to students
 - **Application of skill** – the skill must become easy and habitual; student must recognize when it is appropriate to use the skill (i.e. forced landings)
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Memory

- Several theories about how memory works
 - Widely-accepted view: it's a multi-stage process
 - **Sensory Register**
 - Receives input from environment
 - Quickly processes info by what's important to the individual
 - **Short-term memory**
 - Stores and encodes sensory input for a matter of 5-10 sec
 - Retention may be strengthened by repetition or other means
 - If coding process is interrupted, info is lost in about 20 sec
 - **Long-term memory**
 - Important info from short-term transfers to long-term
 - Recall is a reconstruction process, not always complete
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Memory:

Factors affecting retention

mnemonic: P A S A R

- **Praise** – praise stimulates remembering
 - **Association** – association promotes recall
 - **Senses** – learning with all senses is most effective
 - **Attitude** – favorable attitudes aid retention
 - **Repetition** – meaningful repetition aids recall
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Memory:

Factors affecting forgetting

mnemonic: *R I D*

- **Repression** – tendency to submerge unpleasant ideas in subconscious as a defense mechanism
 - **Interference** – tendency to forget ideas because other experiences have overshadowed them
 - **Disuse** – tendency to forget things which are not used
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Transfer of learning

- Application of what has been learned in one task to another subsequent task
 - All new learning is based on previously learned experience
 - Plan for transfer by organizing lessons in meaningful sequence
 - Positive transfer
 - Learning one skill helps learn another
 - Example: speedometer (car) and airspeed indicator (plane)
 - Negative transfer
 - Learning one skill hinders learning another
 - Example: steering wheel (car) vs yoke (plane)
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Task B: Human Behavior and Effective Communication

- Human behavior
 - Control of human behavior
 - Human needs
 - Defense mechanisms
 - Flight instructor as practical psychologist
 - Effective communication
 - Basic elements of communication
 - Barriers of effective communication
 - Developing communication skills
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Human Behavior:

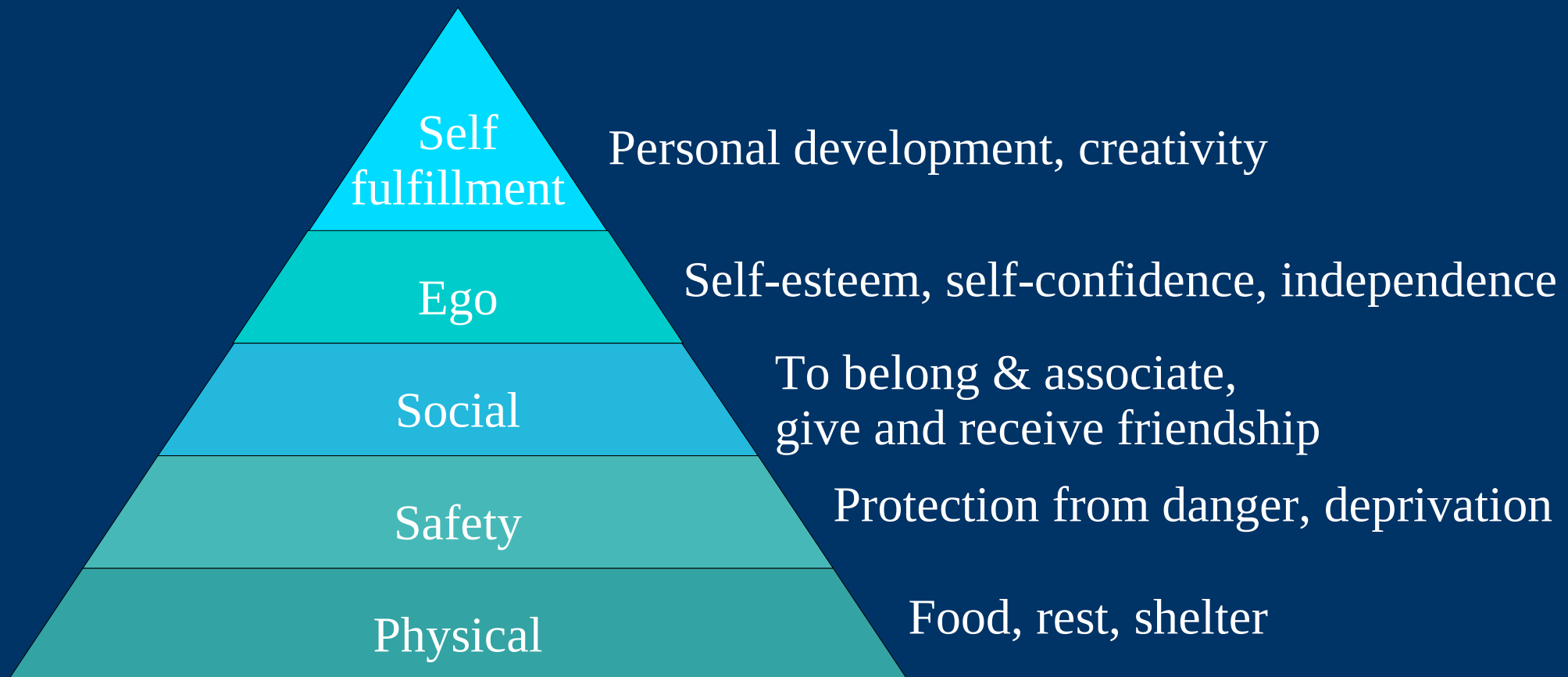
Control of Human Behavior

- Relationship between CFI and student has a profound impact on how much the student learns
 - To a student, CFI is a symbol of authority
 - CFI's challenge is to know what controls are best for what circumstances
 - To mold a solid relationship depends on CFI's knowledge of the student's needs, drives and desires
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Human Behavior: Human Needs

“Maslow's Pyramid”

each level depends on foundation of layers below



Human Behavior: Defense Mechanisms

- **Compensation**
 - Emphasizing more positive quality to offset weak one
 - **Projection**
 - Blame own shortcomings on others, or weather
 - **Rationalization**
 - Can't accept real reasons for behavior, uses excuses
 - **Denial of reality**
 - Refuse to acknowledge disagreeable realities
- (continued)
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Human Behavior: Defense Mechanisms

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- **Reaction formation**
 - Conscious attitudes/behaviors opposite of desires
 - **Flight**
 - Escape from frustration, physically or mentally
 - **Aggression**
 - Acting out anger in response to frustration
 - **Resignation**
 - Losing interest and giving up as a result of frustration
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Human Behavior:

CFI as Practical Psychologist

- Anxiety
 - Uneasiness arising from fear, real or imagined
 - Needs special instruction to relieve source of anxiety
 - Normal reactions to stress
 - Reacts rapidly within the limits of training
 - Emergency training intended so responses are correct
 - Abnormal reactions to stress
 - Random or illogical, inappropriate laughing or singing
 - Psychological abnormalities may inhibit learning
 - CFI actions regarding seriously abnormal students
 - Must refrain from certifying student
 - If a danger, initiate review by another CFI, FAA FSDO
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Effective Communication: Basic Elements

- Source – sender, instructor
 - Symbols – language, words
 - Receiver – listener, student
 - To be most effective:
 - Present accurate, up-to-date, stimulating material
 - Reveal a positive attitude while delivering message
 - Varying delivery/approach helps gain & hold attention
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Effective Communication: Communications Barriers

- Lack of common experience
 - Words may not carry the same meaning between people whose culture/backgrounds are too different
 - English has many words with subtly varying meanings
 - Some technical terms conflict between industries
 - Tractor is different in aviation/farming/trucking
 - Ground loop is different in aviation/electronics
 - Confusion between symbol and symbolized object
 - Words and connotations they carry may be different
 - Example: mechanic means more in aviation than cars
- (continued)
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Effective Communication: Communications Barriers

(continued)

- Overuse of abstractions
 - Generalizations allow student to hear different meaning
 - Aircraft could be and airplane, glider, helicopter or balloon
 - Airplane could be a Boeing 777 or a Piper Cub
 - Abstractions can be appropriate when topic matches
 - Aerodynamics work the same on any size of aircraft
 - Interference
 - Barriers outside CFI's control which limit learning
 - Physiological – discomfort or illness
 - Environmental – noise levels in airplane
 - Psychological – lack of commitment, fear, mistrust
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Effective Communication: Developing Communications Skills

- Role playing
 - Learn by doing
 - Practice instruction with instructors
- Instructional communication
 - Understanding of the subject being presented
 - Use examples from past experiences
 - CFI needs a way to determine results

(continued)

Effective Communication: Developing Communications Skills

(continued)

- Listening
 - CFI needs to listen to understand student point of view
 - Student needs to want to listen for effective learning
 - Taking notes maintains attention and aids retention
 - Steps to effective listening
 - Ready to listen
 - Responsible for listening
 - Listen to understand, not refute
 - Be emotionally calm
 - Listen for main ideas
 - Take notes
 - Guard against daydreaming

(continued)

Effective Communication: Developing Communications Skills

(continued)

- Questioning
 - Can determine how well the student understands
 - Shows the CFI is interested in the student's progress
 - Paraphrasing checks CFI & student perceptions match
- Instructional enhancement
 - Instructor should always seek additional training
 - Builds confidence and improves depth of presentation

Task C: The Teaching Process

mnemonic: P P A R

- **Preparation** of a lesson for a ground or flight instructional period
 - **Presentation** methods
 - **Application** by the student of the material or procedure presented
 - **Review and evaluation** of student performance
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Preparation

- Performance based objectives
 - Objectives can come from syllabus or PTS
 - What needs to be done and how it will be done
 - Measurable, reasonable standards for the student
 - Description of skill or behavior
 - Desired outcome of the instruction
 - Should be in concrete, measurable terms
 - Not just “knowledge of” or “awareness of”
- (continued)
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Preparation

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- Conditions
 - Rules for demonstrating the skill or behavior
 - Equipment, tools, reference materials, limitations
- Criteria
 - Standards for accomplishment of the objective
 - Be clear; leave no doubt whether objective is met
 - When applicable, should be based on the PTS

Presentation

- Lecture method
 - Classroom or one-on-one presentation
 - For presenting new material
 - Showing relationships between theory and practice
 - Demonstration-performance method
 - Instructor demonstrates, student practices
 - Useful for most flight maneuvers
 - Guided discussion
 - Encourages active participation from students in class
 - Useful for safety and emergency procedures
 - Students can use creativity and imagination
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Application

- Student uses what the CFI has presented
 - After class, student may be asked to summarize
 - In flight, CFI does maneuver then student practices
 - Necessary for CFI to interrupt with corrections
 - Student establishes habits
 - After reasonable competence, student can be allowed to practice a maneuver in solo flight
 - Periodic CFI review needed to make sure student is practicing correctly
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Review and Evaluation

- Use completion standards from lesson plan
 - Instructor reviews what has been covered
 - Student required to demonstrate meeting objective
 - Evaluation may be formal or informal
 - Students must be made aware of their progress
 - Deficiencies must be addressed before presenting new material
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Task D: Teaching Methods

- Organization of material
 - Lecture method
 - Cooperative or group learning method
 - Guided discussion method
 - Demonstration-performance method
 - Computer-based training method
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Organization of Material

- Introduction
 - Attention – focus students on the lesson
 - Motivation – reasons why the lesson is important
 - Overview – tell students what will be covered
 - Development
 - Past to present
 - Simple to complex
 - Known to unknown
 - Most to least frequently used
 - Conclusion
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Lecture Method: Teaching Lecture

- Allows some active participation by students
- Preparing the lecture
 - Establish objective and desired outcomes
 - Research the subject
 - Organize the material
 - Plan productive classroom activity
- Suitable language
 - Prefer simple over complex when possible
 - Define technical terms

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Lecture Method: Teaching Lecture

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- Types of delivery
 - Reading from manuscript
 - Reciting memorized material
 - Speaking extemporaneously from an outline
 - Speaking impromptu without preparation
 - Use of notes
 - Notes usually not needed if instructor...
 - is thoroughly prepared
 - has given presentation before
 - Notes used wisely can ensure accuracy
 - Make no effort to hide looking up notes
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Lecture Method: Formal vs Informal Lectures

- Informal lectures
 - Students' questions supplement the lecture
 - Active student participation
 - Learning is best in friendly relaxed atmosphere
 - Formal lectures
 - Preferred for introducing new subject matter
 - Either way, instructor is responsible to
 - Plan
 - Organize
 - Develop
 - Present
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Cooperative or Group Learning Method

- Organizes students into small groups
- Students work together to maximize learning
- Requires active participation
- Conditions and controls
 - This is not a panacea
 - Needs conditions to meet
 - End result may emphasize
 - Academic achievement
 - Cognitive abilities
 - Physical skills
 - Instructor must define goal unambiguously

(continued)

Cooperative or Group Learning Method

(continued)

- Heterogeneous groups
 - Method works best with groups of 3-6 students
 - Heterogeneous mix tends to strengthen results
 - Different academic or professional backgrounds
 - Mixes of ethnicity, race, gender
- Clear, complete instructions
 - Describe in precise terms what students must do
- Students must buy into targeted objectives
 - Students should perceive objectives as their own
 - Must believe everyone in the group shares the goal

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Cooperative or Group Learning Method

(continued)

- Positive interdependence
 - Structure learning tasks so students feel they will sink or swim together
 - Rewards to groups should be for all together or none
- Opportunity for success
 - Students should have equal chance of learning the content or ability, and earning the group rewards
- Access to must-learn information
 - Structure tasks so students all have access to info that they must learn

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Cooperative or Group Learning Method

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- Sufficient time for learning
 - Give students time needed to learn info or abilities
- Positive social interaction behaviors & attitudes
 - Position students for face-to-face interaction
 - Instructor may describe group interactions, assign roles
- Individual accountability
 - Each student must be held responsible for his/her share
 - Can be determined by testing each student

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Cooperative or Group Learning Method

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- Recognition and rewards for group success
 - Only groups that meet requirements get awards
 - Awards must be something valued by students
 - Debrief in group efforts
 - Students discuss how they worked together as a team
 - How well they achieved their group objectives
 - How well they helped each other learn the material
 - How well they enabled each other to be successful
 - What they need to do in the future to do better
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Guided Discussion Method

- A form of group learning effort
 - Instructor leads student group discussion
 - Students provide ideas, experiences, opinions, info
 - Instructor's goal is to draw out what students know
 - Instructor must be impartial and encouraging
 - Sarcasm and ridicule inhibit spontaneity
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Guided Discussion Method: Effective Questions

- Characteristics of effective questions
 - Have a specific purpose
 - Be clear in meaning
 - Contain a single idea
 - Stimulate thought
 - Require definite answers
 - Relate to previously covered information
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Guided Discussion Method: Planning

- Similar to planning a lecture
 - Select subject students have experience in
 - Specific lesson objective with learning outcomes
 - Research subject to become familiar with it
 - Organize topic outline in logical sequence
 - Plan lead-off questions for each desired outcome
 - May assign homework for students to prepare
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Guided Discussion Method: Instructor Technique

- Instructor needs to keep up with discussion
 - ...and know where to intervene
 - Introduction
 - Similar to lecture introduction
 - Attention, motivation and overview
 - Discussion
 - Instructor asks lead-off questions, patiently listens
 - Ask questions as needed to direct discussion
 - Conclusion
 - Summarize what students have accomplished
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Demonstration-Performance Method

- We learn best by doing
 - Flight instruction almost always uses this method
 - Possibilities in classroom: flight computer
 - Phases:
 - Explanation
 - Demonstration
 - Student performance
 - Instructor supervision
 - Evaluation
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Computer-based Training Method

- Personal computer-based aviation training devices (PCATD)
 - Flight training devices (FTD)
 - Computer assisted instruction (CAI)
 - CBT allows student to progress at own pace
 - Should not be used more than a book or video
 - Not sufficient to teach flight maneuvers alone
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Task E: Critique and Evaluation

- Critique
 - Characteristics of effective critiques
 - Methods of critique
 - Ground rules for critiquing
 - Evaluation
 - Effective oral questions
 - Responses to student questions
 - Effective written questions
 - Performance tests
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Characteristics of Effective Critiques

- Objective
 - Focused on student performance
 - Flexible
 - Considers student's entire performance
 - Considers requirements of the moment
 - Acceptable
 - Instructor must have credibility and trust
 - Comprehensive
 - Captures the significant points without overload
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Effective Critiques

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- Constructive
 - Positive critique when earned
 - Negative critique points toward improvement
 - Organized
 - Follows some pattern of organization
 - Thoughtful
 - Student needs self-esteem, recognition and approval
 - Specific
 - Say what's wrong and how to fix it
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Methods of Critique

- Instructor/student critique
 - Student-led critique
 - Small group critique
 - Individual student critique by another student
 - Self-critique
 - Written critique
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Ground Rules for Critiquing

- Going past allotted time has diminishing returns
 - Avoid trying to cover too much
 - Allow time for summary to emphasize most important points
 - Avoid dogmatic or absolute statements
 - Avoid controversies with class – don't take sides
 - Don't get maneuvered into defending a critique
 - An honest, objective critique can stand on its own
 - If part is written, keep it consistent with oral part
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Evaluation: Effective Oral Questions

- Should be adapted to the student's ability
 - Types of questions to avoid
 - **Puzzle** – lots of parts and subparts
 - **Oversize** – too general, covering wide area
 - **Toss-up** – more than one correct answer
 - **Bewilderment** – unclear about question's content
 - **Trick questions** – challenge to battle of wits with CFI
 - **Irrelevant** – unrelated to topic of discussion
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Evaluation:

Responses to Student Questions

- Must be understood by CFI before answering
- May defer question until later unit or lesson
- CFI should admit not knowing an answer
 - Promise to get the answer or help student to look it up

Evaluation: Effective Written Questions

- Reliability – consistent with repeated measurement
- Validity – measures what it was intended to
- Usability – functionality for student
- Objectivity – singleness of scoring, avoid bias
- Comprehensiveness – measures overall objectives
- Discrimination – measure differences in achievement

relevant requirement: pre-solo knowledge test

Evaluation: Performance Tests

- CFI does not administer pilot practical tests
 - CFI uses same standards preparing students for it
 - Practical Test Standards (PTS) set standards for FAA examiners
 - Broken down into areas of operation and tasks
 - Areas of operation range from preflight to post-flight
 - Tasks are units of areas of operation
 - Knowledge areas
 - Flight procedures
 - Maneuvers
 - PTS are already set high - not minimum standards
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Task F: Flight Instructor Characteristics and Responsibilities

- Instructor responsibilities
 - Providing adequate instruction
 - Standards of performance
 - Emphasizing the positive
 - Student pilot evaluation and supervision
 - Practical test recommendations and endorsements
 - Other training and endorsements
 - Professionalism as an instructor
 - Personal characteristics
 - Minimize student frustration
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Instructor Responsibilities: Providing Adequate Instruction

- Analyze student's personality, thinking and ability
 - No two students are alike
 - Same methods of instruction are not equally effective on each student
 - Learn the student's background, interests, temperament and way of thinking
 - Instruction methods may change as student progresses through stages of training
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Instructor Responsibilities: Standards of Performance

- Flight instructors must continuously evaluate
 - their own effectiveness
 - Standard of learning
 - Performance achieved by their students
 - Desire to maintain pleasant personal relationship with student must not lead to acceptance of slow rate of learning or substandard performance
 - An earnest student will not resent reasonable standards that are fairly and consistently applied
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Instructor Responsibilities: Emphasizing the Positive

- Flight instructors have a tremendous influence on students' perception of aviation
 - Positive or negative impressions formed by
 - The way instructors conduct themselves
 - The attitudes instructors display
 - The manner in which they develop their instruction
 - Success depends largely on instructor's ability to present instruction so students have a positive image of aviation
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Instructor Responsibilities: Evaluation of Student Pilot Ability

- Determine that student understands maneuver
 - Instructor demonstrates, student practices
 - Evaluation must be based on standards
 - Consider student's experience and stage of training
 - Not all PTS standards may apply on first practice
 - But have a reasonable standard for completion
 - Evaluate mastery of all elements of a maneuver
 - Not just overall performance
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Instructor Responsibilities: Pilot Supervision

- Guidance and restraint for solo student operations
 - Instructor alone determines student ready for solo
 - Require performance of fundamental maneuvers
 - Should be able to handle ordinary problems
 - Traffic pattern congestion
 - Change in active runway
 - Unexpected crosswinds
 - Instructor must retain control of situation
 - Example: full-stop landings on first solo flight
 - Instructor can stop the flight if necessary
 - Unexpected conditions or poor performance
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Instructor Responsibilities: Flight Instructor Endorsements

- From FAR Part 61 and Advisory Circular 61-65
 - Instructor must ensure student or pilot meets requirements prior to issuing endorsement
 - “You can never have too much ink”
 - When in doubt if an endorsement is needed, assume so
 - Examples of endorsements:
 - Student solo and cross-country
 - Knowledge tests
 - Practical tests - logbook and Form 8710-1
 - Flight reviews and instrument proficiency checks
 - High performance, high altitude, complex, tailwheel
 - Ground instructor currency
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Instructor Responsibilities: Other training and endorsements

- Flight reviews
 - Not a test or check ride - assesses pilot's knowledge
 - Based on specific objectives agreed by pilot and CFI
 - Standards based on ratings held
 - Instrument proficiency checks
 - Advisory Circular 61-98 and Instrument Rating PTS
 - Aircraft checkouts/transitions
 - CFI must be thoroughly familiar with aircraft & systems
 - Record in logbook exact extent of checkout
 - If pilot performance is insufficient, debrief on problem areas and schedule more instruction
 - Pilot Proficiency Award Program (“Wings”)
 - Advisory Circular 61-91
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Professionalism as an Instructor: Personal Characteristics

- Sincerity
 - Straightforward and honest
 - Facades will only cause student to lose confidence
 - Acceptance of the student
 - As they are, with faults and problems
 - Acceptance encourages learning
 - Personal appearance and habits
 - Important effect on professional image
 - Demeanor
 - Calm, thoughtful, disciplined, but not somber
- (continued)
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Professionalism as an Instructor: Personal Characteristics

(continued)

- Safety practices and accident prevention
 - Emphasis on safety by CFI has long-lasting effect
 - CFI leads by example – “practice what you preach”
 - Proper language
 - Profanity detracts from professional image
 - Define and encourage proper use of aviation terms
 - Self-improvement
 - CFI should seek improvement of own qualifications
 - CFI is the expert many pilots refer questions to
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Professionalism as an Instructor: Minimizing Student Frustrations

- Motivate students
 - more gained from wanting to learn than being forced to
- Keep students informed
 - What is expected of them
 - What they can expect to do and learn
 - Adequate notice of exams, assignments, etc
- Approach students as individuals
 - When teaching a class, get to know the individuals
 - don't limit it to the average case
- Give credit when due
 - When students do well, they expect to be noticed
 - Praise or credit from instructor carries a lot of weight

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Professionalism as an Instructor: Minimizing Student Frustrations

(continued)

- Criticize constructively
 - Important to identify mistakes and failures
 - Describe errors and how to correct them
 - Be consistent
 - Students want to please their instructor
 - Will be frustrated if the same thing is acceptable one day and not the next
 - Admit errors
 - No one expects flight instructors to be perfect
 - Admitting errors wins respect
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Task G: Planning Instructional Activity

- Course of training
- Blocks of learning
- Training syllabus
- Lesson plans



Course of Training

- **Course of training**
 - Complete series of studies leading to attainment of a specific goal
 - **Curriculum**
 - Set of courses in an area of specialization offered by an educational institution
 - **Training syllabus**
 - Step-by-step building block progression of learning
 - **Training course outline**
 - The content of a particular course
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Course of Training: Objectives and Standards

- Before any instruction begins, the instructor must determine objectives and standards
 - Performance-based objectives covered earlier
 - Standards set desired knowledge, behavior or skill
 - A PTS is not an entire course
 - Objective of any pilot training course is for the student to become a safe, efficient, competent pilot
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Blocks of Learning

- After training objectives are established
 - **Blocks of learning** are parts leading to objective
 - Blocks are not isolated – the whole depends on all
 - Extraneous blocks are expensive frills in flying – should be avoided in order to save students money
 - **Foundation blocks** are those others depend on
 - Blocks of learning should be consistent in scope
 - Based on learning which can be measured/evaluated
 - Not a sequence of periods of instruction
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Training Syllabus

- Training syllabus can help keep up with
 - Technology advances
 - Increasingly complicated regulations
 - Syllabus should be an abstract or digest of a course
 - Brief yet comprehensive
 - CFI may use own course or commercial product
 - Order of actual training can be altered as necessary
 - Consider relationships of blocks taken out of order
 - Ground training focuses on cognitive domain
 - Flight training on knowledge and psychomotor
 - Can be used as a checklist of what to teach
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Lesson Plans

- Organized outline of a single instructional period
 - What to do
 - What order to do it
 - Procedure to use in teaching
 - Specific knowledge or skills to be taught
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Lesson Plans: Purpose

- Ensures the instructor has learned the lesson first
 - Assists wise selection of material
 - Minimizes unimportant material
 - Due consideration given to each part of lesson
 - Aid in presenting material in suitable sequence
 - Outline of teaching procedure
 - Relates lesson to its objectives
 - Gives inexperienced instructor confidence
 - Promotes uniformity of instruction
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Lesson Plans:

Characteristics of a Well-planned Lesson

- **Unity** – lesson is a unified segment of instruction
 - **Content** – each lesson contains new material
 - **Scope** – each lesson is reasonable scope
 - **Practicality** – planned for conditions where the training will be conducted
 - **Flexibility** – CFI may adapt/modify as needed
 - **Relation to course of training** – should be taught so that relevance is clear to student
 - **Instructional steps** – use steps of teaching process
 - Preparation, presentation, Application, evaluation
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How to Use a Lesson Plan Properly

- Be familiar with the lesson plan
 - CFI should study the plan and be familiar
 - Use the lesson plan as a guide
 - Avoids getting off track or omitting important details
 - Adapt the lesson plan to the class or student
 - If desired results aren't happening, change the approach
 - Revise the lesson plan periodically
 - Up-to-date for regulations and technology
 - Availability of instructional aids & equipment
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