

Fundamentals of Instructing: Quick Reference

<p>Learning theory</p> <p>Combined approaches of:</p> <ol style="list-style-type: none">1. Behaviorism2. Cognitive approaches	<p>Characteristics of Learning</p> <p><u>PEMA</u></p> <p>Purposeful Experience Multifaceted Active Process</p>
<p>Laws/principles of Learning</p> <p><u>REEPIR</u></p> <p>Readiness Exercise Effect Primacy Intensity Recency</p>	<p>Four levels of learning</p> <p><u>RUAC</u></p> <p>Rote Understanding Application Correlation</p>

How people learn

PIM

**Perception
Insight
Motivation**

Perceptions – a result that occurs when a person gives meaning to sensations

Factors which affect perception:

1. **Physical organism** – perceptual apparatus for sensing world around you
2. **Basic need** – a person's basic need is to maintain and enhance the organized self
3. **Goals and values** – all sensations colored by individual's beliefs and value structures
4. **Self-concept** – a student with a favorable self-image tends to remain receptive to subsequent experiences
5. **Time and opportunity** – both must be available to learn, and student must learn in the right sequence
6. **Element of threat** – narrows the perceptual field and adversely affects perception

Insight – the grouping of perceptions into meaningful wholes

Creating insight is one of the instructor's major responsibilities

Motivation – the dominant force which governs the student's progress and ability to learn

1. Negative motivation – fear, perceived as threat
2. Positive Motivation – desire for personal gain

Learning physical skills

“Learning physical skills involves more than muscles.”

**“Progress follows a pattern.”
(Learning plateau)**

Memory

SR-S-L

**Sensory Register
Short term memory
Long term memory**

<p style="text-align: center;">Transfer of Learning</p> <p style="text-align: center;">Positive transfer Negative Transfer</p>	<p style="text-align: center;">Control of Human Behavior</p> <ul style="list-style-type: none"> - Instructor must recognize student's vast, untapped potential - Identify needs, drives, and desires of students to control behavior
<p style="text-align: center;">Hierarchy of human needs</p> <p style="text-align: center;"><u>PSSSES</u></p> <p style="text-align: center;">Physical Safety Social Egoistic Self-fulfillment</p>	<p style="text-align: center;">Defense mechanisms</p> <p style="text-align: center;"><u>FARR</u></p> <p style="text-align: center;">Flight Aggression Rationalization Resignation</p> <p>More defense mechanisms from H-8083-13:</p> <p style="text-align: center;">Compensation Projection Denial of reality Reaction formation</p>

<p style="text-align: center;">Flight instructor as a practical psychologist</p> <p>Anxiety – a state of mental uneasiness arising from fear</p> <p>Normal reactions to stress:</p> <ul style="list-style-type: none"> - Normal individuals respond rapidly and exactly, within the limits of their experience and training - Thinks rationally, acts rapidly, and is extremely sensitive to all aspects of the surroundings <p>Abnormal reactions to stress:</p> <ul style="list-style-type: none"> - May be random or illogical - Innapropriate reactions – extreme overcooperation, painstaking self-control, inappropiate laughter or singing, very rapid changes in emotions - Severe anger <p>Seriously abnormal students:</p> <ul style="list-style-type: none"> - Flight instructor has responsibility to refrain from certifying such a student - Have another instructor evaluate the student for second opinion - Contact FSDO prior to solo - Contact AME 	<p style="text-align: center;">Basic elements of effective communication</p> <p style="text-align: center;">Source Symbols Receiver</p> <hr/> <p style="text-align: center;">Barriers to effective communication</p> <p style="text-align: center;"><u>COIL</u></p> <ul style="list-style-type: none"> - Confusion between symbol and symbolized object <ul style="list-style-type: none"> - Overuse of abstractions (Generalizations – i.e. 'aircraft' instead of 'airplane') - Interference (Psychological, environmental, physiological interference) - Lack of common experience
<p style="text-align: center;">Developing communication skills</p> <ul style="list-style-type: none"> - Starts with role playing (training to be an instructor, playing role of instructor for training purposes) - Continues with actual instruction - Ongoing additional training 	<p style="text-align: center;">Principles utilized in learning a skill</p> <ul style="list-style-type: none"> Perceptions change as the skill gets easier Give step-by-step examples A desire to learn aids learning Coordination between visual and tactile Students must know how well they're doing Progress plateaus Keep duration of lessons proper length Evaluate, don't criticize Apply/practice the skill
<p style="text-align: center;">How to assist students in remembering what has been learned</p> <p style="text-align: center;"><u>PAFAR</u></p> <p style="text-align: center;">Praise Recall by Association Favorable attitudes Use All senses Repetition</p>	<p style="text-align: center;">Forgetting</p> <p style="text-align: center;"><u>RID</u></p> <p style="text-align: center;">Repression Interference Disuse</p>

<p style="text-align: center;">The Teaching Process</p> <p style="text-align: center;"><u>PPAR</u></p> <p style="text-align: center;">Preparation Presentation Application Review/Evaluation</p> <p style="text-align: center;">Presentation methods:</p> <p>Lecture – formal/informal</p> <p>Cooperative or group learning – use heterogeneous groups</p> <p>Demonstration-performance – we learn by doing</p> <p>Guided discussion</p> <p>Computer-based – test prep, PCATD, FTD, FAA Quizzes</p>	<p style="text-align: center;">Organizing material for a lesson</p> <p style="text-align: center;"><u>IDC</u></p> <p style="text-align: center;">Introduction Development Conclusion</p> <p style="text-align: center;">Introduction step contains:</p> <p style="text-align: center;"><u>AMI</u></p> <p style="text-align: center;">Attention Motivation Insight</p> <p style="text-align: center;">Development step contains:</p> <p style="text-align: center;">Going from past to present Simple to complex Known to unknown Most freq. to least freq. used</p>
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<p>3 most common teaching methods</p> <p style="text-align: center;"><u>LGD</u></p> <p style="text-align: center;">Lecture (Introduce new ideas, summarize, re-emphasize main points)</p> <p style="text-align: center;">Guided Discussion (Relies on students to provide ideas, experiences, opinions)</p> <p style="text-align: center;">Demonstration/performance (We learn by doing)</p>	<p>Guided discussion questions</p> <p style="text-align: center;"><u>ORDRR</u></p> <p style="text-align: center;">Overhead (Directed to entire group)</p> <p style="text-align: center;">Rhetorical (Asked/answered by instructor)</p> <p style="text-align: center;">Direct (To get response from specific person)</p> <p style="text-align: center;">Reverse (Redirect question back to student)</p> <p style="text-align: center;">Relay (Redirect student's question to group)</p>
<p>5 essential phases of the demonstration/performance method</p> <p style="text-align: center;"><u>EDSIE</u></p> <p style="text-align: center;">Explanation Demonstration Student performance Instructor supervision Evaluation</p>	<p>Programmed instruction</p> <p>- Student actively responds to each instructional step and receives immediate feedback on their responses</p>
<p>Integrated flight instruction</p> <p>-Students taught to fly maneuvers with both inside (instrument) and outside (visual) references from the first time the maneuver is introduced.</p>	<p>Professionalism</p> <p>Exists when service is performed Requires training and preparation Based on study and research Intellectual requirement: logic/reason Good decision-making Code of ethics</p>

<p style="text-align: center;">Domains of learning</p> <p style="text-align: center;"><u>CAP</u></p> <p style="text-align: center;">Cognitive domain (Knowledge)</p> <p style="text-align: center;">Affective domain (Attitudes, beliefs, values)</p> <p style="text-align: center;">Psychomotor domain (Physical skills)</p>	<p>Lesson plan always contains:</p> <ol style="list-style-type: none"> 1. Lesson objective 2. Elements 3. Schedule 4. Equipment 5. Instructor's actions 6. Student's actions 7. Completion standards
<p style="text-align: center;">Basic steps in planning a course of learning:</p> <ol style="list-style-type: none"> 1. Determine standards/objectives 2. Develop blocks of learning 3. Identification of blocks of learning 	