

## Fundamentals of Instructing: Quick Reference

<p>Learning theory</p> <p>Combined approaches of:</p> <ol style="list-style-type: none"><li>1. Behaviorism</li><li>2. Cognitive approaches</li></ol>	<p>Characteristics of Learning</p> <p><b><u>PEMA</u></b></p> <p>Purposeful Experience Multifaceted Active Process</p>
<p>Laws/principles of Learning</p> <p><b><u>REEPIR</u></b></p> <p>Readiness Exercise Effect Primacy Intensity Recency</p>	<p>Four levels of learning</p> <p><b><u>RUAC</u></b></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

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**Insight** – the grouping of perceptions into meaningful wholes

Creating insight is one of the instructor's major responsibilities

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



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

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