

Fundamentals of Instruction
Oral Guide
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Task A: Human Behavior & Effective Communication

Definitions of Human Behavior

- Product of Factors that cause people to act in different ways.

Human Needs & Motivation (PESSS)

- **Physical**
- **Safety**
- **Social**
- **Egoistic**
- **Self-fulfillment**

Motivation- reason one acts or behaves in a certain way since it comes from a persons goals. Ongoing behavior determines everyday actions.

Defense Mechanisms

Biological/Physiological response to protect or preserve the student. When anxious, mind tries to solve it and if it can't it will relate to defense mechanism unconsciously, distorting or falsifying reality.

- **Repression**- inhibits ability based on previous, repressed bad experience.
- **Denial**- refusal to accept reality.
- **Compensation**- balancing weak area with strong area.
- **Projection**- blaming someone else for own mistakes.
- **Rationalization**- not accepting real reasons for behavior.
- **Reaction formation**- believing the opposite happened from what did
- **Fantasy**- escaping from reality (daydreaming)
- **Displacement**- moving emotions away from threatening issue

Student Emotional Reactions

Anxiety: worry, nervousness, unease about something that is going to happen.

Reactions: hesitant, impulse to do something.

Stress Normal Reactions: rapid/exact response.

Stress Abnormal Reactions: Over-cooperation, painstaking self-control, laughter or singing, rapid changes in emotions.

Basic Elements of Communication (SSR)

- Source
- Symbols
- Receiver

Barriers of Effective Communication (LOCI)

- Lack of common experience
- Confusion between symbol & symbolized object.
- Overuse of Abstractions
- Interference

Developing Communication Skills (RILI)

- **Role-playing**
- **Instructional Communication**
- **Listening/Questioning**
- **Instructional Enhancement**

Task B: The Learning Process

Learning Theory

Definition: change of behavior as a result of an experience.

- Behaviorism: response to stimuli.
- Cognitive: what's going on inside the mind.

Perceptions & Insights

Perceptions: basis of all learning and come from 1 or more of 5 senses.

Factors Affecting Perceptions:

- Physical
- Goals + Values
- Self-Concept
- Time + Opportunity
- Element of Threat

Insights are a grouping of perceptions into meaningful wholes.

Acquiring Knowledge

- Memorization
- Understanding
- Application

Laws of Learning (REEPIR)

Readiness

Exercise

Effect

Primacy

Intensity

Recency

Domains of Learning (CAP)

- **C**ognitive (thinking)
 - Rote
 - Understanding
 - Application
 - Correlation
- **A**ffective (feeling)
- **P** psychomotor (doing)

Characteristics of Learning (PEAM)

- **P**urposeful- clear goal
- **E**xperience- learn through them
- **A**ctive Process- react & respond
- **M**ultifaceted- different methods

Acquiring Skill Knowledge (CAA)

- **C**ognitive
- **A**ssociative
- **A**utomatic Response stage

Types of Practice

- Deliberate
- Blocked
- Random

Scenario-based Training

- Practicing Realistic Scenarios
- Clear objectives, tailored to student needs, capitalize nuisances of local environment.

Errors

- Slip: do one thing, inadvertently does something else.
- Mistake: unwittingly plans and does wrong thing.

Reducing Errors: Learning/Practicing; Taking Time; Checking; Reminders; Routines; Awareness.

Memory & Forgetting

- Sensory Register
- Short Term
- Long Term

Forgetting (RIDS):

- **R**epression
- **I**nterference
- **D**isuse
- **S**uppression

Retention of Learning

- Praise
- Recall
- Favorable
- Learning
- Meaningful

Transfer of Learning

- Positive- Past Knowledge supports/assists.
- Negative- Past Knowledge confuses/detracts

Task C: The Teaching Process

Preparation of a lesson

1. Objectives
2. Goals
3. Homework?
4. Equipment
5. Syllabus

Characteristics of a Dual lesson Plan:

- Unity
- Content
- Scope
- Practicality
- Flexibility
- Relation
- Steps

Organization of Material

Introduction

- Attention
- Motivation
- Overview

Development

- Past to Present etc.

Conclusion

- Review
- Summary

Training Delivery Methods

Lecture	
Advantages	Disadvantages
<ul style="list-style-type: none"> • New Concepts • Formal/Informal • Briefing 	<ul style="list-style-type: none"> • Not good evaluation • No feedback
Guided Discussion	
Advantages	<i>Good Question</i>
<ul style="list-style-type: none"> • Use of Questions • Key Points • Conclusion 	<ul style="list-style-type: none"> • Purpose • Meaning • Single Idea • Stimulates • Requires Answers • Relates
Demonstration/Performance	
Advantages	Disadvantages
<ul style="list-style-type: none"> • Explain/Demonstrate/Perform • Supervise/Evaluate 	<ul style="list-style-type: none"> • Required Early Corrections • Primacy

- Drill/Practice Method- Retain skill (Blocked Practice)
- Computer-assisted learning method- Own pace.

Problem Based Learning

- Environment, which confronts real problem scenarios to students.
 - Promoted through repetition
 - Learning continuous

Instructional Aids & Training Technologies

- Objective
- Simple/Compatible
- Encourage participation
- Meaningful

Task D: Assessment & Critique

Purpose of Assessment

- Deficiencies
- Feedback
- ADM

Characteristics of effective assessment (OFACCOTS)

Objective

Flexible

Acceptable

Comprehensive

Constructive

Organized

Thoughtful

Specific

- Traditional: Supply/Selection Type
 - Reliability
 - Validity
 - Usability
 - Objectivity
 - Comprehensiveness
 - Discrimination
- Authentic: Real World/ Understanding
 - Performance Testing- PTS
 - Collaborative Assessment- Replay/Reconstruct/ Reflect/ Redirect
- Oral: Reveals effectiveness of instruction
 - Questions Should:
 - Apply
 - Brief
 - Adapted
 - One concept
 - Challenge
 - Avoid:
 - Puzzle
 - Oversize
 - Bewilderment
 - Trick Questions

Critique

Instructor/student Critique:

- Group Discussion- Structured

Student-led Critique:

- Student leads the assessment
- Not efficient if inexperienced

Small-Group:

- Divided into small groups
- Reports analyzed

Student-Student Critique

Self Critique

Written Critique

Thorough/ Refer afterwards/ Personal Basis

Task E: Instructor Responsibilities & Professionalism

Aviation Instructor Responsibilities

Helping students learn:

- Enjoyable/Pleasurable
- Use standards

Providing Adequate Instruction:

- Genuine Interest
- Ensure adequate instruction is provided

Standards of Performance:

- Instructor responsible for setting standards
- PTS Standards (Testing, not Teaching Document)

Minimizing:

- Motivate
- Informed
- Individuals
- Praise- Public
- Constructive Criticism- Private
- Consistency
- Admit Errors

Flight Instructor Responsibilities

- Physiological
 - No Sick Students
- Ensuring Student Ability
 - Evaluate
 - Inform
 - Safety
 - Confidence

Professionalism

- Sincerity
- Acceptance of the Student
- Personal Appearance and Habits
- Safety
- Demeanor- + Attitude
- Proper Language

Evaluation of Student Ability

- Demonstrated Ability
- Keep Student Informed
- Correct Student Errors

Aviation Instructors & Exams

- Instructor shall provide required training and is responsible for deficiencies.
- Responsible for safety regarding endorsing a student.
- Records shall be kept for 3 years with Type, Date, Name, Aircraft. Also Practical Test results.
- Instructor responsible for endorsing flight review and should be tailored to fit the pilots highest achieved certificate level.
- Instructors can perform aircraft checkouts.

Professional Development

- WINGS Program
- Educational Institutions
- Commercial Organizations
- Industry Organizations

Task F: Techniques of Flight Instruction

Obstacles to Learning During Flight Instruction

- Unfairness
- Impatience
- Worry/Lack of Interest
- Physical Discomfort/Illness
- Apathy
- Anxiety

Demonstration-performance training delivery

Instructor Explanation; Instructor Demonstration; Student Performance; Instructor Supervision; Instructor Evaluation

Positive Exchange of Controls

You have Control- I have Control- You have Control

Sterile Cockpit

- Refrain from nonessential activities
- Ground/Flight <10,000' (Critical)

Use of Distractions

- Secondary Tasks
- Intentional Distractions
- Attention Division

Integrated Flight Instruction

- Maneuvers by Visual & Instruments
- Instrument Cross-Check/Interpretation

Assessment of Piloting Ability

- What Students learn
- How Students Learn/ How well Students Learn
- Keep Students Informed on their progression

Aeronautical Decision Making

- Defining the Problem
- Choosing a course of Action
- Implementing the decision and evaluating the outcome

Hazardous Attitude	Antidote
Anti-Authority (Don't tell me)	Follow the Rules
Impulsivity (Do it quickly)	Not so fast, think first
Invulnerability (Won't happen to me)	It could happen to me
Macho (I'll show them)	Taking chances is foolish
Resignation (What's the use)	I'm not helpless

Task G: Risk Management

Principles of Risk Management

- Accept no unnecessary risk
- Make risk decisions at the appropriate level
- Accept risk when benefits outweigh the costs
- Integrate risk management into planning at all levels

Risk Management Process (DECIDE)

Detect

Estimate

Choose

Identify

Do

Evaluate

Level of the risk

- Severity
- Probability

Assessing risk

- Likelihood of an event
- Severity of an event

Mitigating Risk

After level of risk has been determined, actions can be taken to reduce risk.

IMSAFE

Illness

Medication

Stress

Alcohol

Fatigue

External Pressures

PAVE

Pilot

Aircraft

enViroment

External Pressures

5P

Plan

Plane

Pilot

Pax

Programming