

Lesson 3

Teaching Methods

Content

- Teaching Methods
- The Learning Environment
- Learning Plateaus
- Retention
- Defense Mechanisms
- Lesson Plans
- Instructional Aids

Teaching Methods

- Lecture
- Demonstration / Performance
- Trial & Error
- Rote Learning
- Self Teaching
- Insight
- Guided Discussion-next lesson on *Questions*

Lecture

- Used to introduce a new subject, possible large audience.
- Effective present copious information short time.
- Identify desired outcome, select lecture type
 - Illustrated talk – Use visual aids.
 - Briefing – Present facts without elaboration.
 - Formal Speech – Inform, persuade, entertain or garner votes.
 - Teaching Lecture – help the student reach a desired change in behavior.

Demonstration- Performance

- Phases:
 - **Explanation and Demonstration** - explain skill and demonstrate how performed. Explanation and demonstration may be provided separately or together
 - **Student Performance and Instructor Supervision** – Student practices new skills in small segments, instructor eliminates major mistakes. Student continues practice, instructor corrects minor mistakes.
 - **Evaluation** – Instructor evaluates, gives feedback, constructive steps. Instructor only intervenes for safety.

Trial & Error

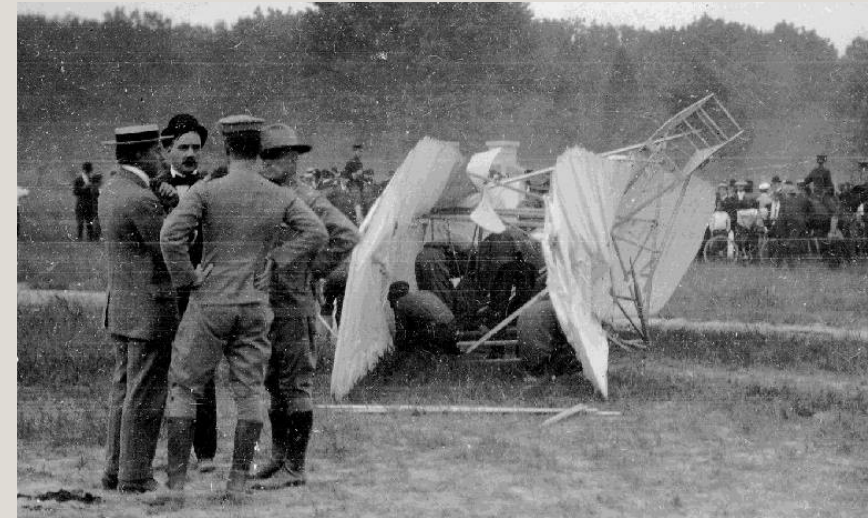
- Student attempts something.
- Fail? Try again. Modify. Try Again..until success/give up/death
- Slow method of learning alone, some learning does fall under this category.
- Instructor can give direction for trials help student concentrate, learn faster.
- Imagine looking for a house in a new city with no direction. Drive each street and neighborhood. No recommendations, direction. Slow process.
- Aviation? Would likely die using trial & error, as first pioneers did

Rote Learning

- Memorization technique, Communist/Totalitarian.
- Cold memory technique, no thinking involved.
- Imagine learning a rule but not really understanding it.
- Can complete exercise but may not have understanding of why.
- Initial memorization of checklist emergency items.
 - Student can often do it but not understand why they are doing it.

Self Teaching

- Read background material.
 - Essential for theory, ground school
 - Difficult for practical work without guidance
 - Imagine: attempt a stall and recovery self teaching.
 - How did that go, historically?
- > self teaching perfectly acceptable for theory of stall.



INSIGHT

- Student has learned the material
- Sufficient knowledge to **understand** what is happening
- Able to **tie facts together** and apply them to future problems
- Instructor passes more knowledge
- retained longer when student has *Insight*

Developmental teaching/ Guided discussion

- Learning by asking questions.
- **reasoning with students to guide thought.**
- Use students' **background knowledge**, ask questions which lead students
- Requires appropriate questions
- Next instructor lesson all about *Questions!*

The learning environment

- learning achieved if the recipient is relaxed and willing.
- Try teaching someone who does not want to learn!
- Instructors must cultivate an inviting and relaxed learning environment.
- If learning seen as drudgery, outcome diminished.
- Flight lessons should be pleasant, memorable..not miserable, frightening



Learning Plateaus

- Skills best taught with clear step-by-step demonstration.
- Performance increases rapidly at first.
- Levels off for some time before starting to increase again.
- Instructor identifies factors holding up learning.
- Some learning plateaus caused by overload
- Student needs time to process information.

Retention

- Newly learned skill takes practice to retain
- Re-enforce skills in students mind, repeat several times.
- Leave maneuver for a while then come back to it later.
- 48 hours knowledge level can drop to 70%
- Learning curve graph FIG
- Reviews at 7 days and 28 days, student maintains 70% knowledge of skill.

Defense Mechanisms

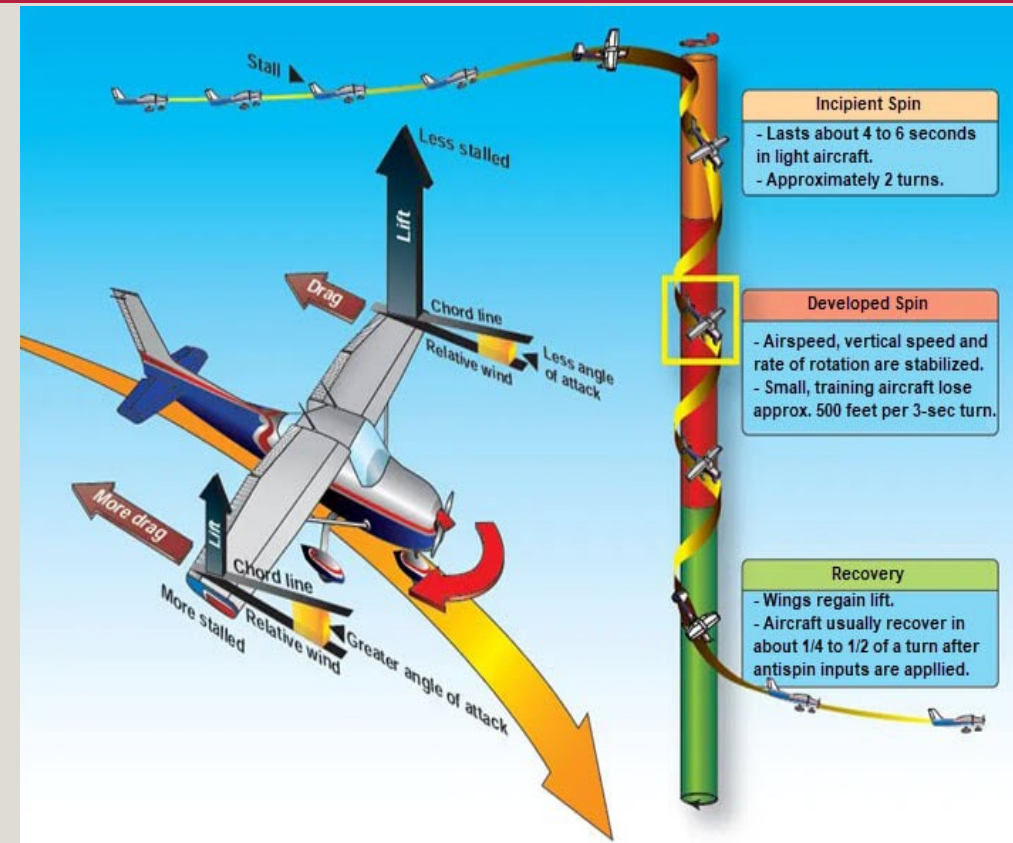
- Distinct behavior used to soften the feeling of failure:
 - Rationalism
 - Flight
 - Aggression
 - Resignation
 - Projection – Transferring Blame
- Instructor identifies and corrects why the student is defensive

Lesson Plans

- A good introduction sets the stage for learning.
 - Attention Grabbing Opening!
 - Motivation
 - Overview
- Body of Lesson
 - Organized logical
 - Past to present, simple to complex, known to unknown, frequently used to infrequent.
- Conclusion
 - Retrace most important elements of lesson.
 - Review major points.

Instructional Aids

- Secure and hold attention of students.
- A picture paints 1000 words.
- clearly establish objective
- aids can distract



Teaching: Summary

Teaching Methods

- Developmental Teaching / Guided Discussion
- Lecture
- Demonstration / Performance
- Trial & Error
- Rote Learning
- Self Teaching

For Next Time:

- Next lesson Questions-Developmental Teaching

Purpose of questioning.

Building effective questions.

How to use questions and handle student questions.

Why questioning is such a useful tool.

Developmental Teaching – guiding learning by questions

- Please read FIG (Flight Instructor Guide) -Questions section