

Scenario-based Training Toolbox

Introduction

Scenario-based training adds important skills to the classical “stick-and-rudder” precise aircraft control training.

Controlling the aircraft precisely and within practical test standards has worked well over the last 60 years. Because of this time-proven method of precise “stick and rudder” control, most accidents are caused by pilot decision making error. Pilots simply make the wrong decisions with things going from bad to worse.

It has been found that if real-life flight training is added to precise “stick and rudder” control, then accidents decrease.

Normally, your first period of flying after you obtain your pilot certificate as pilot in command is when you gain real-life flight experience. This is a critical period when more accidents occur. Scenario-based training simulates hazards and provides simplified tools to make the best decision when real-life flight hazards arise.

Scenario-based training creates real life scenarios to evaluate unexpected situations, identify hazards, and make the best decision based on the situation. This situational awareness and smart decision-making is the basis of the FAA phrase “Aeronautical Decision Making (ADM).”

Scenario-based training adds more interest and adventure to conventional “how-to fly” courses because you are actually training like you fly.

Blending Aeronautical Decision Making (ADM) into Modern Scenario-based Training (SBT)

ADM FAA definition -- A systematic approach to the mental process to constantly determine the best course of action in response to a given set of circumstances. This definition is the objective of scenario-based training. Today, there are many ADM models to use for the decision making process.

The **DECIDE** model which is covered in detail in the FAA “Pilots Handbook of Aeronautical Knowledge” chapter 17, time proven and best known decision-making process in aviation:

- Detect (the problem)
- Estimate (the need to react) or Evaluate the situation
- Choose (a course of action)
- Identify (Solutions)
- Do (the necessary Actions)
- Evaluate (the Effect of the Action)

A newer FAA three step decision-making process version has recently been introduced as a new decision-making process.

3P model for decision making: Perceive, Process, Perform risk management

1. Perceive and identify hazards (define problem objectively, maintain situational awareness)

2. Process hazards:

Evaluate hazards and assess degree of risk from alternate actions.

Maintain situational awareness.

3. Perform risk management (evaluate and choose best course of action)

Consider in the decision-making process to help make the best decision:

- Hazardous attitudes
- Stress
- Resources internal and external
- Operational pitfalls

Determine if risks can be eliminated or transferred to someone else. Accept risks if benefits outweigh costs/outcome. Once action is taken, what can be done to mitigate risks? Reprioritize workload management before performing action.

It should be noted that either the DECIDE or 3P decision-making process checklist is acceptable to use.