

Collaborative Strategy Scenario

Collaborative Strategy Scenario No. 3

Strategy: Advanced Organizer

Content: Bernoulli's operating principles of the venturi tube.

Title: The Venturi Tube

Time Required: 30 Minutes

Number of Participants: 10-15

Target Audience: Aircraft A&P mechanics

Goal of Activity: To prepare students of an aviation maintenance school who are about to embark on a course which involves carburetor maintenance and repair.

Learning Outcomes:

Gagne's Taxonomy - Verbal Information

Bloom's Taxonomy - Knowledge, Comprehension, and Application

Learner Characteristics: The learners are students attending an aircraft maintenance school. They will primarily be males from 18 to 55 years old. These students are mostly high school graduates with little to no college. Approximately half of the students are already trained in the field. The remaining population will be new to the field and seeking their certification as an A&P aircraft mechanic.

Entry Skills: The learners are characteristically mechanically inclined and highly motivated to learn this instruction.

Setting: Classroom

Media: Paper handout and computer with presentation hardware and Powerpoint software.

Process:

1. The instructor will gain audience attention with a handout that illustrates the operating principle of the venturi. It will consist of a somewhat humorous picture of an old-fashioned perfume atomizer.
2. An informal discussion will ensue as the instructor prompts the students for prior knowledge about atmospheric pressure and its relation to this atomizer with venturi.

3. The instructor will then open a Powerpoint presentation that further exemplifies the function of the venturi and subsequent application to the carburetor.

Strategy Assessment: The learners will be given a test on carburetor operation which will include questions about the operating principles of the venturi. This will determine if the advanced organizer was beneficial for the melding of prior knowledge with need-to-know knowledge.

Authors:

The Leopards Group: Darryl Hollins, Scotia Thornton, Stephanie Harrison, and William Beam

Reference: West, C.K., Farmer, J.A., & Wolff, P.M. (1991). Instructional Design: Implications from Cognitive Science, Boston: Allyn and Bacon