

1. SCOPE

The model guidelines define performance-based technician training. Essential training program elements supported by a systematic process for development are also identified.

1.1 Purpose

This set of guidelines is to be used as a model for the preparation of a training program for technicians. A training program can be developed internally or by external suppliers. In either case the elements identified in this model should be used in the development of a training program.

1.2 Performance-Based Training Defined

Performance is defined in terms of technician accuracy and completeness in diagnosis and correction of malfunctions.

Productivity is defined in terms of the consistency of the technician's work and the timeliness of service.

Profitability is defined in terms of corporate, dealership service facility, and technician profits.

As such, performance-based technician training:

- a. Focuses instruction on the improvement of the performance and productivity of the technician
- b. Defines course goals, measured by objectives based upon job tasks required in the servicing of a vehicle
- c. Is need-to-know knowledge supported by skills required to perform the job tasks
- d. Utilizes a process of inquiry, analysis and decision making that accommodates adult learning styles

1.3 Sponsoring Organization Needs

Performance-based technician training programs target the needs of the organization sponsoring the training program. Automotive service organizational needs include:

- a. A reduction in the time required by a technician to effect a repair
- b. An increase in the accuracy of the technician's work
- c. A reduction or elimination of come-backs
- d. A decrease in the number of incorrect parts used in a repair
- e. A reduction in technician turnover
- f. An improvement in shop safety and a reduction in workmen's compensation claims
- g. A minimum loss of technician time to participate in training

2. REFERENCES

2.1 Related Publications

The following publications are provided for information purposes only and are not a required part of this document.

2.1.1 SAE Publications

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

- SAE Paper #870567 Training Tomorrow's Technicians Using Human-Performance Technology, Charles O. Probst, Cybern Training Systems
- SAE Paper #910396 Determining Value of Technical Training by Statistical Analysis, Bill B. Burris, Jaguar Cars, Inc.
- SAE Paper #910397 Making Performance Pay Through Training, Gary J. Corrigan, Dana Corporation
- SAE Paper #920795 Who Will Fix Our Vehicles? The Need for Performance Based Technician Training Programs, J. Kenneth Cerny, DAS
- SAE Paper #920851 Performance Based Technician Training: A National Program, J. Kenneth Cerny, DAS and Donald L. Levans, Sears Roebuck and Co.
- SAE Paper #920856 Designing and Measuring Training for Performance, Richard Donnelson, Mitsubishi Motor Sales of America, Inc.
- SAE Paper #940780 Technician Payoffs: Getting Results Through Performance Audits, Gary J. Corrigan, Dana Corp. and Victor Tsimpinos, BP Oil
- SAE Paper #940781 How Do We Know What They Can Do as a Result of the Training? Charles O. Probst, Cybern Training Systems, Inc.
- SAE/SP-88/761 The Automotive Service Industry in the 1990's

2.1.2 Other Publications

Canadian Automotive Repair and Service Council, National Core Curriculum for Automotive Service Technician Apprenticeship Training, 1990

3. MISSION AND CORPORATE GOAL

A training program starts with a mission statement. The mission statement expresses in very general terms the sponsoring organization's interest in providing technicians with the skills and knowledge needed to perform their jobs.

Corporate training goals are based on the mission and further refine what the technician will know and be able to do at the completion of a training program.

Training objectives focus on the desired measurable outcomes of a specific training program.

3.1 Needs Analysis

Needs analysis is the instructional design phase during which the situation identified by the mission statement and corporate goal is examined. Effective needs analysis is performed carefully and in great detail, objectively and methodically. (See Figure 1.)

It is the most critical element because it is the foundation upon which all the other phases are based. It identifies the problem and determines the most appropriate solution. It is important to recognize that the most effective solution may not always be training.

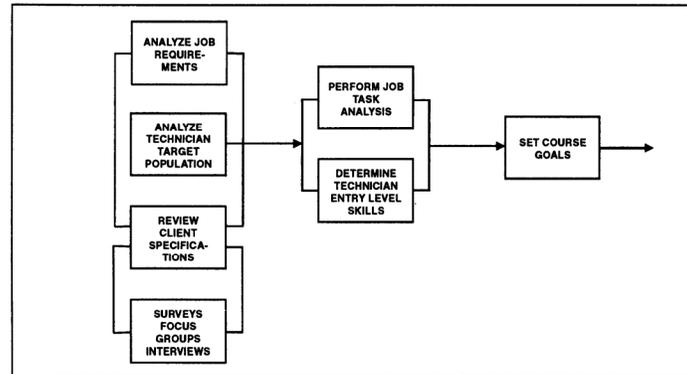


FIGURE 1 - NEEDS ANALYSIS

3.2 Design Phase

The design phase creates the overall framework for solving the problem identified through needs analysis. This crucial phase stimulates decisions that impact the development, implementation and delivery of the training program. (See Figure 2.)

Design decisions are based on corporate mission, goals, and resources with regard to the most efficient and appropriate methods for imparting skills and knowledge and resolving performance problems.

The design phase can either expand or refine the solution determined during the preceding phase.

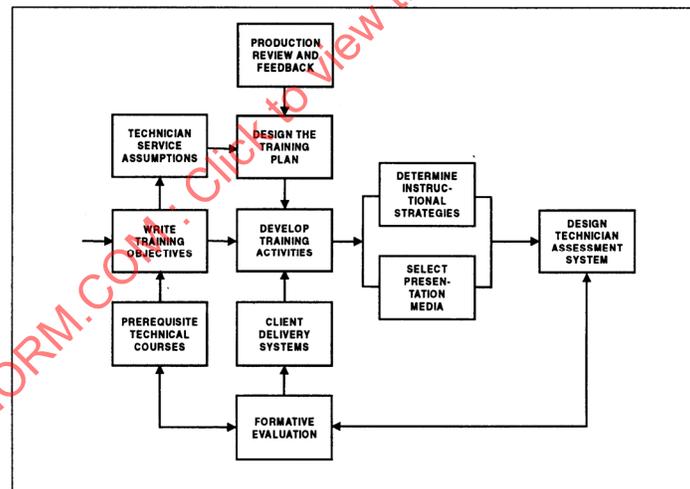


FIGURE 2 - DESIGN

3.3 Development Phase

The development phase "fleshes out" the framework created during the design phase by tending to the details of writing the training program. It focuses on sequenced performance objectives, instructional materials and post-training support materials. (See Figure 3.)

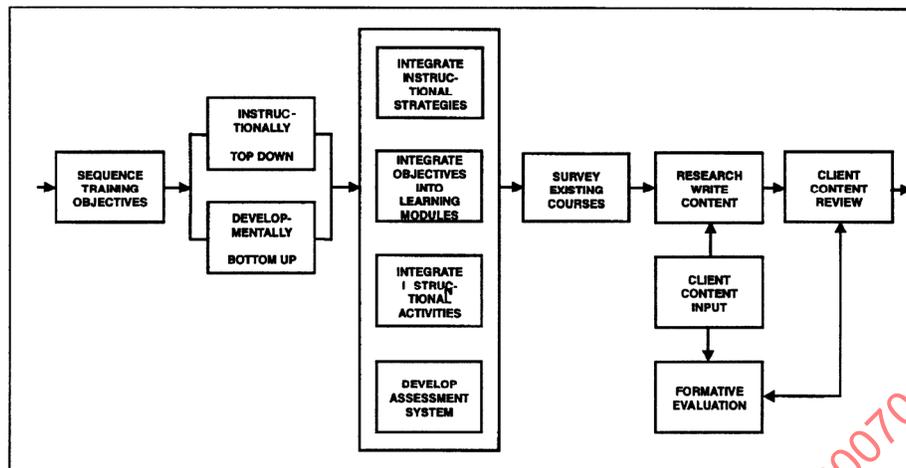


FIGURE 3 - DEVELOPMENT

3.4 Implementation Phase

Three distinct activities take place during the implementation phase:

- a. Pilot materials are produced (see Figure 4)

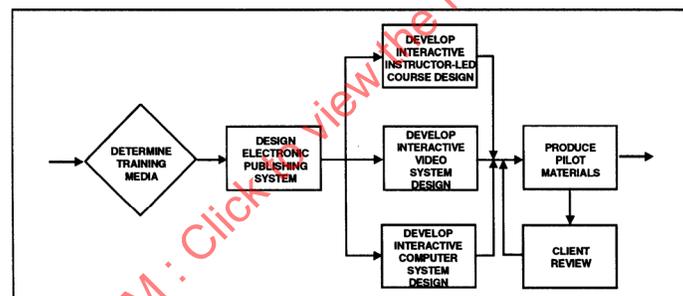


FIGURE 4 - PRODUCTION OF PILOT MATERIALS

- b. Pilot testing takes place (see Figure 5)

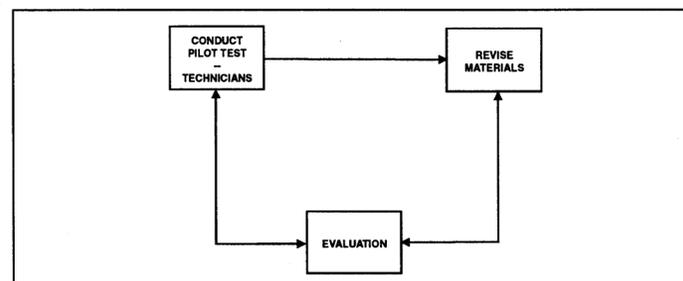


FIGURE 5 - PILOT TEST

The pilot test is actually a training session conducted with members of the target population using pilot materials. The goal is to verify appropriate instructional strategies, course content, and time requirements.