

Training

Definition:

A planned effort by an organization to facilitate the learning of job-related behavior or “competencies” on the part of its employees.

(Noe, 1999; Wexley, 1984)

Basic Framework

Needs Assessment



Training Objectives



**Design, Develop, & Conduct
Training**



**Evaluate Training
Effectiveness**

Needs Assessment

- Organizational Analysis
- Task Analysis
- Person Analysis
- (Demographic Analysis)

(McGehee & Thayer, 1961)

Organization Analysis – “What is the context?”

- ✓ Strategic direction (e.g., long- & short-term goals, new products)
- ✓ Financial, human, & time resources
- ✓ External environment (e.g., legislation, new technology, customer preferences)
- ✓ Organizational climate/culture
- ✓ Age of current job incumbents

Task Analysis

- “What is needed to effectively perform the job?”
- Often tied to work analysis or job description

Task Analysis Components - Examples

- ✓ Duties, tasks, and behaviors
- ✓ Knowledge, skills, abilities, and other personal characteristics
- ✓ Beliefs, values, or attitudes
- ✓ “Performance standards”

Person Analysis – “Who needs training?”

- New jobs
- Performance deficiencies
- Use of new technology

■ Person Analysis – Measurement Examples

Ratings

By supervisors, peers, self, subordinates, customers

“Tests”

Checks or hurdles from industry or organization

Errors or Deficiencies

E.g., scrap, defect, and return rates, time efficiency

Person Analysis – Other Issues

- ✓ Readiness for training (person & work environment)
- ✓ Motivation to learn/transfer (prior, during, & after training)

Demographic Analysis

- What is the representation of group members being trained to the (area) population?
- What are the ages of personnel?
- What are the typical retirement ages?
- What is the turnover rate in the job?

Needs Assessment: Is training likely to have an impact?

1. What is the performance discrepancy?
2. Is it important?
3. Is it the result of a skill or motivational deficiency?
4. How widespread is the problem?
5. Can we do anything about it?

Basic Framework II

Needs Assessment



Training Objectives

Training Objectives

“What should the person or group be able to do following training?”

Objectives should include:

- ✓ An observable action
- ✓ A measurable criterion
- ✓ Conditions of performance (context)

Format for Writing Training Objectives

1. Starting clause:

“After training, the person will be able to...”

2. Observable action:

Includes action verb and object of action

Format for Writing Training Objectives

3. Measurable criterion:

How will we know if it is OK? How many?

4. Conditions of performance:

What is given? What is the context?

Training Objectives – Examples

- “After training, the worker will be able to add 6% sales tax without error on all sales by striking the proper keys on a computerized register.”
- After training, the worker will be able to ask open questions which cannot be answered “yes” or “no” whenever probing for feelings.”

Basic Framework III



Training Design: General Principles

1. At least a moderate amount of motivation via:
 - “Why should I learn this?”
 - “How does it relate to my experience?”
 - Choice
 - Goal setting
 - Accountability

Training Design: General Principles

2. Learn in one long session (massed) vs. distributed sessions? (depends)
3. Learn as a whole vs. in parts (depends)
4. Practice, practice, practice!
5. Feedback is a must! (why, what or how, not just “wrong”)

Training Design: General Principles

6. Opportunities to observe & interact with others
7. New behavior must be reinforced & supported
8. Sequence learning from simple to complex

**And now ...
a few
techniques!**

Training Techniques: Lectures!

Things to do:

- Gain attention & establish credibility
- Present objectives
- Use a logical sequence
- Link content with familiar examples

(adapted from Silber & Stelnicki, 1987)

Lectures

More things to do:

- Provide clear illustrations
- Review important point(s) at end
- Provide memory aid(s)
- **KEEP IT SIMPLE!**

(adapted from Silber & Stelnicki, 1987)

Lectures

Things to avoid:

- Talking while writing
- Complex sentences
- Technical jargon
- Reading!!!
- Monotone voice
- Irrelevant examples (guilty!)
- Distracting gestures

Techniques: Behavior Modeling Training

Typical Steps

- Meet as group at off-site location
- Trainer introduces topic
- Trainer provides Behavioral Learning Points – what to focus on (usually 3 – 7 key points)
- Trainees view videotape of “Model” showing desired behaviors

Techniques: Behavior Modeling Training

Typical Steps

- Trainer reintroduces learning points and group discusses model's behavior
- Group members “role play” parts in a simulation to practice learning points
- Role players and then group and trainer provide feedback on behaviors in relation to the learning points

Techniques: Behavior Modeling Training

Typical Steps

If possible...

- Group members try out new behavior in normal work setting
- Report results back to group and discuss what did and did not work and why

Techniques: Behavior Modeling Training

Outcomes

- Relatively effective for training on interpersonal skills
- Use of behavioral learning points (“Rules”) helps generalization across situations
- Built-in concern for transfer of training, if carry out last two steps

Training Techniques: Simulation Methods

- Try to reproduce important characteristics of “real” situation
- Controlled nature helps decrease effects of error
- Provides opportunities for repetitive practice of rarely used behaviors and skills

Simulation Methods

Advantages

- Safety
- Do not damage (expensive) equipment while learning
- Do not slow down production
- Decreased embarrassment from errors
- Compress time
- Tend to be highly involving and motivating

Simulation Methods

Disadvantages

- Concerns about physical AND psychological fidelity
- Identifying “key characteristics” of real environment to simulate
- Costs
- Gaming aspects - focus on “winning the game” versus learning – the “Kobayashi Maru” syndrome
- Creative solutions can cause problems

Basic Framework IV



Evaluation Design Basics

Trying to answer at least two questions:

1. Did a change occur?
2. To what extent can we infer that the training caused the change?

Threats to Internal Validity of Research Studies

- History
- Maturation
- Selection
- Mortality
- Effect of Measurement

(Campbell & Stanley, 1963)

Common Training Evaluation Designs

Symbolically:



T A

Where:



T = Training



A = Assessment

Due to multiple threats to internal validity, does not allow strong inferences regarding causality

(Campbell & Stanley, 1963)

Common Training Evaluation Designs

SINGLE-GROUP PRETEST – POSTTEST DESIGN

Symbolically:

➤ **A T A**

Where:

➤ **T = Training**

➤ **A = Assessment**

Due to multiple threats to internal validity, does not allow strong inferences regarding causality

(Campbell & Stanley, 1963)

Common Training Evaluation Designs

PRETEST - POSTTEST WITH CONTROL-GROUP DESIGN

Symbolically:

➤	A	T	A	(Treatment)
	A		A	(Controls)

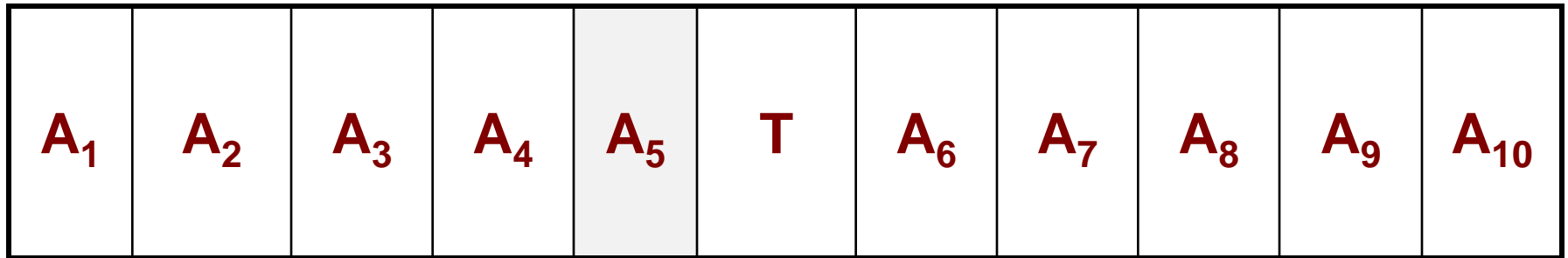
Where:

- T = Training
- A = Assessment

(Campbell & Stanley, 1963)

Common Training Evaluation Designs

QUASI-EXPERIMENTAL TIME-SERIES DESIGN



(Campbell & Stanley, 1963)

Training Evaluation: Levels of Criteria

- Reactions
- Learning
- Behavior
- Results

(Kirkpatrick, 1987)

Training Evaluation: Transfer of Training

Examine transfer of training in relation to:

- ✓ Generalization of material learned in training to the job context
- ✓ Maintenance of learned material over a period of time on the job

(Baldwin & Ford, 1988)

Training on the Web

Many, many programs are being moved to some form of web training. It can cost more than a lecture to develop, but can be delivered over and over again.

- Why do it
- Format
- Security

Why do it?

- As an alternative to face-to-face classes
- Reach trainees in variety of places
- Provides archive or backup for face-to-face interactions

Format

- One-way (Slides/text with minimal interaction)
- Interactive (Slides/questions/text with interaction required)
- Video of live interactions
- “Multimodal”

Security

- Assume all sites can/will be hacked
- Run some version of protection on site and users' computers
- Randomly check for various forms of attack (e.g., denial of service, sleeper attacks, Trojan horses, etc.)