**Human Resources Training and Individual Development**

February 11: Training Evaluation

## Objectives

- Explain why evaluation is important
- Identify & choose outcomes to evaluate
- Identify how to measure outcomes
- Discuss validity threats and experimental designs
- Discuss issues to consider in evaluation design to improve the ability to make inferences

## What is Training Evaluation?

Assessing the effectiveness of the training program in terms of the benefits to the trainees and the company

- process of collecting outcomes to determine if the training program was effective
- from whom, what, when, and how information should be collected

## Importance of Evaluation

- Why evaluate training?

## Purpose of Evaluation

- Summative Evaluation: Collecting data to assess learning & other criteria
- Formative Evaluation: collecting data to assess how to make the program better

## What Should Be Evaluated?

- Cognitive Learning
- Skills Learning
- Affect
- 'Objective' results
- ROI

## How Do You Measure Outcomes?

- Cognitive Learning
- Skills
- Affect
- Results
- ROI

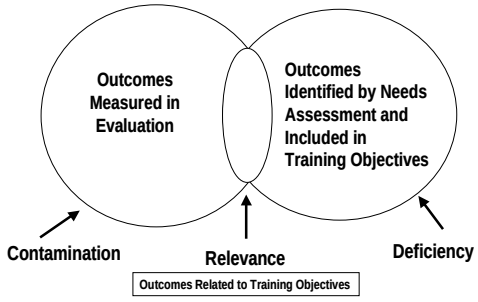
## Criteria for Evaluation

- Criteria should be based on training objectives
  - all objectives should be evaluated
- Criteria should be relevant (uncontaminated, not deficient), reliable, practical, and they should discriminate
- Criteria should include reactions, learning (verbal, cognitive, attitudes), results & ROI

## Outcomes: Relevance, Contamination and Deficiency

- **Criteria relevance**
- **Criterion contamination**
- **Criterion deficiency**

## Criterion deficiency, relevance, and contamination




## Outcomes: Reliability, Discrimination and Practicality

- **Reliability**
- **Discrimination**
- **Practicality**

## Evaluation Design: Purpose

- What is the objective of the training program?
- What do you want to accomplish with the evaluation?

## Evaluation Design

- How do you determine whether the program has worked or not?
  - Measuring outcomes
  - Outcome constructs have changed as it was expected
  - The training program was responsible for the change, and not something else
- The broader question is: How can you infer causality?

## Causal Inferences

- Knowledge is most applicable when it can be expressed in terms of cause-and-effect relationships
- One thing causes another if:
  - Temporal precedence
  - Covariation
  - No alternative explanations
- Control

## Experimental Designs

- Test whether one or more manipulated variables have an effect on specific criteria when controlling for other factors
- Treatment – manipulated variables
- Two features
  - A. Timing of treatment and measurement ensures temporal precedence
  - B. Attempt to eliminate alternative explanations
- If A and B, then covariation is interpreted as causality

## Experimental Designs: Threats to Validity

- **Threats to validity** refer to a factor that will lead one to question either:
  - The believability of the study results ***(internal validity)***, or
  - The extent to which the evaluation results are generalizable to other groups of trainees and situations ***(external validity)***

## The Correlation Coefficient

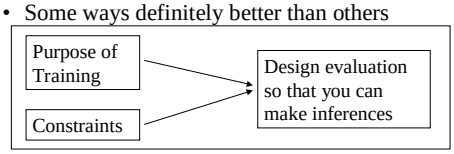
- A relationship index
- What is r for a perfect positive relationship?
- How about a perfect negative relationship?
- No relationship?
- What is the interpretation of the squared correlation coefficient?

## Correlation and Causality

- Ex. 1: Job satisfaction – job performance
- Ex. 2: Reading – IQ

## Evaluation Design

- No one "best way"
- Some ways definitely better than others




- Need to rely on logic to design an evaluation program that will allow you to make inferences

## Considerations for Evaluation Design

- Use pre-test & post-test
- Have a comparison group
- Random Assignment

## Evaluation

- Why are the "best designs" not used?

## Self-Talk Training Example

- Increase confidence of out of work managers
  - subject pool -- managers who have given up job search
  - 1/2 given self-talk training and encouraged to continue job search
  - results: *"self-talk training worked because the treatment group had a higher rate of reemployment"*
  - implications: *"self-talk is useful in increasing reemployment of the hard core unemployed"*
- What is wrong with this?

## Implications for Evaluation Design

- Explicitly consider evaluation at all levels
  - reactions, learning (verbal, skills, attitudes) results, ROI
- Make links from objectives clear
- Specify types of outcome measures (include examples)
- Specify evaluation strategy

## Next Time

- Traditional training methods
  - Noe Chapter 7
  - Broadwell and Dietrich (1996)