

# Rater Training for 360° Assessment: Creating Beta & Gamma Change

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# Pitfalls in 360° Assessment

- Traditional PA Issues
  - Leniency
  - Halo
- Multirater Issues
  - Low inter-rater agreement
  - Idiosyncratic rater variance

# Rater Training

- Rater training works but can be cumbersome and expensive
  - Performance Dimension Training (PDT)
    - Explains dimensions to create cognitive map of performance domain
  - Rater Error Training (RET)
    - Conditions raters to avoid common errors
  - Frame-of-Reference (FOR) Training
    - Gives raters common evaluative metric for making performance ratings

# Mechanisms of Rater Training

		<b>Error Type</b>	
		Halo Error	Leniency
<b>Intervention Type</b>	Behavioral	RET to increase probability of variation across dimensions	RET to decrease probability of using highest rating
	Cognitive	PDT to create dimension schemata	FOR to calibrate scale points with performance continuum

(Craig, Lindberg, Kaiser, & Baydoun, 2005)

# Types of Change

(Golembiewski, Billingsley, & Yeager, 1976)

- Alpha change
  - Movement along a stable dimension
- Beta change
  - Recalibration of intervals used to measure some stable dimension of psychological space
  - Corresponds to goal of FOR training
- Gamma change
  - Qualitative shift in raters' conception of reality (e.g., redefinition of performance dimensions)
  - Corresponds to goal of PDT

# Research Questions

1. Will web-based rater training reduce rating errors?  
(leniency, halo)
2. Can error reduction be attributed to beta and gamma change?

beta change  $\longrightarrow$  leniency

gamma change  $\longrightarrow$  halo

# Method

- Single-group pretest / post-test design (T1=2002, T2=2003)
- Sample 1: Financial Services Company
  - Proprietary 360 instrument with 25 items / 5 scales
  - $N = 13,528$  raters with pre and post data
- Sample 2: Convenience Store Chain
  - Proprietary 360 instrument with 59 items / 6 scales
  - $N = 3529$  raters with pre and post data
- All observers combined into single group (i.e., self-ratings excluded)
- Leniency operationalized as mean item response within-rater
- Halo operationalized as within-rater SD across dimensions
- Gamma change assessed with factor analysis
- Beta change assessed with IRT (DFIT)

# Web-based Rater Training

- After implementation in 2003, all raters required to complete training before rating
- Self-guided via standard web browser
- Included RET and FOR

# Results

- Leniency decreased following training
  - $D_1 = .35$      $D_2 = .24$
- Halo decreased following training
  - $D_1 = .05$      $D_2 = .09$
- No gamma change in Sample 1  
(unable to assess in Sample 2)
- No beta change

# Conclusions

- Web-based rater training can be used to significantly reduce leniency and halo errors
- Gamma / beta change do not appear to be mechanisms of training effect
- Some other process must be at work!
  - FOR training may change perceived performance itself rather than how the instrument is used

# Limitations & Future Research

- Limitations
  - No control group
  - pseudo-PDT present at both administrations
- Future Research
  - Quasi-experimental study being planned
  - More sensitive IRT analyses (e.g., LRT)

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