

The Development and Construct Validity of a Measure of Adaptability

Robert Ployhart
George Mason University

Jessica Saltz David Mayer
University of Maryland

Paul Bliese
Walter Reed Army Institute of Research

Why Individual Adaptability?

- Modern work *is* change!
 - Technology & continuous improvement
 - Mergers & acquisitions
 - Diversity & teamwork
- Individual adaptability has consequences:
 - Less need for training
 - Greater readiness for training
 - Easier transition to workplace changes
 - More flexibility in working with diverse others

Past Approaches

- Organizational Level
 - Adaptability defined by organizational changes
 - Mergers, acquisitions, organizational change efforts, and restructuring
 - Judge, Thoresen, Pucik, & Welbourne (1999)
 - Dispositions affected reactions to organizational change

Past Approaches

- Job Level
 - Adaptability defined by job requirements
 - Pulakos, Arad, Donovan, & Plamondon (2000)
 - Identified job characteristics of adaptability across multiple jobs, occupations, and organizations
 - Developed an eight-dimension taxonomy of the adaptability requirements of jobs

Adaptability Taxonomy

- I. Handling emergency or crisis situations**
- II. Handling work stress**
- III. Solving problems creatively**
- IV. Dealing with uncertain and unpredictable work situations**

Adaptability Taxonomy

V. Learning work tasks, technologies, and procedures

VI. Demonstrating interpersonal adaptability

VII. Demonstrating cultural adaptability

VIII. Demonstrating physically oriented adaptability

Past Approaches

➤ Task Level

➤ Defined by task requirements

➤ Kozlowski, Gully, Brown, Salas, Smith, & Nason (2001)

➤ LePine, Colquitt, & Erez (2000)

➤ Lab experiments find individual difference correlates of adaptive decision making

➤ Defined as individual difference

➤ Schunn & Reder (1998)

➤ Adaptability distinct from cognitive ability

Present Research

- Use the eight-dimension taxonomy to develop an individual difference measure of adaptability
 - Why?
 - Selection
 - Readiness for training
 - Readiness for organizational changes
 - Readiness for technology
 - Reactions/responses to task, job, and organizational changes

Development of Measure

1. Write items to reflect eight dimensions
 - 160 items written (20 per dimension)
2. Retranslate items to dimensions
 - 12 experts; eliminated 20 items
3. Pilot test items for clarity
 - Decision rules for variability and item distributions
4. Reduce to 40 items (5 per scale)

Sample Items

- Crisis: I think clearly in times of urgency.
- Work Stress: I'm easily rattled when my schedule is too full.
- Creativity: I'm good at developing unique analyses for complex problems.
- Uncertainty: I become frustrated when things are unpredictable.

Sample Items

- Learning: I take action to improve work performance deficiencies.
- Interpersonal: I believe it is important to be flexible in dealing with others.
- Cultural: I enjoy learning about cultures other than my own.
- Physical: If my environment is not comfortable (e.g., cleanliness) I cannot perform well.

Study 1: Factorial Validity and Criterion-Related Validity

- 2,990 ROTC candidates in leadership assessment center exercises
- Criterion: leadership dimensions
 - Charismatic role model
 - Inspirational motivation
 - Team builder
 - Follower Development
 - Technical
 - Physical

Measurement Characteristics

- **Confirmatory Factor Analysis**
 - Found good fit of eight factor model
 - Better than single factor model
 - No meaningful reduction in factors
 - Removing 3 bad items produced excellent fit
 - 1 learning item
 - 2 physical items
- **Support for factorial validity**

Reliability

- All dimensions were above .70 except:
 - Uncertainty: .55
 - Physical: .43

Criterion-Related Validity: Overall Leadership

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➤ Crisis	.19	
➤ Stress	.18	
➤ Creativity	.13	Overall $R^2 = .06$
➤ Uncertainty	.21	Multiple $R = .36$
➤ Learning	.09	
➤ Interpersonal	.09	
➤ Culture	.03	
➤ Physical	.15	

Criterion-Related Validity: By Leadership Dimension

- Significant Number of Predicted Leadership Dimensions (out of 15):
 - Crisis 6
 - Stress 3
 - Creativity 1
 - Uncertainty 11
 - Learning 4
 - Interpersonal 3
 - Culture 7
 - Physical 5

Study 1: Conclusions

- Support for Factorial Validity
- Decent Reliability (for 6/8 dimensions)
- Support for Criterion-Related Validity
- Subgroup Differences primarily for gender and White-Hispanic

Study 2: Construct Validity

- Administered 261 undergraduates a battery of individual difference measures
- Key question: what contributes to individual differences in adaptability?

Convergent Measures

- Personality
 - Dogmatism
 - Neuroticism
 - Extraversion
 - Openness
 - Agreeableness
 - Conscientiousness
- Motivation Strategies for Learning Questionnaire (MSLQ)
- Stress & Coping
- Cognitive Ability

Descriptive Statistics

- Means and variances slightly lower than ROTC sample
- Reliabilities above .70 except for:
 - Uncertainty: .54
 - Learning: .66
 - Physical: .64

Study 2: Conclusions

- Construct validity evidence for the adaptability dimensions was supported
- Neuroticism and Coping are most consistent correlates

Overall Conclusions

- Adaptability can be measured as an individual difference
- Respectable criterion-related validity
- Reasonable discriminant and convergent validity
- Reasonable construct validity

Future Directions

- Need to refine items
 - Learning and Physical
- Assess relations to other criteria
- Link to objective criteria
- Current projects involve administering a revised, web-based measure to assess:
 - readiness for organizational change
 - leadership performance in dynamic environments
 - readiness for new software systems

Thank You!!!

- To obtain copies of slides, paper, etc:
- www.gmu.edu/departments/psychology/ployhart/
- Email: rployhar@gmu.edu
- Office #: 703-993-1279