Validating the accuracy of the Demands and Abilities Transforming Algorithm (DATA) for Systematic Job Matching

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Background

- "Job matching is the collaborative, data-based decision-making process used by transition teams to determine the best fit between an individual’s abilities and preferences and the job’s environmental and occupational demands"¹
- Optimal vocational performance occurs when workers’ abilities are well matched to job demands²
- Systematic Job Matching³ includes: 1. Vocational Fit Assessment (VFA)⁴ 2. Demands and Abilities Transforming Algorithm (DATA)⁵ 3. Job Matching Reports (JMR)⁶
- The Vocational Fit Assessment (VFA) was developed in an effort to operationalize this process

Method

- Traditionally, a professional must evaluate each individual combination of abilities and demands, each and every time they engage in the job matching process
- The Demands & Abilities Transforming Algorithm (DATA) makes evaluative judgments for each of the 9 possible combinations of abilities and demands, which enables increased:
  • Accuracy
  • Consistency
  • Efficiency
- The purpose of this study was to validate the accuracy of the Demands and Abilities Transforming Algorithm (DATA)

Results

Study 1: 246/335 trials supported the DATA, a 73.4% accuracy rate
- 81 of 89 failed trials occurred when:
  • Job demands were high (VFA-Job=2)
  • Workers demonstrate some ability (VFA-Worker=1)
Study 2: 185 trials, targeted the extremes of the DATA, in which job demands and worker abilities were either perfectly matched (i.e., high demand & high ability) or job demands greatly exceeded worker abilities (i.e., high demand & low ability), and resulted in a 100% accuracy rate.

Discussion

When an individual demonstrates some ability (VFA-W=1) and a job has at least some demand (VFA-J=1), then the match between abilities and demands may be improved through intervention:
1. Direct instruction to develop workers’ abilities
2. Job accommodations provided under the Rehabilitation Act or the ADA
3. Modifications of the work environment.
- The DATA functions with perfect accuracy at its extremes
- These data strongly support the basic logic of the Demands and Abilities Transforming Algorithm

References and Resources


Resources:
• For a digital copy of this poster, visit go.osu.edu/tetlab
• To access the VFA, visit VocFit.com