



**It All Begins with the Job Analysis:
Using Job Analyses to Identify Talent
and Drive Organizational
Success**

**John M. Ford, CWH
Michael D. Blair, EMBARQ**

IPMAAC 2008: Oakland, CA

Overview

- **The Nature of Job Analysis**
- **The Problem with Traditional Job Analysis**
- **Expanding the Job Domain by Expanding the Job Analysis**
- **Expanding the Job Domain by Using Good Business Sense**



The Nature of Job Analysis



Job Analysis Builds the Foundation for HR Processes

- **Recruiting**
- **Selection & Promotion**
- **Placement**
- **Training**
- **Certification**
- **Compensation**
- **Performance appraisal**
- **Performance management**
- **Termination**



Job Analysis & Assessment

- **Identifying the predictor and criterion space**
- **Determining critical elements of a job for designing selection and training programs**
- **Developing performance measures**
- **Determining the focus within a particular assessment solution**
- **Determining appropriate test weights**
- **Conducting test transportability studies**



The Purpose of Job Analysis

- **Fully define and understand ALL of the important elements of the job domain**
 - Has been forgotten due to the overemphasis on establishing procedures to legally defend traditional selection processes



The Problem with Traditional Job Analysis



Traditional Job Analysis Leads to the Wrong Assessment Result

- **Traditional job analysis overemphasizes cognitive ability and basic educational skills**
- **Focus on cognitive and technical elements results in an emphasis on traditional cognitive measures in selection**
- **Important non-cognitive and non-traditional dimensions never surface or are buried**



Example: Over Emphasis on Cognitive Aspects

- **Consider the traditional list of KSAOs for a police promotional exam**
 - Knowledge of laws, codes, regulations, criminal offenses, procedures, & policies
 - These Ks are subdivided into very specific elements resulting in lengthy “K of” lists
- **Critical areas such as communication, interpersonal, & management skills are short-changed**
 - Skills & abilities lists in these areas tend to be short and general in nature



Traditional Job Analysis Leads to Assessment Double Dipping

- **Traditional job analysis approach often leads to unintentional double dipping in cognitive and technical domains**
- **Double dipping occurs due to the focus on identifying KSAOs without regard to the common underlying relationships or how the KSAOs are used on the job**



Example: Double Dipping

- **Knowledge of basic math versus the ability to add, subtract, multiply, and divide**
- **Knowledge of response area versus the ability to learn and recall streets, buildings, and routes**
- **If both “knowledge of” and “the ability to” are measured, double dipping has occurred**



Compensating for Traditional Job Analysis Results

- **More of the job domain is being measured**
- **Progress is due to what happens after the job analysis, not because of the job analysis**
 - Basic job analysis model has not changed
 - Adverse impact led to the development and use of other predictors to measure the traditional job domain
- **We have not gained a better understanding of the job domain - we've gained a better understanding of how to test for the job domain**



Expanding the Job Domain by Expanding the Job Analysis



KSA vs. KSAO

- **The concept of KSAs has been expanded to KSAOs**
 - **O's = Other Characteristics**
 - **Judgment & Common Sense**
 - **Interpersonal Skills**
 - **Emotional Skills**
 - **Leadership**
 - **Personality traits or temperaments**
 - **Interests**



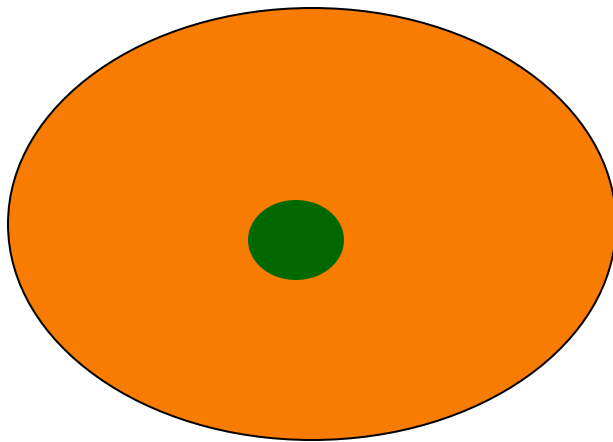
Benefits of Expanding the Job Domain

- **Allows for the exploration of the full range of KSAOs that are important for the job**
- **Expands the predictor space**
- **Influences test weights**
- **Influences how specific predictors are used in the selection process**
- **Defining a broader job domain can result in higher validity and lower adverse impact.**

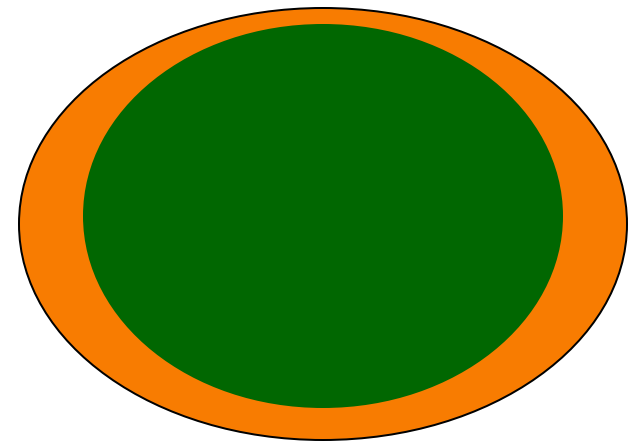
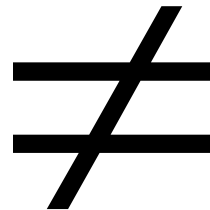


Traditional Job Analysis Leads to Less Valid Assessments

Actual Job Domain
Test Domain

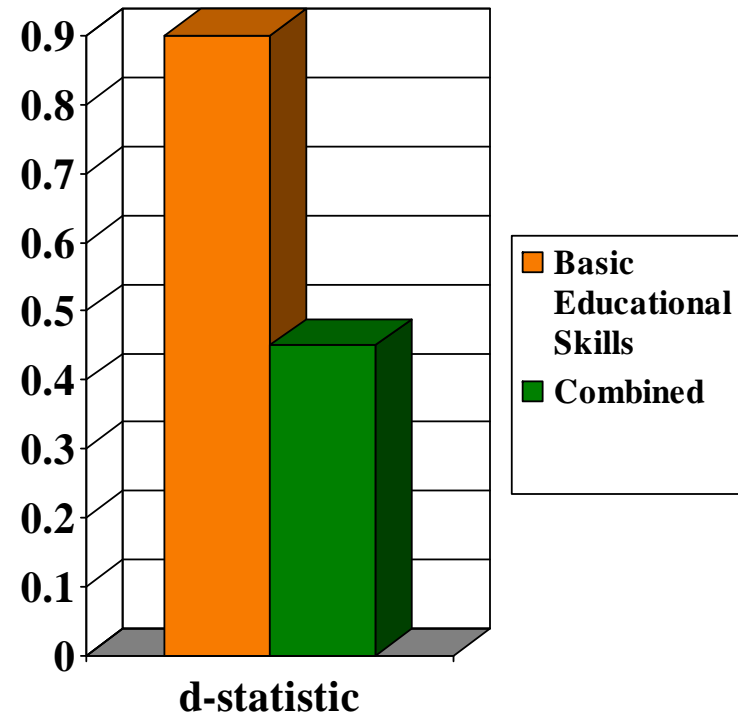
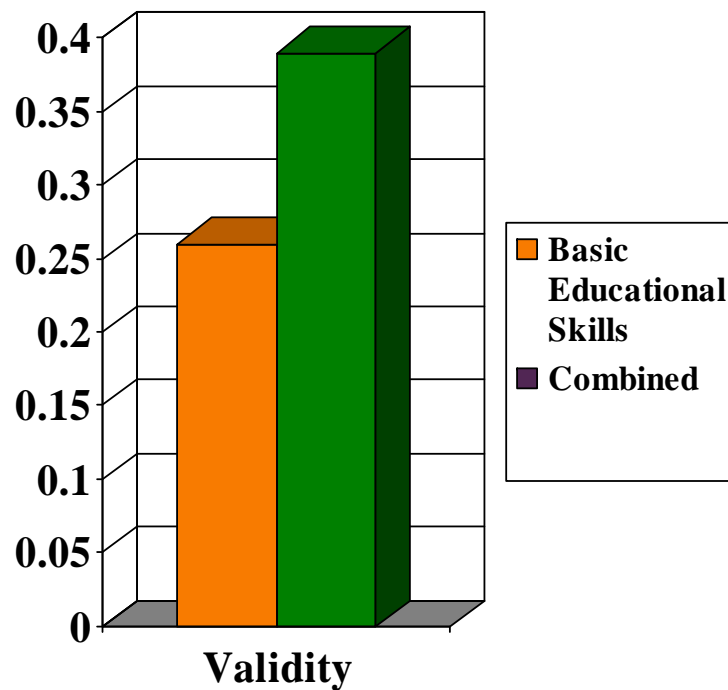


Test Domain as defined by Traditional Job Analysis



Test Domain as defined by Broad-based Job Analysis

Example: Broad Assessments Can Increase Validity & Reduce Adverse Impact



Combined includes Interpersonal Skills, Emotional Outlook, & Practical Skills



Focus of the Expanded Job Analysis

- **Increase the job analysis domain to capture the full range of KSAOs**
- **Emphasize non-cognitive and other non-traditional elements required for performance**
- **Group technical and cognitive KSAOs similarly to how non-technical and non-cognitive KSAOs are grouped**
- **Shift away from the traditional approach towards an approach that encourages a full exploration of the job domain**



Dimension Approach to Job Analysis

- **Start by discussing the broad dimensions that are important for successful job performance**
 - Interpersonal skills
 - Communication skills
 - Managerial skills
 - Practical skills
 - Technical skills
- **Discuss relative importance of each broad dimension and then determine the KSAOs in each dimension**
 - Exploration of each dimension leads to an expansion of the KSAO side of the job domain



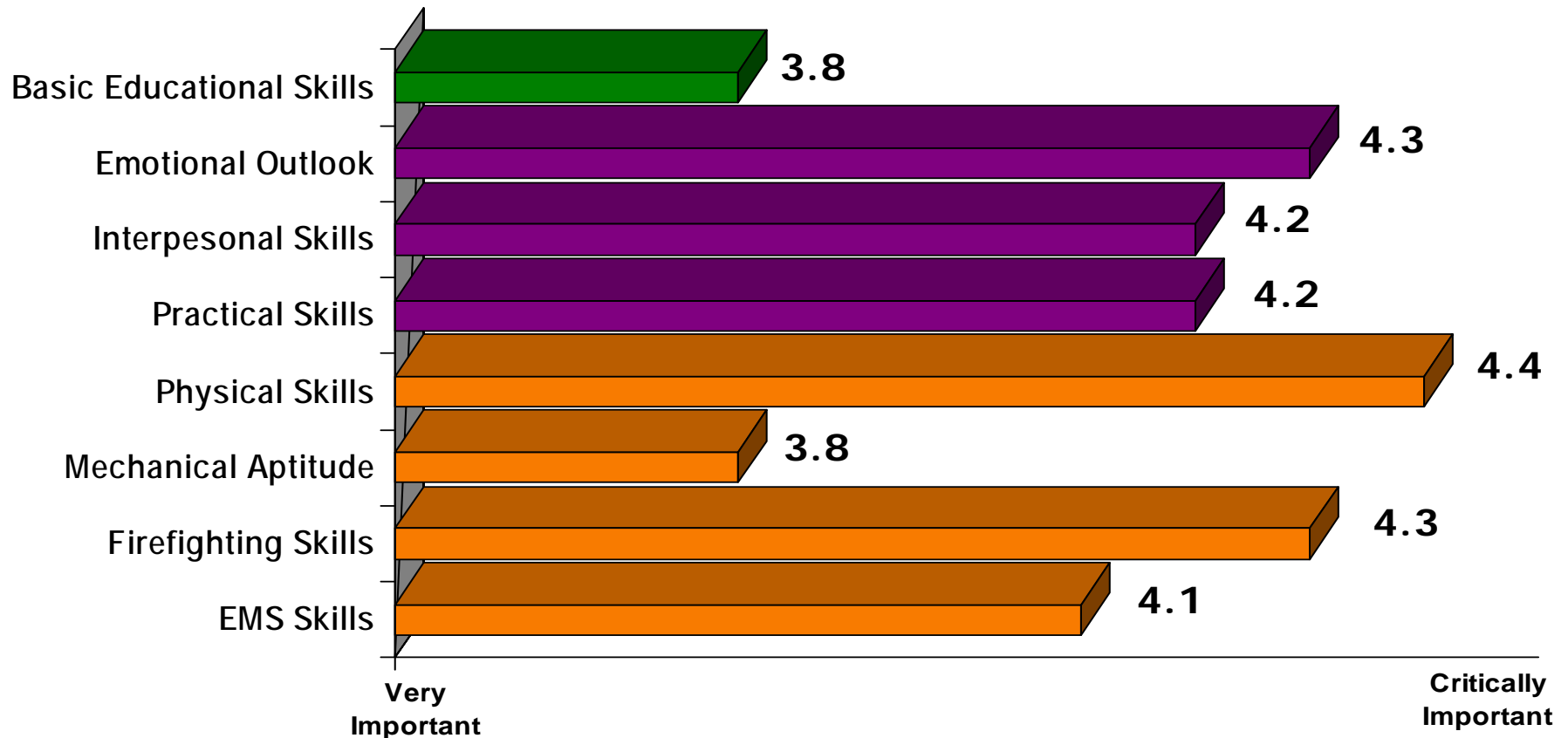
Dimension Approach Example - Communication

- **Communication is a complex dimension**
 - Customers, peers, supervisors, subordinates, members of the public
 - Technical vs non-technical information
 - Various modes (e.g., oral, written, non-verbal)
- **Traditional job-task analysis typically under represents communication skills as one or two generic KSAOs**
 - Ability to orally communicate with others
 - Ability to communicate in writing
- **Dimension approach leads to the identification of multiple KSAOs defining communication**
 - Increases the representation of the job domain
 - Results in a more accurate and complete description



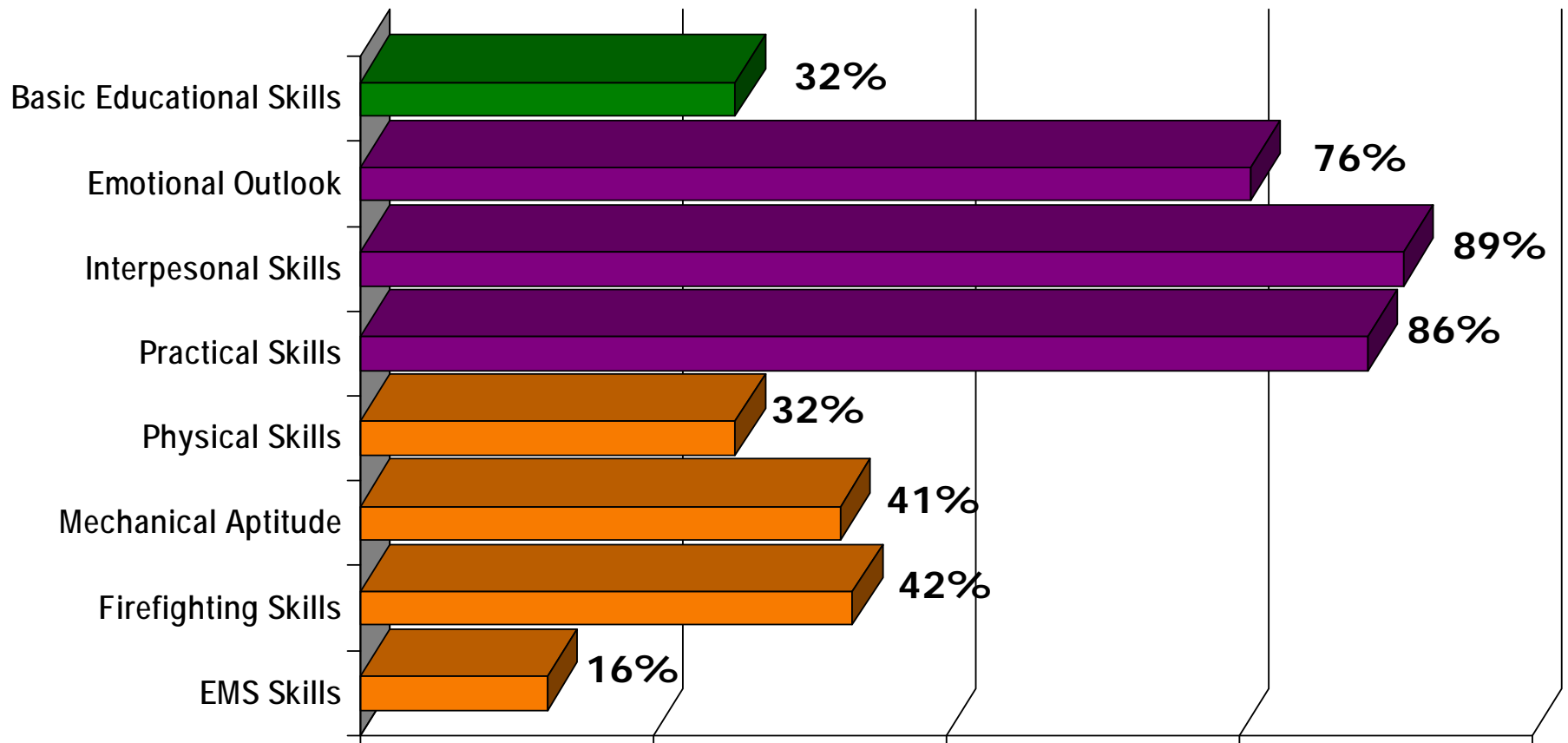
Results of a Dimensional Approach to Job Analysis

Importance Ratings for Fire Fighter



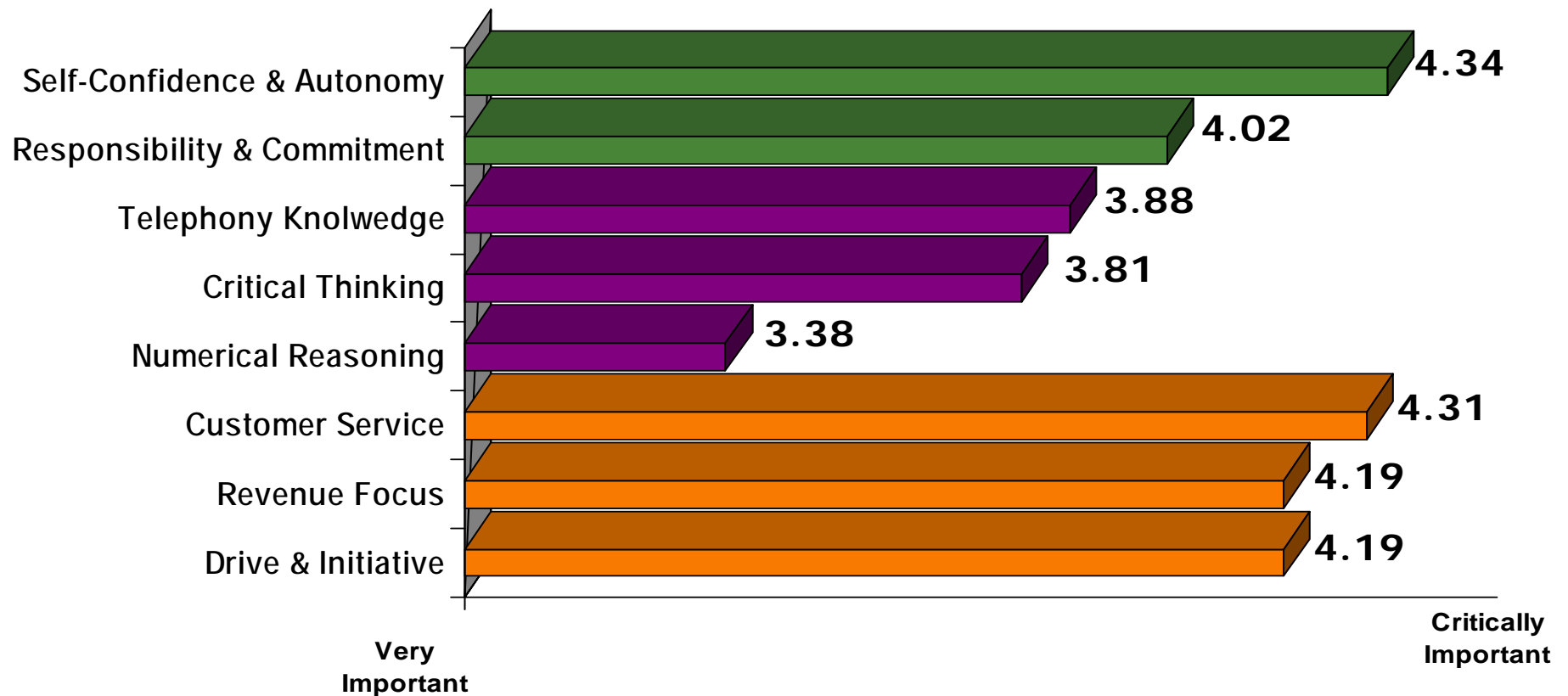
Job Analysis Results

% Linked to Relevant Job Duties



Results of a Dimensional Approach to Job Analysis

Importance Ratings for Sales Professional



Broad-based Job Analyses Result in Substantially Better Hires

- **Measuring a broad range of skills identifies more complete candidates and increases your ability to hire top candidates for the job**
- **Measuring a broad range of skills increases diversity**
- **Measuring a broad range of skills increases the ROI of your hiring process**
- **Measuring a broad range of skills early in your process can also reduce the cost of later steps**



Example: Which Candidate Would be the Best Hire?

	Cognitive	Interpersonal	Emotional Outlook	Practical
Candidate A	87	60	60	60
Candidate B	85	70	70	70
Candidate C	83	90	90	90

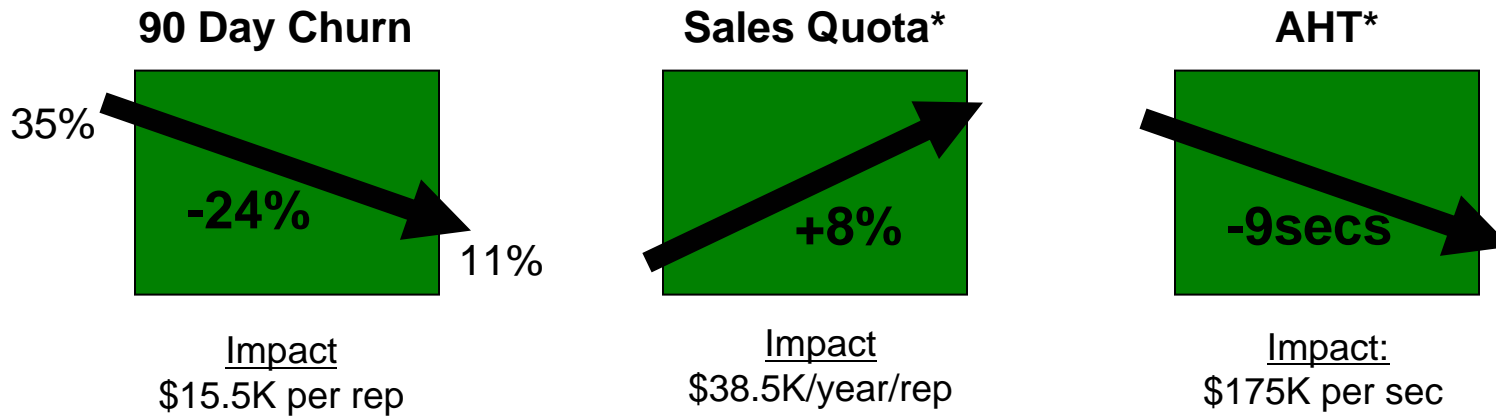


Example: Hiring Advantage of Measuring a Broad Range of Skills

Selection Ratio	AI Ratio-Cognitive Model	AI Ratio-Complete Model	% of Top Candidates Screened Out by Cognitive Model
.20	.32	.32	68%
.40	.37	.49	35%
.60	.52	.65	23%
.80	.63	.85	12%



Example: ROI Advantage of Measuring a Broad Range of Skills



*Comparison of candidates in top half vs. bottom half of test scores

- Turnover reduced by 240 employees (est.) = \$3.72M
- Sales increase for high band hires (est.) = \$19.3M
- Decrease in Average Hold Time (est.) = \$1.58M
- Assessment costs for 2008 = \$105k
- **Total ROI (revenue & savings - cost) = \$24.5M**
- **ROI per assessment dollar = \$233.33 (per dollar spent)**



Expanding the Job Domain by Using Good Business Sense



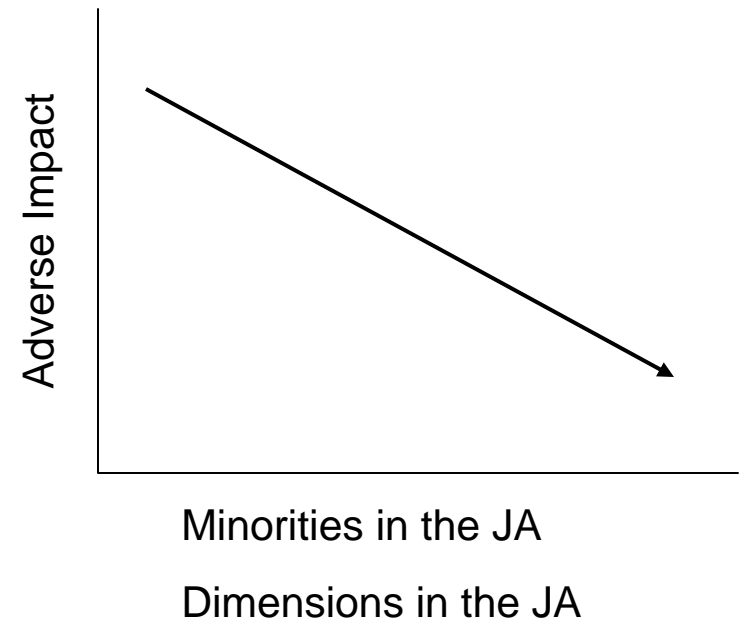
Minority Representation in the Job Analysis Process

- **Minorities focus more on contextual and other non-traditional dimensions of the job**
 - Identify these dimensions more often than whites
 - Rate these dimensions as more important than whites
- **Minority under representation leads to an under representation of the job domain**
 - Under emphasis on non-traditional dimensions
 - Subsequent over emphasis on task specific and cognitive components in the selection process



Practical Benefits of Minority Representation in the Job Analysis

- **Adverse impact decreases with increasing minority representation in the job analysis**
- **Adverse impact decreases with increasing representation of contextual and other non-traditional dimensions in the job analysis**



Arnold, R., Mangos, P, & McCoy, C. (2007)

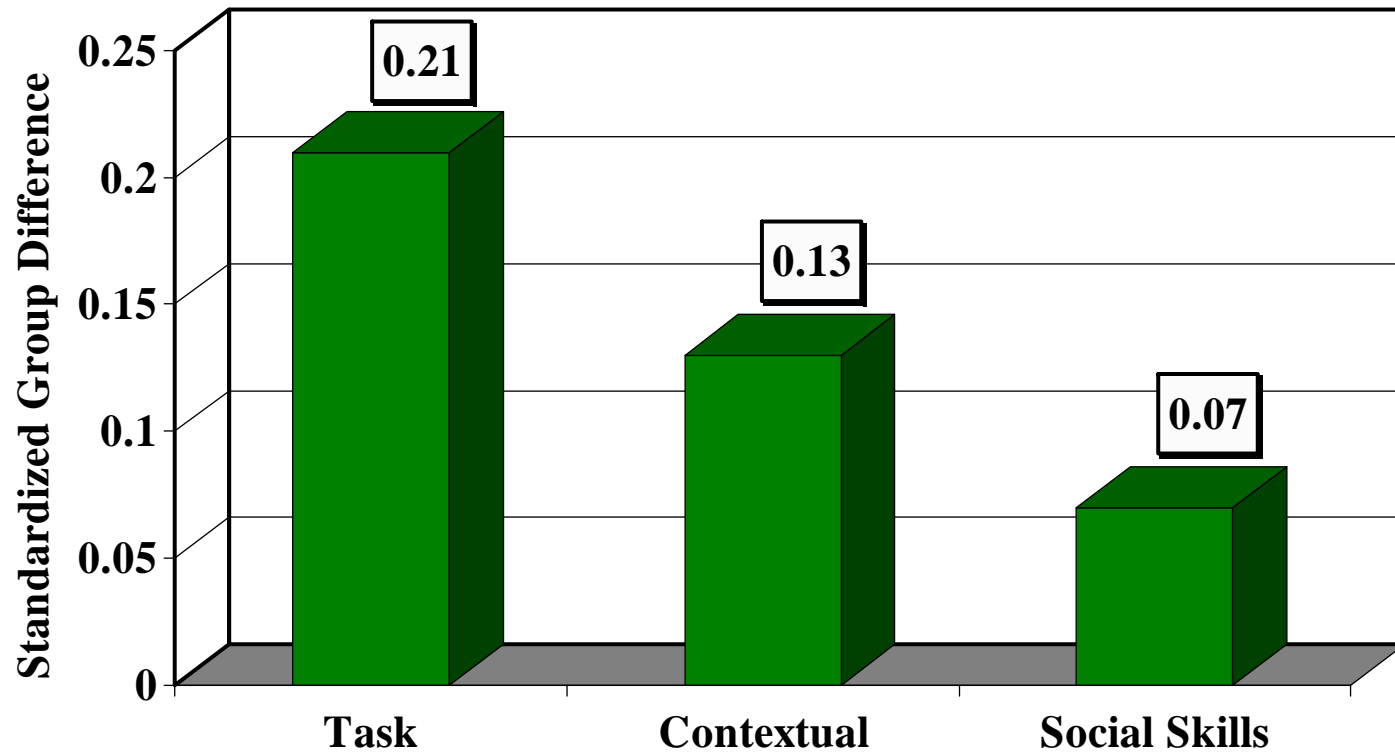


Reevaluate How Your Organization Defines Job Performance

- For many years, job performance was operationalized as a unidimensional construct focused on the performance of tasks
- Recent research supports a broader conceptualization of job performance



Multidimensional Conceptualizations of Job Performance



McKay & McDaniel, 2006



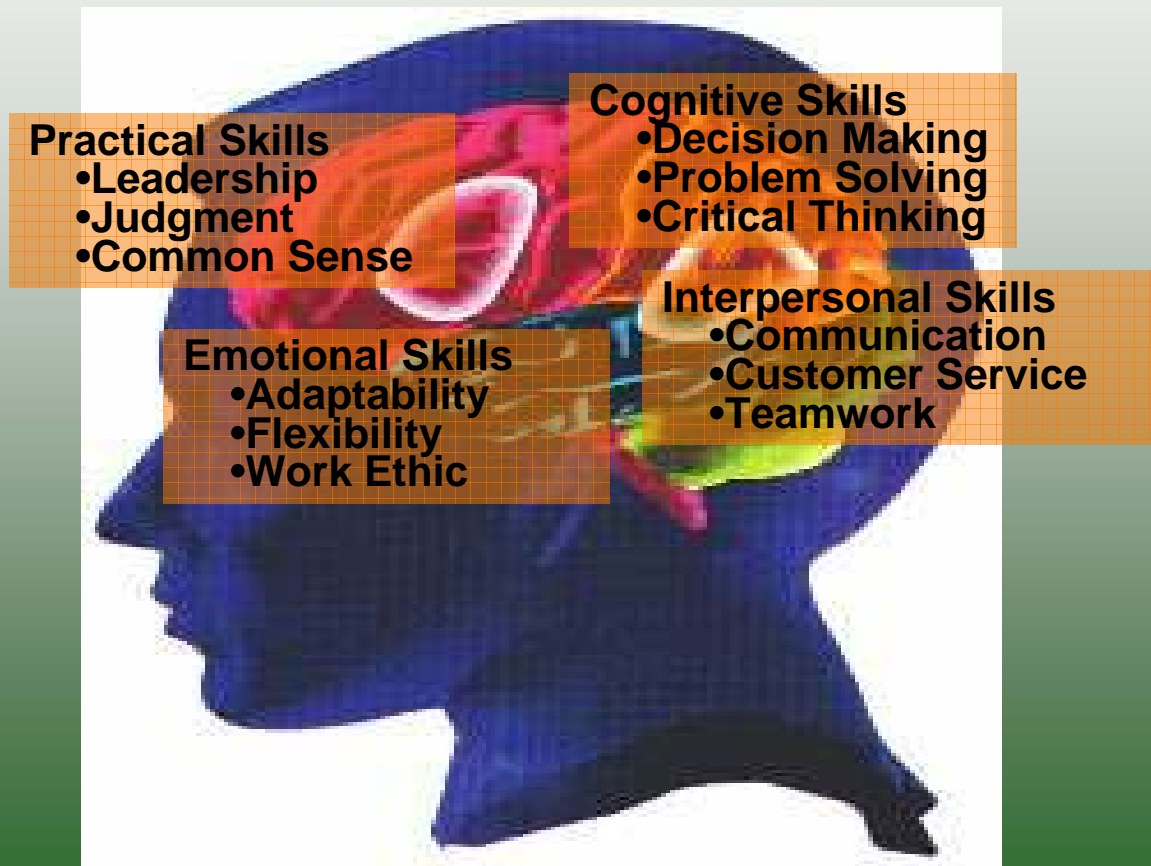
Practical Benefits of a Broader View of Job Performance

- More complete, accurate performance evaluations for incumbents
- More equal career advancement opportunities in your organization
- Non-task related aspects of performance may become more important in the future as the need for customer service, adaptability, and team-based performance increases (Borman & Motowidlo, 1997)



Expanding the Job Domain Leads to the Whole Person Approach to Assessment

– Don't settle for “book smart, world dumb”



How to Contact Us

Michael D. Blair

EMBARQ

5440 W 110th Street

KSOPKR0301-A3057

Overland Park, KS 66211

michael.d.blair@embarq.com

913-345-6334

John M. Ford

CWH

9360 Teddy Lane, Suite 203

Lone Tree, CO

80124

jford@cwhms.com

Voice: (303) 617-3433

