The Competency Validation Center for Health Care

Bill Guest, Metrics Reporting, Inc.
John Cleveland, Innovation Network for Communities
Jim Sharf, Sharf and Associates
Contents

1. Center Mission and Vision
2. Market Positioning
3. The Health Care Sector Opportunity
4. Competency Validation Framework
5. Center Products and Services
6. Center Business Design
Mission and Vision
“The focus of the Competency Validation Center is on the definition, validation, and communication of competencies that are demonstrated to be related to job performance.”
Mission

The mission of the Competency Validation Center for Health Care (CVC) is to support improved quality and productivity in the U.S. health care sector through the definition, validation, and advancement of industry-endorsed competency frameworks and models for a set of health care job families that covers the majority of health care jobs.
Vision

• **The health care sector** sets an example for competency validation that is adopted by other sectors of the U.S. economy;

• **Every major U.S. occupation** has defined, validated, and communicated competency frameworks and models for the majority of their jobs;

• **Employers** use these competency models and selection tools to select and develop talent;

• **Educators** align competency-based education programs with industry-wide validated competency models;

• **Professional organizations** embrace industry-wide competency models and align competency definitions to create a common language around competencies; and

• **States** embrace industry-wide competency models as a means to harmonize licensing requirements for professions.
A National Network of Sector-Based Validation Centers

A Common Competency Validation “Operating System”

- O*NET Framework
- Job Analysis Methods
- Validation Methods
- Software Tools
- Supply Chain Relationships

Health Care

Manufacturing

Retail

Construction

Energy

Financial Services

Transportation

Etc.
Core Strategies for Accomplishing the Mission

- Define competencies
- Align competencies with professional standards
- Validate competencies
- Create guidelines for selecting assessment tools
- Integrated competencies into the talent supply chain
- Ensure compliance with employment law
Market Positioning
A National Competency-Based Talent System

The Center’s Work is Focused Here

- Validated Job Competencies
  - Competency-Based Employer Talent Systems
    - Competency-Based Credentials
      - Competency-Based Education & Training
A More Detailed View

Diagram from: *Making a Market for Competency-Based Credentials* by the Corporation for a Skilled Workforce (CSW).

- Validated Competencies
  - Standards
    - Skill & Knowledge Learning Process
      - Competency-Based Curriculum
        - Pre-Assessment
          - Targeted Instruction
            - Learning Outcomes Assessment
              - Competency-Based, Portable and Transparent Credentials
                *Used by employers for hiring*
## A National Competency-Based Talent System

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Validated Competencies</strong></td>
<td>Employers develop and validate legally-defensible, job-related competency standards for key sector job families.</td>
</tr>
<tr>
<td><strong>Competency Based Talent Systems</strong></td>
<td>Employers implement talent selection and development systems that use competency standards to make hire and promotion decisions.</td>
</tr>
<tr>
<td><strong>Competency-Based Credentials</strong></td>
<td>Credential-granting organizations integrate competency requirements into their credential granting process.</td>
</tr>
<tr>
<td><strong>Competency-Based Education and Training</strong></td>
<td>Educational and training organizations integrated competency requirements into their curricula, teaching and assessment.</td>
</tr>
</tbody>
</table>
The Center Supports Employer “Talent Supply Chain Management”

The Talent Supply Chain

Pre-K ➔ Primary (K-8) ➔ Secondary (9-12) ➔ Post Secondary (Various) ➔ Employer

Can we improve the performance of our Talent Supply Chains by working together on competency models?
Roles in Talent Supply Chain Management Systems

1. Employers define and communicate competencies that are related to job performance (requirements).

2. Individuals access evidence-based career navigation to target appropriate jobs and build relevant competencies (qualifications).

3. Education and Training institutions offer competency-based education and training to support individuals’ educational goals.

Policy Foundation that supports: (1) employers to define, validate, and communicate competency requirements, (2) individuals to navigate career paths and target specific competency building, and (3) educators to provide competency-based education and training.
What It Takes For Employers to Implement Talent Supply Chain Management

Define
- Job families aligned with individual job codes
- Competencies for each job family

Forecast
- Hiring quantities for each job family
- Number of employees participating in continuing education to develop competencies

Communicate
- Competencies required for each job family
- Number of new candidates needed by job family

Manage
- Treat schools, colleges, universities and training centers as suppliers in a talent supply chain just like any other supply chain
- Reward the suppliers who “build to specifications”
Prior Work Supporting Center Development

- Metrics Reporting Talent Supply Chain Management Framework
- Talent SCM Prototyping at Trinity Health
- ANSI Health Care Competency Collaborative
- USDOL Competency Models
- Health Care Competency and Career Pathways Initiatives
- O*NET Database
USDOL Allied Health Competency Model

Job Specific Competencies

Industry Competencies

Foundational Competencies

Knowledge

Skills & Abilities

Management Competencies

Occupation-Specific Requirements

Industry-Sector Technical Competencies

Patient Interaction
Health & Disease
Infection Control
Medication
Documentation
Diagnostic Procedures
Rehabilitation Therapy

Management Competencies

Occupation-Specific Requirements

Industry-Sector Technical Competencies

Patient Interaction
Health & Disease
Infection Control
Medication
Documentation
Diagnostic Procedures
Rehabilitation Therapy

Industry-Wide Technical Competencies

Health Industry Fundamentals
Healthcare Delivery
Health Information
Health Industry Ethics
Laws & Regulations
Safety Systems

Industry-Wide Technical Competencies

Health Industry Fundamentals
Healthcare Delivery
Health Information
Health Industry Ethics
Laws & Regulations
Safety Systems

Workplace Competencies

Teamwork
Customer Focus
Planning & Organizing
Problem Solving & Decision Making
Working with Tools & Technology
Scheduling & Coordinating
Checking, Examining & Recording
Workplace Fundamentals

Workplace Competencies

Teamwork
Customer Focus
Planning & Organizing
Problem Solving & Decision Making
Working with Tools & Technology
Scheduling & Coordinating
Checking, Examining & Recording
Workplace Fundamentals

Academic Competencies

Reading
Writing
Mathematics
Science and Technology
Communication: Listening & Speaking
Critical & Analytical Thinking
Basic Computer Skills
Information Literacy

Academic Competencies

Reading
Writing
Mathematics
Science and Technology
Communication: Listening & Speaking
Critical & Analytical Thinking
Basic Computer Skills
Information Literacy

Personal Effectiveness Competencies

Interpersonal Skills
Integrity
Professionalism
Initiative
Dependability & Reliability
Adaptability & Flexibility
Lifelong Learning

Personal Effectiveness Competencies

Interpersonal Skills
Integrity
Professionalism
Initiative
Dependability & Reliability
Adaptability & Flexibility
Lifelong Learning
Comprehensive Competency Model

Occupational Competencies

**Job Specific Competencies** – also know as Tasks or Work Behaviors – are job specific work activities.

**Industry-Wide Competencies** – industry specific work activities that are common across multiple jobs.

Foundational Competencies

**Cognitive**
- Problem Solving
- Critical Thinking
- Listening
- Speaking
- Reading
- Writing
- Math
- Time Mgt.
- Perception

**Character**
- Initiative and Perseverance
- Teamwork and Citizenship
- Problem Solving and Ingenuity
- Responsibility
- Flexibility and Resilience

**Physical**
- Vision
- Strength
- Steadiness
- Dexterity
- Coordination
- Speed
- Stamina
- Flexibility

**Linking**
Foundational competencies are linked to occupational competencies to establish their relationship to job performance.
The Health Care Sector Opportunity
Why Health Care Is Important

- If the U.S. Healthcare industry was an independent country, it would be the 5th largest economy in the world.

- U.S. GDP = $15.68 Trillion

- Healthcare is 18% of the US GDP

- This represents $2.8 trillion in expenditures ($1.4 trillion in payroll)

- US health care represents 4% of global GDP
Health Care Challenges

Jobs and Job Families

- Organizations have thousands of job codes and job descriptions with few structural commonalities.

Competency Models

- Organizations lack comprehensive competency models with common definitions that are used across the organization.

Tasks and Task Families

- There is no standard format for task descriptions which makes it difficult to generalize competency standards.
The Triple Aim in Health Care

Improved productivity in the 50% of the health care GDP that is payroll can advance the Triple Aim.
Talent SCM Can Improve Business Performance

- Reduced first year turnover
- Reduced long-term turnover
- Improved recommend-hire ratios
- Reduced time-to-fill
- Higher employee engagement
- Better employee development
## Top 25 Health Care Employers

<table>
<thead>
<tr>
<th>Rank</th>
<th>System</th>
<th>Hospitals</th>
<th>Employees (Thousands)</th>
<th>2012 Revenue (Millions)</th>
<th>For Profit</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>HCA</td>
<td>165</td>
<td>204</td>
<td>$33,013</td>
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<td>2</td>
<td>Kaiser Foundation Hospitals</td>
<td>38</td>
<td>222</td>
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<tr>
<td>3</td>
<td>Ascension Health</td>
<td>77</td>
<td>150</td>
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<tr>
<td>4</td>
<td>CHE Trinity Health</td>
<td>86</td>
<td>87</td>
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<tr>
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<td>Community Health Systems</td>
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<td>135</td>
<td>$13,029</td>
<td>X</td>
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<tr>
<td>6</td>
<td>Providence Health</td>
<td>34</td>
<td>73</td>
<td>$10,608</td>
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<td>7</td>
<td>Dignity Health</td>
<td>37</td>
<td>56</td>
<td>$10,522</td>
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<tr>
<td>8</td>
<td>Catholic Health Initiatives</td>
<td>93</td>
<td>90</td>
<td>$9,844</td>
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<tr>
<td>9</td>
<td>UPMC</td>
<td>20</td>
<td>62</td>
<td>$9,636</td>
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<td>10</td>
<td>Sutter Health</td>
<td>24</td>
<td>48</td>
<td>$9,560</td>
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<td>11</td>
<td>Tenet Health Care</td>
<td>80</td>
<td>105</td>
<td>$9,119</td>
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<td>12</td>
<td>Partners HealthCare System</td>
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<td>60</td>
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<td>13</td>
<td>Mayo Clinic</td>
<td>23</td>
<td>58</td>
<td>$8,844</td>
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<td>14</td>
<td>Adventist Health System</td>
<td>46</td>
<td>70</td>
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<td>15</td>
<td>Universal Health Services</td>
<td>25</td>
<td>68</td>
<td>$6,961</td>
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<tr>
<td>16</td>
<td>North Shore LI Jewish Health Syst</td>
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<tr>
<td>17</td>
<td>Vanguard Health Systems</td>
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<td>18</td>
<td>Health Management Associates</td>
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<td>X</td>
<td>$5,878</td>
<td>X</td>
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<tr>
<td>19</td>
<td>Banner Health</td>
<td>25</td>
<td>39</td>
<td>$5,635</td>
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<td>Johns Hopkins Health System</td>
<td>6</td>
<td>41</td>
<td>$4,760</td>
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<td>21</td>
<td>Intermountain Health Care</td>
<td>21</td>
<td>34</td>
<td>$4,700</td>
<td></td>
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<tr>
<td>22</td>
<td>Advocate Health Care</td>
<td>12</td>
<td>35</td>
<td>$4,599</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Sentara Health Care</td>
<td>12</td>
<td>24</td>
<td>$4,480</td>
<td></td>
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<tr>
<td>24</td>
<td>St. Joseph Health System</td>
<td>14</td>
<td>24</td>
<td>$4,376</td>
<td></td>
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<tr>
<td>25</td>
<td>Mercy</td>
<td>26</td>
<td>40</td>
<td>$4,112</td>
<td></td>
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</table>

**Total**

<table>
<thead>
<tr>
<th>Hospitals</th>
<th>Employees</th>
<th>2012 Revenue</th>
<th>For Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1119</td>
<td>1795</td>
<td>$237,873</td>
<td></td>
</tr>
</tbody>
</table>

- $235 billion in annual revenues
- 1.8 million employees
Key Health Care System Stakeholders

**Human Resources**
- Part of the senior leadership team
- Responsible for demonstrating improvements in key performance metrics and articulating financial returns

**Financial Leadership**
- Understand that 50% of costs are in talent
- Understand the cost of turnover is high ($25-$30,000 per turnover)

**Clinical Managers**
- Benefit from reduced turnover
- Understand that a stable team improves clinical performance

**Corporate Counsel**
- Has a stake in assuring that selection systems are legally defensible and do not expose the enterprise to liability based on adverse impact
Competency Validation Framework
Important Definitions

- **Competency**: A set of defined behaviors that provide a structured guide enabling the identification, evaluation, and development of the behaviors in individual employees. The O*NET competencies are organized as **knowledge, skills, abilities, and work styles** (see next slide).
  - **Character Competencies**: Soft skills, behavioral skills, personality factors.
  - **Cognitive Competencies**: Mental processing skills.
  - **Physical Competencies**: The ability to perform specific physical tasks.
  - **Professional Competencies**: The ability to apply knowledge, skills, abilities and work styles to accomplish job tasks.

- **Competency Validation**: The process of defining competencies that are related to job performance and gathering and organizing evidence to substantiate the relationships.

- **Job Family**: A group of jobs defined by a set of similar O*NET occupation codes that perform similar tasks and require similar competencies (skills and abilities).

- **Job Analysis**: The process of grouping jobs into a job family; analyzing the knowledge, skills, abilities, and work styles required to perform tasks in the job family; and working with SMEs to evaluate the importance level of each competency relative to performing the job.

- **O*NET**: A free on-line database of 974 occupational definitions developed by the US Department of Labor.

- **Subject Matter Expert (SME)**: An incumbent working in the job family or a manager with extensive job knowledge whose role is to help facilitators identify and prioritize tasks, knowledge, skills, abilities, and work styles important to performance in the job family.

- **Tasks**: The things an individual does to perform a job. Also sometimes referred to as “work behaviors”.

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27 • Competency Validation Center for Health Care
O*NET Knowledge, Skills, Abilities and Work Styles

**Knowledge.** Organized sets of principles and facts applying in general domains


**Skills.** Developed capacities that facilitate learning or the more rapid acquisition of knowledge

- Examples: Active Listening, Speaking, Reading Comprehension, Social Perceptiveness, Critical Thinking, Service Orientation, Monitoring, Coordinating, Writing

**Abilities.** Enduring attributes of the individual that influence performance


**Work Styles.** Personal characteristics that can affect how well someone performs a job

- Examples: Dependability, Integrity, Attention to Detail, Concern for Others, Self Control, Cooperation, Stress Tolerance, Adaptability/Flexibility, Independence, Initiative
# Skills, Abilities and Work Styles

<table>
<thead>
<tr>
<th>Skills</th>
<th>Abilities</th>
<th>Work Styles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Active Listening</td>
<td>1. Oral Comprehension</td>
<td>1. Dependability</td>
</tr>
<tr>
<td>2. Speaking</td>
<td>2. Oral Expression</td>
<td>2. Integrity</td>
</tr>
<tr>
<td>3. Reading Comprehension</td>
<td>3. Problem Sensitivity</td>
<td>3. Attention to Detail</td>
</tr>
<tr>
<td>5. Critical Thinking</td>
<td>5. Speech Recognition</td>
<td>5. Self Control</td>
</tr>
<tr>
<td>15. Persuasion</td>
<td>15. Flexibility of Closure</td>
<td>15. Leadership</td>
</tr>
<tr>
<td>17. Management of Personnel</td>
<td>17. Time Sharing</td>
<td></td>
</tr>
<tr>
<td>18. Negotiation</td>
<td>18. Fluency of Ideas</td>
<td></td>
</tr>
<tr>
<td>20. Mathematics</td>
<td>20. Originality</td>
<td></td>
</tr>
<tr>
<td>23. Science</td>
<td>23. Number Facility</td>
<td></td>
</tr>
<tr>
<td>25. Operations Analysis</td>
<td>25. Speed of Closure</td>
<td></td>
</tr>
<tr>
<td>26. Operation and Control</td>
<td>26. Visualization</td>
<td></td>
</tr>
<tr>
<td>27. Management of Material</td>
<td>27. Memorization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>29. Manual Dexterity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30. Auditory Attention</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31. Hearing Sensitivity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32. Multilimb Coordination</td>
<td></td>
</tr>
<tr>
<td></td>
<td>33. Control Precision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>34. Static Strength</td>
<td></td>
</tr>
<tr>
<td></td>
<td>35. Stamina</td>
<td></td>
</tr>
<tr>
<td></td>
<td>36. Extent Flexibility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>37. Gross Body Coordination</td>
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</tr>
</tbody>
</table>
Drowning In a Sea of Data

- Employers have hundreds and in many cases thousands of job titles and job descriptions
- The O*NET has 974 occupations, >100 health care
- There is no standard competency model
- Hence, competency means different things to different stakeholders
- O*NET Model has 277 Descriptors, 120 KSAs
- Many define jobs by the tasks … ability to “do”
- There are no common standards for job components (groups of tasks)
1. A common taxonomy of Jobs, Competencies and Tasks based on the O*NET framework

2. A standardized process for Job Analysis

3. A process for validating the relationship between O*NET-based competencies and job performance
### Defining Jobs and Job Families
- Multiple occupations organized into broader job families based on common competencies
- Competency requirements are then generalized at the Job Family Level
- Over time, employers can simplify their position description taxonomy based on the Job Families

### Defining Competency Families
- Competency models are developed for each Job Family
- The 136 KSAs in the O*NET competency taxonomy are grouped into 32 “competency families”

### Defining Tasks and Task Families
- Tasks are the activities an individual performs (as differentiated from the competencies he/she needs to perform them)
- Tasks are grouped into 41 broad “Task Families”
- Tasks are based on the O*NET Generalized Work Activities (GWAs) and supplemented with tasks required by licensing and professional credentials
- Competencies are linked to tasks by documenting “examples of use” – how competencies are used to perform tasks
# 23 Job Families for Health Care

<table>
<thead>
<tr>
<th>Leaders</th>
<th>Executive Manager Supervisor</th>
<th>Providers</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EXC - Executive</td>
<td>PS</td>
<td>ES</td>
</tr>
<tr>
<td></td>
<td>MGR - Manager</td>
<td>PC</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>FLS - Supervisor, First-Line</td>
<td>AP</td>
<td>PCA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PS</td>
<td>MA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PC</td>
<td>RN</td>
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<td></td>
<td></td>
<td>AP</td>
<td>PT</td>
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<tr>
<td></td>
<td></td>
<td>ES</td>
<td>PLB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NS</td>
<td>REG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PCA - Patient Care Assistant</td>
<td>BOC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MA - Medical Assistant</td>
<td>LPN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RN - Registered Nurse</td>
<td>CW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PT - Pharmacy Technician</td>
<td>TECH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PLB - Phlebotomist</td>
<td>LAB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REG - Patient Registration, Scheduling, Admitting</td>
<td>MBC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BOC - BOC / Medical Secretary</td>
<td>THR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LPN - LPN / Clinic (ambulatory) Nurse</td>
<td>PHRM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CW - Case Workers</td>
<td>DTN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TECH - Technicians</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LAB - Laboratory Technicians</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MBC - Medical Billing and Coding</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>THR - Therapists</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>THR - Therapists</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHRM - Pharmacists</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>DTN - Dietitians and Nutritionists</td>
<td></td>
</tr>
</tbody>
</table>

These 23 job families cover 90% of employees.
### Health Care Job Families with O*NET/BLS Data (Basis for Trinity Health Job Analysis)

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1 ES</td>
<td>37-2011.00</td>
<td>Janitors and Cleaners, except Maids &amp; Hskpg</td>
<td>HS</td>
<td>63%</td>
<td>1.76</td>
<td>682,000</td>
<td>2,310,000</td>
<td>$10.75</td>
<td>$22,370</td>
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<tr>
<td>1 ES</td>
<td>37-2012.00</td>
<td>Maids and Housekeeping Cleaners</td>
<td>HS</td>
<td>64%</td>
<td>1.68</td>
<td>351,900</td>
<td>1,427,000</td>
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<tr>
<td>1 ES</td>
<td>51-6011.00</td>
<td>Laundry and Dry-Cleaning Workers</td>
<td>HS</td>
<td>64%</td>
<td>1.64</td>
<td>44,300</td>
<td>225,000</td>
<td>$9.58</td>
<td>$19,930</td>
</tr>
<tr>
<td>2 NS</td>
<td>35-2021.00</td>
<td>Food Preparation Workers</td>
<td>LT</td>
<td>54%</td>
<td>1.48</td>
<td>377,100</td>
<td>814,000</td>
<td>$9.27</td>
<td>$19,270</td>
</tr>
<tr>
<td>2 NS</td>
<td>35-3022.00</td>
<td>Counter Attendant, Concession, Coffee Shop</td>
<td>LT</td>
<td>75%</td>
<td>1.26</td>
<td>350,400</td>
<td>446,000</td>
<td>$8.92</td>
<td>$18,560</td>
</tr>
<tr>
<td>2 NS</td>
<td>35-3041.00</td>
<td>Food Servers, Nonrestaurant</td>
<td>LT</td>
<td>38%</td>
<td>1.46</td>
<td>96,700</td>
<td>209,000</td>
<td>$9.40</td>
<td>$19,550</td>
</tr>
<tr>
<td>2 NS</td>
<td>29-2051.00</td>
<td>Dietetic Technicians</td>
<td>LT</td>
<td>35%</td>
<td>2.15</td>
<td>8,100</td>
<td>24,000</td>
<td>$12.85</td>
<td>$26,730</td>
</tr>
<tr>
<td>2 NS</td>
<td>35-2012.00</td>
<td>Cooks, Institution and Cafeteria</td>
<td>LT</td>
<td>47%</td>
<td>1.67</td>
<td>136,200</td>
<td>405,000</td>
<td>$10.92</td>
<td>$22,710</td>
</tr>
<tr>
<td>3 MA</td>
<td>31-9092.00</td>
<td>Medical Assistants</td>
<td>HS</td>
<td>41%</td>
<td>2.81</td>
<td>243,800</td>
<td>528,000</td>
<td>$13.99</td>
<td>$29,100</td>
</tr>
<tr>
<td>4 PCA</td>
<td>31-1011.00</td>
<td>Home Health Aides</td>
<td>not available</td>
<td>not available</td>
<td>837,500</td>
<td>1,018,000</td>
<td>$9.91</td>
<td>$20,610</td>
<td></td>
</tr>
<tr>
<td>4 PCA</td>
<td>31-1013.00</td>
<td>Psychiatric Aides</td>
<td>HS</td>
<td>63%</td>
<td>2.60</td>
<td>19,000</td>
<td>68,000</td>
<td>$12.10</td>
<td>$25,170</td>
</tr>
<tr>
<td>4 PCA</td>
<td>31-1014.00</td>
<td>Nursing Assistants</td>
<td>not available</td>
<td>not available</td>
<td>496,100</td>
<td>1,505,000</td>
<td>$11.63</td>
<td>$24,190</td>
<td></td>
</tr>
<tr>
<td>4 PCA</td>
<td>31-1015.00</td>
<td>Orderlies</td>
<td>not available</td>
<td>not available</td>
<td>1,116</td>
<td>4,434</td>
<td>$11.63</td>
<td>$24,190</td>
<td></td>
</tr>
<tr>
<td>4 PCA</td>
<td>31-2012.00</td>
<td>Occupational Therapy Aides</td>
<td>SC</td>
<td>42%</td>
<td>3.04</td>
<td>3,600</td>
<td>8,000</td>
<td>$13.56</td>
<td>$28,200</td>
</tr>
<tr>
<td>4 PCA</td>
<td>31-2022.00</td>
<td>Physical Therapist Aides</td>
<td>HS</td>
<td>64%</td>
<td>2.43</td>
<td>27,600</td>
<td>47,000</td>
<td>$11.39</td>
<td>$23,680</td>
</tr>
<tr>
<td>4 PCA</td>
<td>39-9021.00</td>
<td>Personal Care Aides</td>
<td>HS</td>
<td>59%</td>
<td>2.18</td>
<td>675,200</td>
<td>861,000</td>
<td>$9.49</td>
<td>$19,730</td>
</tr>
<tr>
<td>5 RN</td>
<td>29-1141.00</td>
<td>Registered Nurses</td>
<td>A</td>
<td>64%</td>
<td>4.26</td>
<td>included above</td>
<td>included above</td>
<td>$31.71</td>
<td>$65,950</td>
</tr>
<tr>
<td>5 RN</td>
<td>29-1141.01</td>
<td>Acute Care Nurses</td>
<td>A</td>
<td>75%</td>
<td>4.35</td>
<td>included above</td>
<td>included above</td>
<td>$31.71</td>
<td>$65,950</td>
</tr>
<tr>
<td>5 RN</td>
<td>29-1141.03</td>
<td>Critical Care Nurses</td>
<td>A</td>
<td>50%</td>
<td>4.55</td>
<td>included above</td>
<td>included above</td>
<td>$31.71</td>
<td>$65,950</td>
</tr>
</tbody>
</table>

O*NET Data: Code, Occupation, Education, and Wages
1. Identify & Verify Job Families

- Review relevant employer job codes & job descriptions
- Review education and compensation levels to assure similarity
- Review importance levels of KSAs and Work Styles to confirm similarity
- Assign all appropriate employer job codes to the job family

2. Develop Task Lists and Link to Competencies

- Develop the O*NET task list for each job family
- Group tasks into the 41 Task Families
- Scan professional standards, licensing standards, and job descriptions for additional tasks
- Identify O*NET competencies important to the job family and group into competency families
- Link tasks to competencies through examples of use

3. Verification by Subject Matter Experts (SMEs)

- Interview SMEs to verify tasks and to record tools and technologies used to accomplish the tasks
- Job shadow a sample of individuals to refine the tasks and how competencies are used to perform them
- Hold an SME session to allow them to refine the tasks, competencies and examples of use
- SMEs score the importance of the competencies

4. Prepare the Job Analysis Report

- A list of the O*NET titles included in the job family
- The job shadowing participants and dates
- The SME demographics
- A list of the tasks grouped into Task Families
- A list of the examples of use linking competencies to tasks
- A final list of O*NET competencies and the SME consensus importance ratings for the competencies

---

*Competency Validation Center for Health Care*
1. Task List

2. Linking (examples)

3. Individual Ratings

4. SME Consensus of Importance Ratings
3 – Validation Studies

- Validation studies verify the relationship between competencies and job performance

- Validation studies are required to establish legal defensibility of the use of assessment tools to select candidates for job positions

- Validation studies require that employers select assessment tools that have been demonstrated to effectively measure competencies that are being screened for

- In the absence of legally-defensible validation studies, an employer can be liable for claims of “adverse impact” of selection tools and processes

- Fear of legal liability has severely limited the use of evidence-based selection tools
Validation Study Strategies

- **Criterion-Related Validity** – Relies on empirically correlating assessment (predictors) with job performance (criteria).

- **Content-Related Validity** – Relies on showing that predictor is an adequate sample of the job content (tasks and/or KSAs).

- **Transport of Validity** – Relies on showing that a job to which validity is to be transported is “substantially similar” to a job for which criterion-related validity study has already been conducted.

- **Synthetic Validity (Job Component Validity)** – Relies on methodological approached for “building up” overall validity estimate for specific job or job families based on their job components.

- **Meta-Analytic Validation Evidence** – Relies on methods to combine mathematically results from individual studies to draw conclusions regarding validity for a particular class of jobs or occupations, or test constructs.

- **Consortium Studies** – Relies on multiple organizations pooling resources, technical capabilities, and employees and/or applicant to conduct empirical validation research.

- **Construct Validity Research** – Relies on accumulating evidence that a predictor is a representative sampling of a construct domain which is an essential component of the job performance domain.
Competency Validation Center Products and Services
Three Primary Value Propositions

Make Job Family Competency Validation Reports Available to All Employers in the Sector

Radically reduces time, complexity and cost for an employer to develop valid job analyses for their key job families.

Support Member Employers in Implementation of Evidence-Based Selection and Development Processes

Accelerates employer implementation of legally defensible selection methods and improvement in businesses performance metrics.

Communicate Competency Requirements to the Sector’s Talent Supply Chain

Reduces the employer cost of talent supply chain management and assures that key competencies are effectively incorporated into curricula, teaching and assessment processes.
<table>
<thead>
<tr>
<th>Make Validation Reports Available to All Employers</th>
<th>Support Member Employer Implementation</th>
<th>Integrate Competencies Into the Talent Supply Chain</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Brief employers on the job family structure and base competency analysis</td>
<td>• Establish the management team responsibility and organizational scope</td>
<td>• Share aggregated job family competencies with education providers</td>
</tr>
<tr>
<td>• Facilitate the confirmatory job analysis for the employer</td>
<td>• Assess current talent acquisition processes</td>
<td>• Hold an annual Competency Validation Conference for the health sector</td>
</tr>
<tr>
<td>• Help employers select valid assessment tools</td>
<td>• Identify position descriptions within the relevant job family and align PDs with existing job analysis data</td>
<td>• Work with professional associations to align job family tasks and competencies with credentials</td>
</tr>
<tr>
<td>• Provide employers with the structure for concurrent validation studies</td>
<td>• Conduct confirmatory job analyses and set up systems for validation studies</td>
<td>• Inform the development of new job descriptions and credentials</td>
</tr>
<tr>
<td>• Allow employers to participate in consortium validity studies</td>
<td>• Provide support in implementing new talent acquisition processes</td>
<td>• Help communicate to job seekers in a standardized way</td>
</tr>
</tbody>
</table>
Competency Validation Center Business Design
## Core Organizational Elements

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Legal Structure</strong></td>
<td>The Center will be organized as a 501 c3 organization.</td>
</tr>
<tr>
<td><strong>Board of Directors</strong></td>
<td>A small board will provide fiduciary and management oversight.</td>
</tr>
<tr>
<td><strong>Strategic Advisory Board</strong></td>
<td>The Center strategy will be informed by a Strategic Advisory Board with representatives from the health care sectors, strategic partners, and industry experts. The Strategic Advisory Board will be developed during the business planning and design phase for the Center (CY 2015).</td>
</tr>
<tr>
<td><strong>Employer Members</strong></td>
<td>Leading health care employers will form the core membership of each sector initiative. Member employers will pay an annual membership fee to help support the Center operations. The goal at the end of Year Two is to have 10 of the top 25 health care employers in the country as members of the Center.</td>
</tr>
</tbody>
</table>
| **Center Management**         | Details for the Center staffing will be developed during the Year One business planning process. It is anticipated that the Center will have the following kind of staffing structure:  
• President/CEO  
• 3 Senior Staff: VP for Employer Relations; Director of Job Analysis and Validation; Director of Information Systems  
• 3-4 Professional staff members  
• 1-2 Support staff |
## Partners and Stakeholders

<table>
<thead>
<tr>
<th>Partner</th>
<th>Role</th>
</tr>
</thead>
</table>
| **Hope Street Group**                        | • Lead fund raising  
• Convene employers for the business planning phase  
• Organize talent supply chain partners          |
| **Innovation Network for Communities**       | • Serve as start-up fiscal agent  
• Facilitate the business planning process        |
| **Trinity Health**                           | • Take a lead role in convening health care employers during the business planning phase                                        |
| **American National Standards Institute**    | • Collaborate with the Center through the Health Care Competency Collaborative                                                 |
| **Health Professions Pathway Consortium (H2P)** | • Lead the development of a industry-wide skills credential for the health care sector that integrates key validated competencies |
| **Health Professions Network**               | • Collaborate with the Center on harmonizing job family competencies and tasks with professional credentialing requirements.     |
| **Other Potential Stakeholders**             | • Patient advocates; community health organizations; workforce agencies; health care insurers and payors; US Dept. of Health and Human Services; state licensing boards |
Long-Term Center Key Performance Metrics

• **Employers Engaged** – Including a weighted percentage of the top 25 in the industry sector

• **Universities Engaged** – Including a percentage of the influential leaders of ASAHP (Association of Schools of Allied Health Professionals).

• **Community Colleges Engaged** – Including a percentage of influential members of NN2 (National Network of Health Career Programs in Two Year Colleges).

• **Aggregated Annual Return** – Aggregated annual savings rate of engaged employers.

• **Aggregated First-Year Turnover** – Aggregated turnover relative to industry benchmarks.

• **Philanthropy Engaged** – Including a percentage of foundations with health care and/or jobs focus.

• **Aggregated Savings** – Aggregated savings to society based on reduced first-year turnover at employers, increased retention in programs, and increased retention in professions.
<table>
<thead>
<tr>
<th>Outcome</th>
<th>Tasks</th>
</tr>
</thead>
</table>
| Founding Health Care Employer Membership     | • Informal convening of health care CEOs in the fall of 2014  
    • One on one meetings with interested health care systems to explain the Center value proposition and connect it to their strategic interests  
    • Full founding employer convening in Q3 of 2015                                                                 |
| Board of Directors and Advisory Board        | • Identify candidates  
    • Solicit interest in participation  
    • Confirm Board and Advisory Board membership  
    • Hold first Strategic Advisory Board meeting in Q3 2015                                                                 |
| Legal Incorporation                          | • Incorporate as a non-profit organization  
    • File IRS 1023 application  
    • Obtain IRS 501c3 approval                                                                                             |
| Detailed Business Plan                       | • Develop detailed business and operating plan for the Center, based on the existing concept document                                   |
| Raise Funds for the First Three Years of Operation | • Raise commitments from membership fees, corporate sponsorships and foundation grants amounting to approximately $6 million over three years |
| Management Team                              | • Develop position descriptions  
    • Post positions; recruit and hire  
    • Use evidence-based assessment tools in the hiring process where appropriate                                               |
| Sector Competency Validation Scan            | • Conduct a scan of the competency validation frameworks in other top US job producing sectors  
    • Establish priorities for expanding the Competency Validation model to other sectors                                      |
A competency-based and demand-driven talent system for the United States that expands economic opportunity and prosperity for all Americans.

**Employers** design and build Talent Supply Chain Management (SCM) systems; and communicate requirements.

**Individuals** leverage evidence-based career navigation to and accumulate the competencies and stackable credentials that demonstrate their qualifications.

**Talent Suppliers** provide competency-based education and competency-based credentials that align with employer requirements.
Collective Impact is the commitment of a group of actors from different sectors to a common agenda for solving a specific social problem, using a structured form of collaboration. The approach of collective impact is placed in contrast to “isolated impact,” where organizations primarily work alone to solve social problems.

Initiatives must meet five criteria in order to be considered collective impact:

- **Common Agenda:** All participating organizations (government agencies, non-profits, community members, etc.) have a shared vision for social change that includes a common understanding of the problem and a joint approach to solving the problem through agreed upon actions.

- **Shared Measurement System:** Agreement on the ways success will be measured and reported with a short list of key indicators across all participating organizations.

- **Mutually Reinforcing Activities:** Engagement of a diverse set of stakeholders, typically across sectors, coordinating a set of differentiated activities through a mutually reinforcing plan of action.

- **Continuous Communication:** Frequent communications over a long period of time among key players within and across organizations, to build trust and inform ongoing learning and adaptation of strategy.

- **Backbone Organization:** Ongoing support provided by an independent staff dedicated to the initiative. The backbone staff tends to play six roles to move the initiative forward: Guide Vision and Strategy; Support Aligned Activity; Establish Shared Measurement Practices; Build Public Will; Advance Policy; and Mobilize Funding.
Career Readiness Through a Collective Impact Lens

Primary (K-8) ➔ Secondary (9-12) ➔ Post Secondary (Various) ➔ Employer

- Job Performance and Engagement
- Degree Completion

Primary (K-8) ➔ Secondary (9-12) ➔ Post Secondary (Various)

Primary (K-8) ➔ Secondary (9-12)

Diploma Completion
Employers need to connect these two targets:

**Predictors:**
- Cognitive Competencies
- Character Competencies
- Physical Competencies
- Industry-Wide Competencies
- Job Specific Competencies
- Evidence of Past Performance
- Evidence of Past Engagement

**Job Performance:**
- General Task Performance
- Safety and Rule Compliance
- Customer Service
- Empathy, Caring and Compassion
- Work Discipline
- Teamwork
- Proactive Work Behavior
- Overall Job Performance
- Engagement Scores

*Empathy, Caring, and Compassion* is an additional *Customer Service* measure for Health Care.
Alliance for Quality Career Pathways Model

Three essential features of career pathways:

1. **Well-connected and transparent education, training, credentials, and support services**
   - e.g., high school or CTE
   - e.g., ABE, TANF, or workforce system
   - e.g., military or civilian workplace
   - e.g., certificate, diploma
   - e.g., license, industry credential
   - e.g., postsecondary system
   - e.g., apprenticeship
   - e.g., 2-year degree
   - e.g., 4-year degree

2. **Multiple entry points**
   - for both well prepared students and targeted populations
   - e.g., 1st job in career path
   - 2nd job in career path
   - 3rd job in career path
   - Nth job in career path

3. **Multiple exit points**

Increasing skills, competencies, and credentials informed by industry/employers
Validity refers to the degree to which evidence and theory support the interpretations of test scores for proposed uses of tests. Validity is, therefore, the most fundamental consideration in developing tests. The process of validation involves accumulating relevant evidence to provide a sound scientific basis for the proposed score interpretations. It is the interpretations of test scores for proposed uses that are evaluated, not the test itself. When test scores are interpreted in more than one way (e.g., both to describe a test taker's current level of the attribute being measured and to make a prediction about a future outcome), each intended interpretation must be validated. Statements about validity should refer to particular interpretations for specified uses. It is incorrect to use the unqualified phrase “the validity of the test.”

Standards for Educational and Psychological Testing is sponsored by the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME).

- The purpose of the Standards is to provide criteria for the development and evaluation of tests and testing practices and to provide guidelines for assessing the validity of interpretations of test scores for intended test uses.

- Sources of evidence may illuminate different aspects of validity, but they do not represent distinct types of validity. Validity is a unitary concept. It is the degree to which all the accumulated evidence support the intended interpretation of the scores for the proposed use.
Validity Relationships

Validation Process for Employee Selection

1. True score validity
2. Observed validity
3. True validity/Operational validity
4. Relationship between predictor construct(s) and measure(s)
5. Relationship between criterion construct(s) and measure(s)

Note: Diagram is from Industrial and Organizational Psychology, the journal of the Society for Industrial and Organizational Psychology (SIOP), Volume 7, Issue 4, December 2014, Page 509
Responses to the following *Job Performance* constructs will be collected (quintiles format):

- **General Task Performance** – Behaviors that are formally included in the employee’s duties. Examples include completing tasks on time and showing attention to detail.

- **Safety and Rule Compliance** – Being perceptive of and competing work in a safe manner and complying with applicable policies and regulations.

- **Customer Service** – Serving and helping customers internal to or external to the organization. Examples include responding to customers quickly and giving customers helpful suggestions.

- **Empathy, Caring, and Compassion** – Being perceptive of and responsive to patients’ needs. Making patients feel safe and respected.

- **Work Discipline** – Following organizational norms and considering the organization’s needs. Examples include coming to work on time and not wasting time or organizational resources.

- **Teamwork** – Working well with others. Examples include helping others with their work loads and sharing resources with coworkers.

- **Proactive Work Behavior** – Showing motivation to do a good job. Examples include suggesting procedural improvements and exceeding performance standards.

- **Overall Job Performance**
Evidence Based Selection Example (Trinity Health) Applicant Funnel

1. Auto Prescreen – ETS Personality Score, Knock-Out Q’s
3. Test – ETS WorkFORCE for Job Fit, ETS Cognitive Ability, SkillSurvey® reference checks, and credential verification
4. Interview – HR TA Specialist with Structured Interview Guide (SIG) including review of tests and checks
5. DASH – Day of Action Selection Hiring, with Hiring Mgr.
6. Hire – Post-Offer Checks and Employment Physical
### Predictive Validity – Job Performance

*Predictive Validity for Overall Job Performance of General Mental Ability (GMA) Scores Combined with a Second Predictor.*

<table>
<thead>
<tr>
<th>Personnel Measure</th>
<th>Validity (r)</th>
<th>Multiple R</th>
<th>Additional validity from adding a second predictor</th>
<th>% Increase in validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMA tests</td>
<td>.51</td>
<td></td>
<td>.12</td>
<td>24%</td>
</tr>
<tr>
<td>Interview (structured)</td>
<td>.51</td>
<td>.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job knowledge tests</td>
<td>.48</td>
<td>.58</td>
<td>.07</td>
<td>14%</td>
</tr>
<tr>
<td>Integrity tests</td>
<td>.41</td>
<td>.65</td>
<td>.14</td>
<td>27%</td>
</tr>
<tr>
<td>Interview (unstructured)</td>
<td>.38</td>
<td>.55</td>
<td>.04</td>
<td>8%</td>
</tr>
<tr>
<td>Assessment centres</td>
<td>.37</td>
<td>.53</td>
<td>.02</td>
<td>4%</td>
</tr>
<tr>
<td>Biographical data</td>
<td>.35</td>
<td>.52</td>
<td>.01</td>
<td>2%</td>
</tr>
<tr>
<td>Conscientiousness tests</td>
<td>.31</td>
<td>.60</td>
<td>.09</td>
<td>18%</td>
</tr>
<tr>
<td>Reference checks</td>
<td>.26</td>
<td>.57</td>
<td>.06</td>
<td>12%</td>
</tr>
<tr>
<td>Job experience (years)</td>
<td>.18</td>
<td>.54</td>
<td>.03</td>
<td>6%</td>
</tr>
<tr>
<td>Years of education</td>
<td>.10</td>
<td>.52</td>
<td>.01</td>
<td>2%</td>
</tr>
<tr>
<td>Interests</td>
<td>.10</td>
<td>.52</td>
<td>.01</td>
<td>2%</td>
</tr>
<tr>
<td>Graphology</td>
<td>.02</td>
<td>.51</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Age</td>
<td>-.01</td>
<td>.51</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Adapted from Schmidt and Hunter (1998, p.265)  
*The Validity and Utility of Selection Methods in Personnel Psychology: Practical and Theoretical Implications of 85 Years of Research Findings*
Utility – Job Performance

Dollar Value of Output:

<table>
<thead>
<tr>
<th>Variation</th>
<th>-1σ</th>
<th>mean</th>
<th>+1σ</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example variation for a $40,000 worker.</td>
<td>-40%</td>
<td>100%</td>
<td>+40%</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>-16,000</td>
<td>Mean</td>
<td>+16,000</td>
<td>$32,000</td>
</tr>
</tbody>
</table>

Output as a Percentage of Mean:

- Unskilled & Semiskilled: 81% 100% 119% 38%
- Skilled: 68% 100% 132% 64%
- Managerial & Professional: 52% 100% 148% 96%
## Relationships of O*NET Data Elements to Annual Wages

<table>
<thead>
<tr>
<th>ONET ID</th>
<th>O*NET Area</th>
<th>O*NET Element Name</th>
<th>R</th>
<th>R²</th>
<th>Slope</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.B.4.e</td>
<td>Skills</td>
<td>Judgment and Decision Making</td>
<td>0.70</td>
<td>0.50</td>
<td>2078.21</td>
<td>1</td>
</tr>
<tr>
<td>1.A.1.b.4</td>
<td>Abilities</td>
<td>Deductive Reasoning</td>
<td>0.70</td>
<td>0.49</td>
<td>2035.70</td>
<td>2</td>
</tr>
<tr>
<td>2.A.2.a</td>
<td>Skills</td>
<td>Critical Thinking</td>
<td>0.71</td>
<td>0.50</td>
<td>2000.83</td>
<td>3</td>
</tr>
<tr>
<td>1.A.1.b.7</td>
<td>Abilities</td>
<td>Category Flexibility</td>
<td>0.51</td>
<td>0.26</td>
<td>1987.62</td>
<td>4</td>
</tr>
<tr>
<td>1.A.1.b.6</td>
<td>Abilities</td>
<td>Information Ordering</td>
<td>0.51</td>
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