Psychometric Testing and its applications in Performance Management

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Personality
The sum total of ways in which an individual reacts and interacts with others
- Genetic influences on personality.
- Environmental influences on personality.
- Cultural influences on personality.
- Psychodynamic influences on personality.
- The inner experience.

Why are we different?
- We want different things
- Different motives, purposes aims, values, needs, drives, impulses, urges
- Think, perceive & understand differently
- Learn & develop differently
- Relate to others differently

The origins of character analysis...

Empedocles, 5 century BC
- Humans are a microcosmic form of the macrocosmic theory of the four elements (earth, water, air, fire) and the four qualities (dry, wet, cold, hot).

‘Humours’ in the body (400BC)

Phlegm, blood, yellow bile, black bile: An imbalance meant you were ‘ill humoured’
- Choleric – angry
- Phlegmatic – apathetic, dull
- Melancholic – gloomy, cynical
- Sanguine – confident, hopeful, warm

Psychometrics
- Psychometrics deals with the scientific measurement of individual differences (personality and intelligence)
- It attempts to measure the psychological qualities of individuals and use that knowledge to make predictions about behaviour
• Dawis (1992) suggests that the invention and development of psychometric tests in psychology is comparable in its impact to the invention of the microscope in biology

What is a Test?
• A test can be described as an objective, systematic and standardised measure of a sample of behaviour
  – Objectivity is where every observer of an event would produce an identical account of what took place
  – Systematic refers to a methodical and consistent approach to understanding an event
  – Standardised means observations of an event are made in a prescribed manner

Test vs. Assessment
• A test is also different from an assessment
  – Assessment refers to the entire process of collating information about individuals and subsequently using it to make predictions
  – Tests represent only one source of information within the assessment process
  – e.g. spelling is one aspect of writing, and so to assess it we would use a spelling test. Whereas to gauge up someone’s general writing ability we would have to assess the entire process (spelling, style, grammar, punctuation etc.)

Assessments in Performance Management

Types of Psychometric Tests
• Two types of psychological tests are used by HR selection practitioners:
  – Tests of cognitive ability
    • Cognitive assessment tests attempt to measure an individual’s ability to process information from their environment
  – Tests of personality measures
    • Personality measures are more concerned with people's dispositions to behave in certain ways in certain situations
Different Categories of Psychometric Tests

- There are three categories of psychometric tests in use by psychologists:
  - **Normative tests** – most psychometric tests where data exists which tell us the range of scores expected from the population under consideration e.g. IQ scores
  - **Criterion referenced tests** – tests commonly used in education where a candidate has to meet some pre-arranged standard.
  - **Idiographic tests** – tests used in therapy to observe an individual’s progress over time

Cognitive Testing

- Intelligence tests are commonly used in two main areas: occupational psychology and educational psychology
- Cognitive ability tests fall into two categories in terms of administration of the test:
  - Individually administered tests
  - Group administered tests
- Three different types of cognitive tests (collectively known as **maximum performance** tests):
  - Speed, power and knowledge tests

Personality Testing

- Personality tests are concerned with attempting to measure people’s characteristics or traits
- There are two forms of personality test:
  - **Objective personality tests**
    - Individuals are asked to rate their own actions or feelings in set situations
  - **Projective tests**
    - Individuals are asked to formulate an unstructured response to some form of ambiguous stimuli e.g. Thematic Apperception Test (TAT, Murray, 1935) and Rorschach Ink-Blot Test (Rorschach, 1921)

Projective Techniques

**Thematic Apperception Test (TAT)**

- Person is asked to tell a story about:
  - Who are these people?
  - What are they doing?
  - What will happen?
- Based on Murray’s personality theory
  - People are distinguished by the needs that motivate their behavior

**The Rorschach Inkblot Test**

- Ambiguous stimuli
- Person is asked to report what they see
  - No clear image, so the things you see must be “projected” from inside yourself
Objective Personality Tests

Carl Jung’s - 1920’s Framework
4 basic psychological types

<table>
<thead>
<tr>
<th>Sensation</th>
<th>Rational</th>
</tr>
</thead>
<tbody>
<tr>
<td>iNtution</td>
<td>Tells you something exists</td>
</tr>
<tr>
<td>Thinking</td>
<td>Tells you where it came from or is going</td>
</tr>
<tr>
<td>Feeling</td>
<td>Tells you what it is</td>
</tr>
<tr>
<td></td>
<td>Tells you whether it’s good or not</td>
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From Jung to Myers - Briggs

Myers-Briggs Type Indicator (MBTI)
MBTI distinguishes four archetypes and sixteen personality types. According to Myers-Briggs, each of us is a mix of these four divisions:

  - Do we receive it from within ourselves (Introverted) or from external sources (Extraverted)? Is our dominant function focused externally or internally?
- **How we take in Information** - our preferred method of taking in and absorbing information.
  - Do we trust our five senses (Sensing) to take in information, or do we rely on our instincts (iNtuitive)?
- **How we make Decisions** – do we decide things based on logic and objective consideration (Thinking), or based on our personal, subjective value systems (Feeling).
- **How we deal with the external world on a Day-to-day Basis** - are we organized and purposeful and more comfortable with scheduled, structured environments (Judging), or are we flexible and diverse, and more comfortable with open, casual environments (Perceiving)?

Temperaments
**SP’s (Sensing, Perception):**
- SPs are freedom loving and are born with a predisposition for the release of impulses through action.
- They are masters of focusing on the immediate situation and seekers of excitement, gravitating toward sports and similar activities.
They consequently tend to surround themselves with fun-loving and spontaneous individuals who share their need for risk taking and adventure.

**NT’s (iNtuitive Thinkers)**
- The NT is born with a predisposition for acquiring knowledge and competence.
- With an eye for gaining mastery and control of their surroundings, the NT seeks out solutions to the most complex problems.
- Intellectual consideration of theoretical and abstract subjects occupies their minds and dominates their actions.
- They are typically involved with projects that call for innovation, vision, and creativity.

**NF’s (iNtuitive Feeling)**
- The NF is born with a predisposition for pursuing self-actualisation and a tendency to focus on the personal, humane, and subjective sides of life.
- Relationships and interactions with the self and others are a valued and meaningful focus for NFs. They continually seek to fulfil human potential and growth through their enthusiasm and warmth.
- Approaching others with a romantic and imaginative outlook, NFs strive for ideal relationships and excellent interpersonal communication skills.

**SJ’s – (Sensing, Judging)**
- SJs are born with a predisposition to seek belonging through service. This makes them responsible, dependable, loyal, and generally obedient.
- With a firm grasp of reality, SJs are down-to-earth and concerned with the security of the future.
- They support time-honoured institutions, such as marriage, school, family, church, and civic organizations, with care and respect for tradition.

**Use of Myers-Briggs Type**
Tests for individuals like Myers Briggs are designed to be wholly without discrimination and can measure important aspects of people’s intellectual ability, personality and interests

**The Big Five**
- **Extraversion:** One’s comfort level with relationships. Extraverts tend to be gregarious, assertive, and sociable
- **Agreeableness:** A person’s propensity to defer to others. Agreeable people are cooperative, warm, and trusting
- **Conscientiousness:** This dimension is a measure of reliability. This person is responsible, organized, dependable and persistent
- **Emotional Stability:** A person’s ability to withstand stress. This person is calm, self-confident and secure
- **Openness to Experience:** The individual’s range of interests and fascination with novelty. They are open, creative and artistically sensitive
The Behavior Event Interview Technique

Emergence of Competency-based Interviews:

• 1970s: “Testing for Competence Rather than Intelligence” (McClelland, 1973)
• Competency: “an underlying characteristic of a person which enables them to deliver superior performance in a given job, role, or situation”
• Can be learned and developed over time.
• Implication: If competencies are made visible and training is accessible, individuals can understand and develop the required level of performance.

Some Commonly used Interview Techniques

• Behavioral Event Interview (adaptation of a critical-incident technique)
• Focus Groups
• Survey

The Behavioral Event Interview

• Respondents describe in their own words what they thought, said, felt and did in three episodes – three positive and three negative
• e.g. Situation 1: a time when one had to work hard to convince or persuade someone to do something
• e.g. Situation 2: a time when one felt happy with something that one achieved
• e.g. Situation 3: a time when one was unhappy with the way things were going in one’s life
• The interviews are recorded, typed up, clustered and coded for various characteristics
• Competencies are coded both for frequency of occurrence and for level of complexity
• Competencies are measured and/or discovered as differentiators between the two groups
• BEI transcripts may be used as a assessment tool or for predicting later applicants for success