

# Chapter 10

## Career and Occupational Assessment: Interest Inventories, Multiple Aptitude Tests, and Special Aptitude Tests



# Defining Career and Occupational Assessment

- ▶ Career and occupational assessment can occur at any point in life — most critical at transition points
- ▶ Counseling and assessment can help in this process
- ▶ Three kinds of assessment that can be helpful:
  - Interest inventories
  - Multiple aptitude tests
  - Special aptitude tests



# Interest Inventories

- ▶ Used to determine the likes and dislikes of a person
- ▶ An individual's personality orientation toward the world of work
- ▶ Many are good at predicting job satisfaction
- ▶ Three we will look at:
  - Strong Vocational Interest Inventory
  - Self-Directed Search (SDS)
  - Career Occupational Preference System Interest Inventory (COPS)



# Strong Interest Inventory

- ▶ First developed in 1927 as Strong Vocational Interest Blank
- ▶ For ages 16 and older
- ▶ Takes 35-40 minutes
- ▶ Five different interpretive scales or indexes:
  - General Occupational Themes
  - Basic Interest Scales
  - Occupational Scales
  - Personal Style Scales
  - The Response Summary

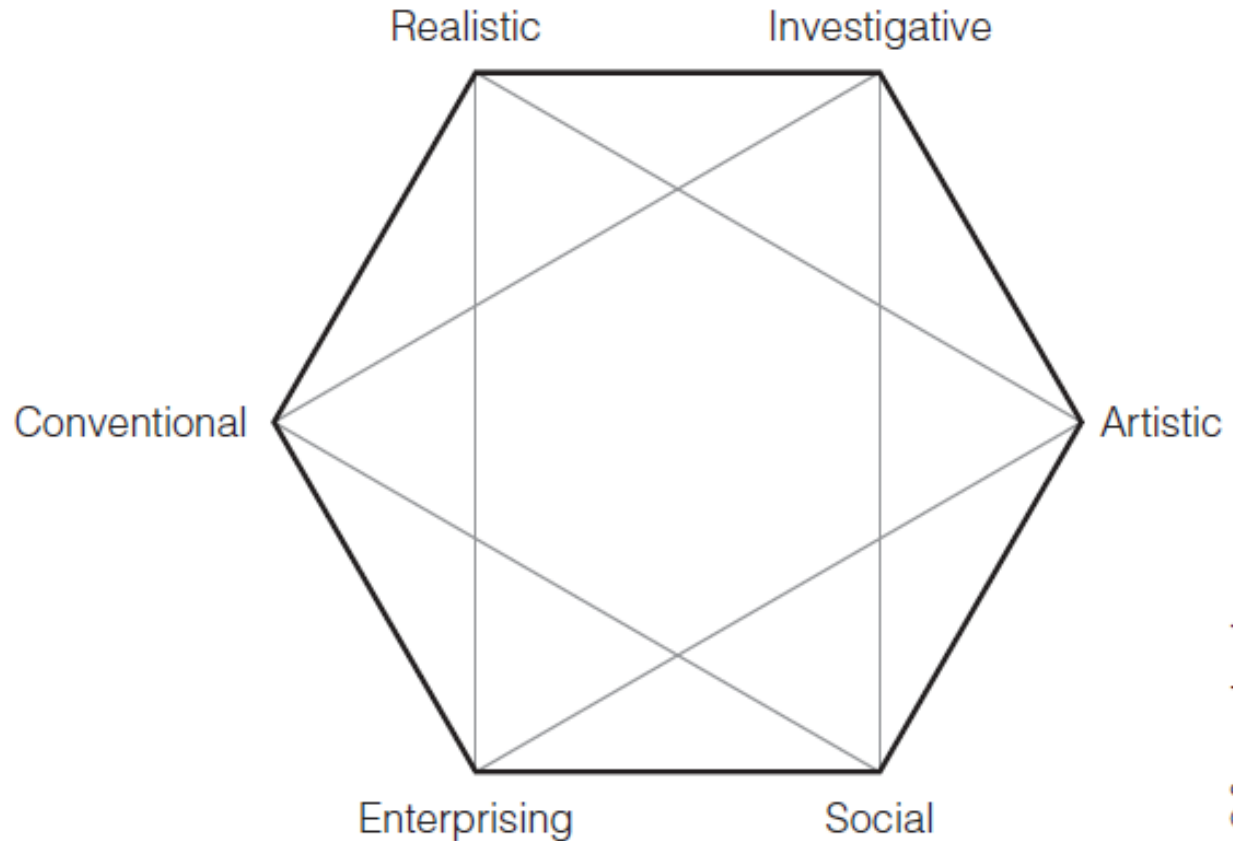


# Strong Interest Inventory

- ▶ General Occupational Themes
  - Most commonly used score on the Strong Interest Inventory
  - Offers a three letter code based on Holland's hexagon model
  - Identifies top three Holland codes in hierarchical order



# Strong Interest Inventory



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**FIGURE 10.1**

Holland's Hexagon Model of Personality Types



# Strong Interest Inventory

- ▶ Basic Interest Scales
  - Shows interests in 30 broad areas broken down by Holland Code
  - Uses T Scores
  - Higher scores: The more you are like people of your gender in those interest areas



# Strong Interest Inventory

- ▶ Occupational Scales
  - Original basis of the 1927 Strong Interest Inventory
  - Compare client's interests to the interests of same-sex individuals who are satisfied in their jobs
  - Lists 10 occupations to which client is most similar
  - Separately compares client to 244 occupations
  - The higher the *T*-Score, the more similar are one's interests to those in the stated jobs





# Strong Interest Inventory

- ▶ The Personal Style Scales
  - Gives estimate of client in certain activities:
    - Work style (alone or with people)
    - Learning environment (practical vs. academic)
    - Leadership style (taking charge vs. letting others take charge)
    - Risk taking/adventure (risk taker vs. nonrisk taker)
    - Team orientation (working on team vs. independently)
  - *T*-scores comparisons to men, women, or both



# Strong Interest Inventory

- ▶ Response Summary
  - Percentage of client's responses across all six areas measured (e.g., school subjects, leisure activities)
  - Helpful if you suspect a response set
  - Typicality index:
    - Assists in identifying or flagging examinees who may be making random responses
    - 16 or lower indicates inconsistent pattern of item selection



# Strong Interest Inventory

- ▶ Normative and Test Worthiness Info
  - Can be mailed, given as software, or on Internet
  - Reliability: .80s to .90s for different subsections
  - Evidence of wide range of validity for different scales
    - Occupational Scales: Convergence with most recent version of Strong
    - Basic Interest Scales: Seem to be related to their broad occupational groups
    - Discrimination of Personal Style Scales



# Self-Directed Search (SDS)

- ▶ Created by Holland
- ▶ Based on hexagon
- ▶ Can be self administered, scored, and interpreted, but always good to have a counselor guide a client
- ▶ Primarily based on interests, but also includes self-estimates of competencies and ability
- ▶ Client obtains three-letter Holland code



# Self-Directed Search

- ▶ Can cross-reference code with:
  - 1,300 occupations in Occupations Finder
  - 2,000 occupations in Dictionary of Holland Occupational Codes
  - O\*NET Online interest search



# Self-Directed Search

- ▶ Four forms for middle school through older adults
  - Form R (regular)
  - Form E (easy-to-read)
  - Form CE (career explorer)
  - Form CP (career planning)
- ▶ Administered by booklet, computer, or Internet
- ▶ Reliability coefficients in the .90s
- ▶ Moderate correlation with job satisfaction



# Career Occupational Preference System (COPS)

- ▶ Three instruments measure interests, abilities, and values
  - Career Occupational Preference System Interest Inventory (COPS)
  - Career Ability Placement Survey (CAPS)
  - Career Orientation Placement and Evaluation Survey (COPES)



# Career Occupational Preference System (COPS)

**TABLE 10.1** | COPS System Assessments and Administration Times

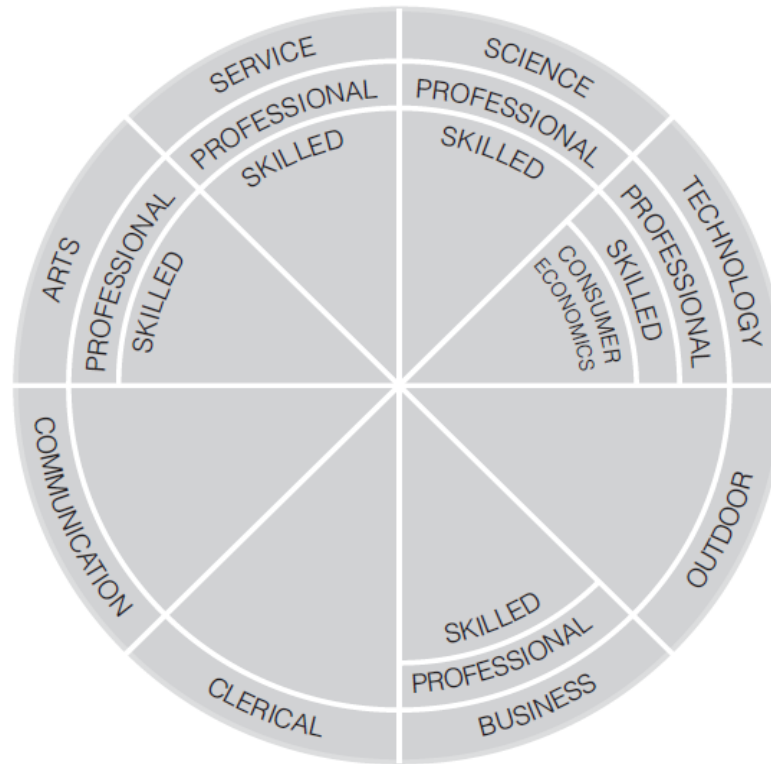
Measurement	Acronym	Full Name	Administration Time (in Minutes)
Interests	COPS	Career Occupational Preference System Interest Inventory	20 to 30
Abilities	CAPS	Career Ability Placement Survey	50
Work Values	COPES	Career Orientation Placement and Evaluation Survey	30 to 40

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# Career Occupational Preference System (COPS)



**FIGURE 10.4** | COPS Career Clusters

Source: EdITS. (2010). COPSsystem: Home. Retrieved from <http://www.edits.net/component/content/article/10/352-copsystem-career-wheel-of-career-clusters.html>



# Career Occupational Preference System (COPS)

- ▶ Career Occupational Preference System Interest Inventory (COPS)
  - 7<sup>th</sup> grade to adult
  - Scores related to a career cluster model used to guide the individual to a number of career areas



# Career Occupational Preference System (COPS)

- ▶ Career Ability Placement Survey (CAPS)
  - Measures abilities across 8 different dimensions related to career cluster
  - Can identify which fields are best suited to their abilities or for which more training may be required



# Career Occupational Preference System (COPS)

- ▶ Career Orientation Placement and Evaluation Survey (COPEs)
  - Assesses values important in occupational selection and job satisfaction
  - Scales are based on eight dichotomous poles, which then are keyed to the COPS career clusters



# Career Occupational Preference System (COPS)

**TABLE 10.2** | The COPES Scales

Investigative	vs.	Accepting
Practical	vs.	Carefree
Independence	vs.	Conformity
Leadership	vs.	Supportive
Orderliness	vs.	Flexibility
Recognition	vs.	Privacy
Aesthetic	vs.	Realistic
Social	vs.	Reserved

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# O\*NET and Career Exploration Tool

- ▶ Occupational Information Network (O\*NET) is a free online database
- ▶ Developed by U.S. Dept. of Labor



# O\*NET and Career Exploration Tool

- ▶ Six domains:
  - Worker characteristics, worker requirements, experience requirements, occupational requirements, workforce characteristics, and occupation-specific information
- ▶ Offers a wide variety of ways to search jobs and job characteristics and to compare your skills, interests, and abilities to these jobs



# Other Common Interest Inventories

- ▶ Campbell Interest and Skill Survey (CISS)
  - For college-bound or educated individuals
- ▶ SIGI 3
  - Computer-based career self-assessment program primarily for high school and college students
- ▶ Career Assessment Inventory
  - Uses Holland Code





# Multiple Aptitude Testing

- ▶ Measures several abilities
- ▶ Used to predict how an individual might perform in different jobs
- ▶ Often used in conjunction with interest inventories
- ▶ Usually used for career counseling
- ▶ Factor analysis often used with multiple aptitude tests to assure the purity of the different tests (sub-tests)



# Armed Services Multiple Aptitude Battery (ASVAB)

- ▶ Most widely-used multiple aptitude test in the world
- ▶ Three components:
  - ASVAB aptitude test
  - Find Your Interests (FYI) interest inventory
    - Uses Holland Codes
  - OCCU-Find career exploration tool



# Armed Services Multiple Aptitude Battery (ASVAB)

- ▶ Aptitude Test Has Two Formats:
  - CAT-ASVAB: Directs examinees to specific questions based on their abilities
  - Traditional paper-and-pencil test



# Armed Services Multiple Aptitude Battery (ASVAB)

- ▶ CAT-ASVAB
  - Takes less time than traditional paper-and-pencil test
- ▶ ASVAB Aptitude Test
  - 10 subtests in 4 domains
  - Has relatively good reliability and validity
  - Often given in high schools for free
  - Associated with O\*NET



# Armed Services Multiple Aptitude Battery (ASVAB)

**TABLE 10.4** | ASVAB Domains and Tests

Domain	Test
Verbal	Word knowledge (WK) Paragraph comprehension (PC)
Math	Arithmetic reasoning (AR) Mathematics knowledge (MK)
Science and Technology	General science (GS) Electronics information (EI) Auto information (AI) Shop information (SI) Mechanical comprehension (MC)
Spatial	Assembling objects (AO)

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# Differential Aptitude Test

- ▶ For grades 7-12
- ▶ Measures students' ability to learn and be successful in certain areas related to occupational skills
- ▶ Often administered/interpreted by school counselors



# Differential Aptitude Test

- ▶ Takes approximately 1.5 to 2.5 hours
- ▶ Eight separate tests that measure verbal reasoning, numerical reasoning, abstract reasoning, perceptual speed and accuracy, mechanical reasoning, space relations, spelling, and language usage
- ▶ Also includes a Career Interest Inventory (CII) to examine interests in conjunction with ability



# Differential Aptitude Test

- ▶ Reliability of different tests range between .80 and .95
- ▶ Correlations with the DAT and several other major aptitude tests (ACT, ASVAB, SAT, and the California Achievement Test) ranged between .68 and .85





# Differential Aptitude Test

- ▶ Correlations with DAT scores and high school grades are sound
- ▶ Little data exists regarding predictive validity in job performance.
- ▶ DAT PCA
  - Version for adults
  - Used by employers for screening and promotion



# Special Aptitude Testing

- ▶ Measures a homogenous area of ability
- ▶ Used to predict success in a specific vocation
- ▶ Helps individuals decide if they might do well in a specific occupation or to help employers and schools make decisions about hiring/admitting
- ▶ Discuss: How is it possible to measure some special aptitudes like art, music?
  - Rating some attributes (interrater reliability) would work, but is it practical?



# Special Aptitude Testing

- ▶ Some more popular Special Aptitude Tests:
  - Clerical Test Battery (CTB2)
  - The Minnesota Clerical Assessment Battery
  - U.S. Postal Service's 473 Battery Examination
  - SkillsProfiler Series Mechanical Aptitude Test
  - Technical Test Battery (TTB2)
  - Wiesen Test of Mechanical Aptitude
  - Arco Mechanical Aptitude and Spatial Relations Tests



# Special Aptitude Testing

- ▶ Some more popular Special Aptitude Tests:
  - Bennett Test of Mechanical Comprehension
  - Music Aptitude Profile
  - Iowa Test of Music Literacy
  - Keynotes Music Evaluation Software
  - Group Test of Musical Ability



# Role of Helpers in Career and Occupational Assessment

- ▶ These tests don't require advance training
- ▶ However, examiners should have knowledge of testing and specific knowledge of these instruments



# Role of Helpers in Career and Occupational Assessment

- ▶ Helpers provide career and occupational assessment in following ways:
  - Middle school counselors give interest inventories to help students examine occupational likes and dislikes
  - High school and college counselors provide interest inventories to help students with occupational choices and make tentative choices about college major



# Role of Helpers in Career and Occupational Assessment

- ▶ Helpers provide career and occupational assessment in following ways:
  - High school counselors orchestrate administration of multiple aptitude tests and help interpret tests
  - Private practice clinicians give interest inventories and aptitude tests to help clients examine what they're good at and guide clients into good occupational "fits"
  - Even private businesses today can be found offering career and occupational assessment



# Final Thoughts on Career and Occupational Assessment

- ▶ As with all testing, occupational and career assessment should not be done in a vacuum
- ▶ Understanding the complexities of one's interests and abilities and eventual occupational choice is critical





# Final Thoughts on Career and Occupational Assessment

- ▶ Clients make choices for such reasons as:
  - Psychodynamic reasons (e.g., parental influences)
  - Social pressures (e.g., racism, sexism, peer pressure)
  - Environmental concerns (e. g, the economy)
  - Family issues (e.g., sibling rivalry)
- ▶ Therefore, occupational and career decisions should be thoughtful and wise

