STUDY GUIDE

Advanced Psychological Testing and Measurements
(Psy 721)

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This book is owned by:

PREFACE

It is my intention in preparing this study guide to provide you with a list of most of the terms, concepts, and principles you should master for an <u>advanced</u> course in psychological testing and measurement. While I have attempted to include everything you should know, I do not intend for this to be an exhaustive survey of everything that we will cover in class. It is my belief that *<u>GRADUATE STUDENTS</u>* should do more than master definitions; they should understand and be able to apply the concepts discussed in this course. My advice is to <u>complete all of the assigned readings</u> and <u>take good notes</u> on what we cover in class.

Table of Contents

Introduction and History

Reading: Murphy & Davidshofer, Chapter 1

Cohen et. al., Chapter 1
Aiken, Chapter 1

Terms You Should Know

Historical figures to know.

Sir Francis Galton

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James McKeen Cattell

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Alfred Binet

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Arthur Otis

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What is a test?

Behavior sample.

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....

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Predictive value of a test.   ....
....

....
Standardization   ....
....

Objective measurement ....

Standardized Test ....

Non-standardized test ....

Aptitude Test ....

Achievement Test ....

Individual Test ....

Group Test ....

Speed Test ....

Power Test ....

Cognitive Test ....

Affective Test ....

Objective Scoring   . . . .
                           . . . .
                           . . . .

Subjective Scoring   . . . .
                           . . . .
                           . . . .

Verbal Test   . . . .
                           . . . .
                           . . . .

Performance Test   . . . .
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                           . . . .

Concepts you should master.

1. Be prepared to identify/list the key sources of information about tests.

2. Be able to describe the different types of psychological tests.

3. Be able to describe, and discuss the assumptions that we make about tests (Aiken).

4. What is the difference between psychological TESTING and psychological ASSESSMENT? Why should we make a distinction between the two terms?

Issues, Ethics, and Diversity

Reading: Murphy & Davidshofer, Chapter 3, Appendix B (APA Ethical Principles for Psychologists)

Cohen et. al., Chapter 2
APA *Standards for Educational and Psychological Testing*
Code of Fair Testing Practices
Ethical Standards for School Counselors

Terms You Should Know.

Ethical Principles for Psychologists, 1992

General principles

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. . . .

Competence

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. . . .

Integrity

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. . . .

Professional Responsibility

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. . . .
. . . .

Respect for People's Rights

. . . .
. . . .
. . . .

Concern for welfare.

. . . .
. . . .
. . . .

Social Responsibility

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. . . .
. . . .

Ethical Standards   . . . .
. . . .
. . . .

    General Standards   . . . .
. . . .
. . . .

    Evaluation, Assessment, or
Intervention   . . . .
. . . .
. . . .

    Privacy and Confidentiality   . . . .
. . . .
. . . .

*Standards for Educational and
Psychological Testing*   . . . .
. . . .
. . . .

    Chapter 6, General principles
of test use.   . . . .
. . . .
. . . .

    Chapter 7. Clinical Testing   . . . .
. . . .
. . . .

    Chapter 8, Educational and
Psychological Testing   . . . .
. . . .
. . . .

APA *Code of Fair Testing Practices
in Education*   . . . .
. . . .
. . . .

Invasion and privacy   . . . .
. . . .
. . . .

Confidentiality   . . . .
. . . .
. . . .

Privileged Communication   . . . .
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                                  . . . .

Concepts you should master.

1. What are the key issues relating to the acquisition of psychological tests?

2. What are the *Ethical Principles for Psychologists* and to whom do they apply?

3. What is the *Code of Fair Test Practice* and to whom does it apply?

4. What are they *Standards for Educational and Psychological Testing* and to whom do they apply?

5. Be able to identify and define the key terms and *Ethical Standards* as they apply to psychological testing.

6. What do the various standards say about competence?

7. What do the various standards say about confidentiality?

8. What do the various standards say about informed consent?

9. What do the ethical principles say about giving feedback?

10. What do the various standards say about the voluntary nature of testing?

11. What are the issues surrounding test fairness and diversity concerns.

12. What is meany by the term 'Efficiency vs. Equity'?

Test Scores and Norms

Reading: Murphy & Davidshofer, Chapter 5 128

Cohen et. al., Chapter 4, pps 116 -
Aiken, Chapter 3

Terms You Should Know...

Norm Referenced Testing   . . . .

Criterion Referenced Testing   . . . .

Normative Scoring   . . . .

Ipsative Scoring   . . . .

Types of Norms

   Developmental Norms   . . . .

      Age Norms   . . . .

      Grade Equivalent   . . . .

Norms

   Ordinal Norms   . . . .

Within Group Norms

    z-score

. . . .
. . . .
. . . .

    Percentile

. . . .
. . . .
. . . .

    Standard Scores

. . . .
. . . .
. . . .

    T- Score

. . . .
. . . .
. . . .

    Normalized Standard Scores

. . . .
. . . .
. . . .

    Stanines

. . . .
. . . .
. . . .

    IQ Scores

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. . . .
. . . .

Norms and Sampling

    Normative Sample

. . . .
. . . .
. . . .

    Anchor Group

. . . .
. . . .
. . . .

    National Anchor Norms

. . . .
. . . .
. . . .

Equating

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Subgroup norms

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....

Local Norms

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....

Grade Norms

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....

Criterion Referenced Testing

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What is the criterion?

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....

Mastery Testing

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Prediction

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Expectancy Tables

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....

Formulas You Should Know...

$$\frac{X - M_X}{SD_x}$$

....
....
....

$$(Z_x \; x \; SD_N) + M_N$$

....
....
....

Computations you should be able to perform.

The following problems use this information.

Wanda Fish computed the grades for an arithmetic test for her class of guppy trainers. The mean for the class was 60 and the standard deviation was 6.

1. Compute a z-score from a raw score.

   Compute a z-score for the following raw scores.

   66

   60

   48

2. Estimate a percentile from a z-score.

   In Fish's class Porgy Haddock got a score of 65. Approximately what percentile does this score represent?

3. Compute a t-score from a z-score.

    Lee Tuort had a z-score of .5. What was Lee's t-score on a scale with M = 50 and SD = 5?

4. Compute a t-score from a raw score.

    Jesus Ixthis had a raw score of 72; what was his t-score on a scale with M=40 and SD = 7?

5. Compute an IQ score from a z-score.

    Barry Cuda had a score of 66. What was Barry's approximate score in IQ units?

Concepts You Should Master

1. What is the difference between criterion referenced testing and norm referenced testing?

    When is it most appropriate to use each?

2. How easy or difficult is it to compare the scores for two individuals who have taken the same test…

    If their scores are reported in terms of the same norm group?

    If their scores are reported in terms of different norm groups?

3. What would you want to know about a norm group before you used it to establish a percentile for a person?

4. Why would you want to know the use to which a score is being put before you chose a norm group?

5. What impact does the standardization sample have on the establishment of norms?

6. Does it make sense to have different norm groups with personality tests?

   a. For normal personality assessments? Why?

   b. For abnormal personality assessments? Why?

Reliability

Reading: Murphy & Davidshofer, Chapter 6 & 7

Cohen et. al., Chapter 5
Aiken, Chapter 5

Terms You Should Know

Reliability   ....

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....

    Sources of error   ....

....

....

    True Score   ....

....

....

    Error   ....

....

....

    r_{xx} ....

....

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Test-Retest Reliability   ....

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Alternate (Parallel) Forms
Reliability   ....

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Internal Consistency   ....

....

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Split Half Reliability

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Kuder Richardson

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Coefficient Alpha

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Interrater (Scorer Reliability)

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Standard Error of Measurement

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Confidence Interval (for a test score)

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Standard Error of the difference between scores

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Spearman Brown Correction for test length.

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Spearman Brown Correction for attenuation.

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Concepts You Should Master

1. Does one type of reliability measure assess all the sources of measurement error?

2. Why does reliability place a limit on validity?

3. What special concerns should we have about the reliability of speeded tests?

4. What types of error are more likely to be detected by each reliability estimate?

5. Why should we be concerned about the Standard Error of Measurement? Of what practical use is this test statistic?

6. What is meant by Correction for Attenuation? What is the practical use of this statistical procedure?

7. Of what practical use is r_{tt} in the interpretation of test scores? Why should you worry about it?

8. What are the pros and cons of administering a homogenous test?

Calculations You Should Be Able to Perform.

1. Compute the standard error of measurement. $SEM = \sigma_t\sqrt{1 - r_{tt}}$

   a. A test has a Mean of 50 a standard deviation of 10 and a reliability coefficient of .91. What is the standard error of measurement?

   b. A test has a mean of 122, a standard deviation of 7, and a reliability coefficient of .84. What is the standard error of measurement?

2. Be able to compute the 95% confidence interval for a test.

   a. Chris gets a score of 87 on a test of mental agility. The standard error of measurement for this test is 2. What is the 95% confidence interval for this score?

   b. Pat gets a score of 128 on a creativity test. The SEM for the test is 3. What is the 95% confidence interval for this score?

3. Be able to interpret the Standard Error of Measurement.

4. Be able to interpret the 95% confidence interval for a test score.

Validity and Test Bias

Reading: Murphy & Davidshofer, Chapter 8 & 9

Cohen et. al., Chapter 6
Aiken, Chapter 5

Terms You Should Know

Validity
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Face Validity
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Content Validity
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Content Domain
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Content Validity Ratio
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....
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Criterion Related Validity
....
....
....

Criterion
....
....
....

Predictor
....
....
....

Predictive Validation ....
....
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Concurrent Validation ....
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Validity Coefficient ....
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Validity Generalization ....
....
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Construct Validation ....
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Clinical Interpretation ....
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Actuarial Interpretation ....
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Test Battery ....
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Multiple Regression ....
....
....

Selection Models ....
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....

Compensatory Model ....
....
....

Multiple Cutoff Model . . . .

Expectancy Table . . . .

Hits . . . .

False Positives . . . .

False Negatives . . . .

True Negatives . . . .

Taylor Russell Tables . . . .

Base Rate . . . .

Selection Ratio . . . .

Construct Validity . . . .

Construct . . . .

Test Bias   . . . .
                                         . . . .
                                         . . . .

    Slope Bias   . . . .
                                         . . . .
                                         . . . .

    Differential Validity   . . . .
                                         . . . .
                                         . . . .

    Intercept Bias   . . . .
                                         . . . .
                                         . . . .

Rater Errors   . . . .
                                         . . . .
                                         . . . .

    Leniency Error   . . . .
                                         . . . .
                                         . . . .

    Severity Error   . . . .
                                         . . . .
                                         . . . .

    Halo Error   . . . .
                                         . . . .
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Concepts You Should Master

1. What is meany by the statement, "*VALIDITY refers to the appropriateness of inferences drawn from test scores.*"?

2. What are the steps in establishing the CONTENT VALIDITY of a test?

3. Of what use is CRITERION RELATED validity? Under what circumstances would being able to demonstrate this be useful?

4. What is the difference between the PREDICTIVE and CONCURRENT validation strategy?

5. Why should you worry about the CONTENT VALIDITY of a test?

6. How does one demonstrate CONSTRUCT VALIDITY? Be able to list the various techniques for developing evidence for CONSTRUCT VALIDITY.

7. As a professional test user, what evidence(s) of validity do you feel should be most important for you? Why?

8. What impact does the Standard Error of Measurement on the interpretation of a test score?

9. Be able to analyze a selection situation and decide what will happen if

    a. The predictor is made more valid.

    b. The cut off score is changed

    c. The expected performance level on the criterion is altered.

10. When would you want to use a compensatory evaluation model, and when would you want to use a multiple cut-off model? Why?

11. How to you estimate test bias? What are the strengths and weaknesses of each approach?

12. Why can a test be valid for one use but invalid for another?

Test Design

Reading: Murphy & Davidshofer, Chapter 11

Cohen et. al., Chapter 7, pps 218-231
Aiken, Chapter 2 & 3

Terms You Should Know.

<u>COGNITIVE TESTS</u>

Screening test

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Educational Objective

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....

Content Domain

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Response Types

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    Supply vs Selection

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    Recall vs. Recognition

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....

    Constructed Response

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Classification of test item types

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    Essay item

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....

True-False . . . .
. . . .
. . . .

Matching . . . .
. . . .
. . . .

Multiple choice . . . .
. . . .
. . . .

Stem . . . .
. . . .
. . . .

Distractor . . . .
. . . .
. . . .

Completion item . . . .
. . . .
. . . .

Short answer item . . . .
. . . .
. . . .

Scoring Tests

Correction for guessing . . . .
. . . .
. . . .

Converted Scores . . . .
. . . .
. . . .

AFFECTIVE TESTS

Self Report . . . .
. . . .
. . . .

Semantic Differential   . . . .
. . . .
. . . .

Projective items   . . . .
. . . .
. . . .

Behavioral Items   . . . .
. . . .
. . . .

Theoretical Items   . . . .
. . . .
. . . .

Response alternatives

   YES-NO   . . . .
. . . .
. . . .

   Frequency   . . . .
. . . .
. . . .

   Agreement   . . . .
. . . .
. . . .

   Selection   . . . .
. . . .
. . . .

   Paired comparison   . . . .
. . . .
. . . .

Response biases
. . . .
   Social Desirability   . . . .
. . . .

Agreement Bias   . . . .
                                        . . . .
                                        . . . .

Positive and Negative   . . . .
Response Bias   . . . .
                                        . . . .

Random responding   . . . .
                                        . . . .
                                        . . . .

Checking Bias   . . . .
                                        . . . .
                                        . . . .

Skill/Performance Testing   . . . .
                                        . . . .
                                        . . . .

Oral Testing   . . . .
                                        . . . .
                                        . . . .

Concepts You Should Master.

1. When designing a test, what are the key things you should consider before you prepare any of the test items?

2. List some of the difficulties faced when developing a self-report test.

3. What does the ethical principle of *informed consent* mean when it comes to effective test administration?

4. What responsibilities does an examiner have when it comes to effective test administration?

5. Why should one be concerned about objective scoring?

6. What are the pros and cons of having correction for guessing on test items?

7. When you look at a test score, or someone tells you about someone's test performance, what should you know about the test's design in order to make a fair, valid, and correct interpretation of the test's score(s). Tell what information you would like to have and why it is important.

Item Analysis

Reading: Murphy & Davidshofer, Chapter 10

Cohen et. al., Chapter 7, pps 232-253
Aiken, Chapter 3

Terms You Should Know...

Item Analysis
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....
....

Distractor Analysis
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....

Item Difficulty Analysis
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....
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Item Discrimination
....
....
....

    Discrimination Index
....
....
....

    PHI Coefficient
....
....
....

    Item-Total Correlation
....
....
....

    Inter-item correlations
....
....
....

Ability/Cognitive Tests

Reading: Murphy & Davidshofer, Chapters 2 pps. 20-35, 13, 14, 15

Cohen et. al., Chapters 8 & 9
Aiken, Chap. 7, 8, 9

Terms You Should Know

Factor Analysis   . . . .
. . . .
. . . .

General Mental Ability   . . . .
. . . .
. . . .

Spearman's Two Factor Theory   . . . .
. . . .
. . . .

Thurstone's Primary Mental
Abilities   . . . .
. . . .
. . . .

Guilford's Structure of Intellect
Model   . . . .
. . . .
. . . .

Information Processing Model   . . . .
. . . .
. . . .

Gardner's Multiple Intelligences   . . . .
. . . .
. . . .

Aptitude   . . . .
. . . .
. . . .

Gifted/Giftedness . . . .
. . . .
. . . .

Individual Tests

Stanford Binet . . . .
. . . .
. . . .

    Adaptive Testing . . . .
. . . .
. . . .

    Routing Test . . . .
. . . .
. . . .

    Basal Level . . . .
. . . .
. . . .

    Ceiling Level . . . .
. . . .
. . . .

Weschler Adult Intelligence Scale
- Revised . . . .
. . . .
. . . .

    Point Scale . . . .
. . . .
. . . .

Weschler Intelligence Scale for
Children . . . .
. . . .
. . . .

Peabody Picture Vocabulary Test . . . .
. . . .
. . . .

Developmental Tests   . . . .
. . . .
. . . .

Gesell Tests   . . . .
. . . .
. . . .

Group Tests   . . . .
. . . .

Multilevel Intelligence Test   . . . .

Otis Tests   . . . .
. . . .
. . . .

Wonderlic Personnel Test   . . . .
. . . .
. . . .

ASVAB   . . . .
. . . .
. . . .

Concepts You Should Master

1. What are the characteristics of a good intelligence test?

2. What is the difference between Aptitude and Ability?

3. What are the major issues relating to the measurement of intelligence and

   a. Stability over time

   b. Early childhood intelligence

   c. What are the various levels and interpretation of IQ scores with regard to mental retardation. What are the controversies in these labels?

4. What impact would the standard error of measurement have on your interpretation of an abilities test?

5. What has research shown with regard to the following demographic variables and their impact on intelligence test scores?

    a. Age.

    b. Family size and birth order.

    c. Occupational status

    d. Socioeconomic status

    e. Teacher expectations

    f. Culture

    g. Gender

6. What has research shown with regard to environmental variables and their impact on intelligence test scores?

7. What skills do we assume a test taker has when taking a group intelligence test?

8. Do our current popular intelligence tests measure intelligence?

9. Be prepared to discuss the following for the Stanford-Binet.

    a. History and how developed

    b. Theory/Model

    c. What measured

    d. Administration

    e. Scoring

    f. Norms and standardization

    g. Reliability and validity

    h. Standard Error of Measurement

    i. Issues

10. Be prepared to discuss the following for the Weschler Adult Intelligence Scale-Revised.

    a. History and how developed

    b. Theory

    c. What measured

    d. Administration

    e. Scoring

    f. Norms and standardization

    g. Reliability and validity

    h. Standard Error of Measurement

    i. Issues

Special Abilities Tests

Reading: Aiken, Chapter 9

Terms You Should Know

Special abilities

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. . . .
. . . .

You be able to give at least one example of each of the following types of tests.

Sensory-Perceptual Tests

. . . .
. . . .
. . . .

Psychomotor Tests

. . . .
. . . .
. . . .

Mechanical Ability

. . . .
. . . .
. . . .

Spatial Relations Tests

. . . .
. . . .
. . . .

Clerical Tests

. . . .
. . . .
. . . .

Creative abilities

. . . .
. . . .
. . . .

Multidimensional Aptitude Battery

. . . .
. . . .
. . . .

Concepts you should master.

1. Do special abilities tests measure aptitude or achievement?

2. What are the advantages and disadvantages of administering an aptitude test battery rather than several single tests of special abilities?

3. What is the evidence for the validity of special abilities tests?

4. Be prepared to discuss the following for the Bennett Mechanical Aptitude Test.

    a. History and how developed

    b. Theory

    c. What measured

    d. Administration

    e. Scoring

    f. Norms and standardization

    g. Reliability and validity

    h. Standard Error of Measurement

    i. Issues

Achievement Tests

Reading: Cohen et. al., Chapter 10

Aiken, Chapter 6

Terms You Should Know

Achievement test

. . . .
. . . .
. . . .

E. L. Thorndike

. . . .
. . . .
. . . .

Teacher accountability

. . . .
. . . .
. . . .

Performance contracting

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. . . .
. . . .

Norm referenced assessment

. . . .
. . . .
. . . .

Criterion referenced assessment

. . . .
. . . .
. . . .

Summative evaluation

. . . .
. . . .
. . . .

Formative evaluation

. . . .
. . . .
. . . .

Survey Battery

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. . . .
. . . .

Single-subject test

. . . .
. . . .
. . . .

Diagnostic Test

. . . .
. . . .
. . . .

Prognostic Test

. . . .
. . . .
. . . .

General Educational
Development (GED) Tests

. . . .
. . . .
. . . .

Survey Reading Test

. . . .
. . . .
. . . .

Diagnostic Reading Test

. . . .
. . . .
. . . .

Reading Readiness Test

. . . .
. . . .
. . . .

Survey Mathematics Test

. . . .
. . . .
. . . .

Diagnostic Mathematics Test

. . . .
. . . .
. . . .

Prognostic Mathematics Test

. . . .
. . . .
. . . .

Language Tests

. . . .
. . . .
. . . .

Concepts You Should Master

1. Be able to briefly summarize the history of achievement tests.

2. Be able to list the major uses of achievement tests.

3. What considerations should be made when selecting a standardized test in terms of?

    a. Reliability

    b. Validity

    c. Norms

    d. Administration

4. Be able to describe the differences between survey tests, diagnostic tests, and prognostic tests.

5. Be able to describe the strengths and issues concerning each of the following.

   a. Survey Test batteries.

   b. General Achievement Test Batteries.

   c. Specific Tests

      i. Reading

      ii. Mathematics

      iii. Language

      iv. Social Studies

6. Be prepared to discuss the following for the Kauffman Assessment Battery for Children.

   a. History and how developed

   b. Theory

   c. What measured

   d. Administration

   e. Scoring

   f. Norms and standardization

   g. Reliability and validity

   h. Standard Error of Measurement

   i. Issues

7. Be prepared to discuss the following for the Woodcock-Johnson Psycho-Educational Battery.

    a. History and how developed

    b. Theory

    c. What measured

    d. Administration

    e. Scoring

    f. Norms and standardization

    g. Reliability and validity

    h. Standard Error of Measurement

    i. Issues

Personality Tests

Reading: Murphy & Davidshofer Chapter 2 (pps. 39-47) 16

Cohen et. al., Chapters 11 & 12
Aiken, Chapters 11, 12

Terms You Should Know

Personality ....
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....

   Type ....
....
....

   Trait ....
....
....

   State ....
....
....

Controlled vs Uncontrolled ....
Observations ....
....

Type Theory ....
....
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Trait Theory ....
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Psychoanalytic Theory ....
....
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Phenomenological Theory

. . . .
. . . .
. . . .

Social Learning Theory

. . . .
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. . . .

Barnum Effect

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. . . .
. . . .

Empirical Criterion Keying

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. . . .
. . . .

MMPI and MMPI-2

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. . . .
. . . .

Myers-Briggs Type Indicator

. . . .
. . . .
. . . .

California Personality Inventory

. . . .
. . . .
. . . .

16-PF

. . . .
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NEO-PI-R

. . . .
. . . .
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Projective Tests

. . . .
. . . .
. . . .

Rorschach Test

. . . .
. . . .
. . . .

John Exner

. . . .
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Thematic Apperception Test

. . . .
. . . .
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Concepts you should master.

1. What are the difficulties faced when attempting to assess a person's personality?

    a. Response sets.

    b. Faking

    c. Socio-economic status

2. What impact does a person's state have on the assessment of an individual's personality?

3. What are the major techniques used for assessing personality?

4. Be able to describe the major techniques for developing a personality test.

5. What are the issues surrounding the fact that most personality assessment techniques are self-reports?

6. Be prepared to discuss the following with regard to the MMPI-2.

    a. History and how developed

    b. Theory

    c. What measured

    d. Administration

    e. Scoring

    f. Norms and standardization

    g. Reliability and validity

    h. Issues

7. Be prepared to discuss the following with regard to the 16PF.

    a. History and how developed

    b. Theory

    c. What measured

    d. Administration

    e. Scoring

    f. Norms and standardization

    g. Reliability and validity

    h. Issues

8. Be prepared to discuss the following with regard to the Rorschach.

    a. History and how developed

    b. Theory

    c. What measured

    d. Administration

    e. Scoring

    f. Norms and standardization

    g. Reliability and validity

    h. Issues

9. Be prepared to discuss the following with regard to the Thematic Apperception Test.

    a. History and how developed

    b. Theory

    c. What measured

    d. Administration

    e. Scoring

    f. Norms and standardization

    g. Reliability and validity

    h. Issues

Industrial and Career Assessment

Reading: Murphy & Davidshofer, Chapter 2 (pps. 35-39), Chapter 16

Cohen et. al., Chapter 17
Aiken, Chapter 10, pps 231-251

Terms You Should Know

Interests
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....
....

Strong Vocational Interests
Inventories
....
....
....

Holland Scales
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....
....

Social Interests
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....
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Enterprising Interests
....
....
....

Conventional Interests
....
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....

Realistic Interests
....
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Investigative Interests
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....
....

Artistic Interests ....

Jackson Vocational Interest Survey ....

Kuder Interest Inventories ....

Attitudes ....

Concepts you should master.

1. What role does each of the following play in determining vocational interests?

    a. Heredity

    b. Environment

2. How stable are a person's interests?

3. What evidence is there for the validity of interest inventories?

4. Be able to identify the six Holland Scales and interpret what it means to have a high or low score on each scale.

5. Be prepared do identify/discus the following for the Strong Vocational Interest Blank

    a. History and how developed.

    b. Theory

    c. What measured

    d. Administration

    e. Scoring

    f. Norms and standardization

    g. Reliability and validity

    h. Issues

6. Be prepared do identify/discus the following for the Kuder Occupational Interest Survey.

    a. History and how developed.

    b. Theory

    c. What measured

    d. Administration

    e. Scoring

    f. Norms and standardization

    g. Reliability and validity

    h. Issues

7. Be prepared do identify/discus the following for the Career Assessment Inventory.

   a. History and how developed.

   b. Theory

   c. What measured

   d. Administration

   e. Scoring

   f. Norms and standardization

   g. Reliability and validity

   h. Issues

Applied Testing: Clinical & Counseling Assessment

Reading: Murphy & Davidshofer Chapters 18, 19, & 20

Terms You Should Know

Interviewing

Directive vs Non-directive
Interviews
. . . .
. . . .
. . . .

Structured vs Non-structured
. . . .
. . . .
. . . .

Primary Questions
. . . .
. . . .
. . . .

Secondary Questions
. . . .
. . . .
. . . .

Behavioral Interview
. . . .
. . . .
. . . .

Situational Interview
. . . .
. . . .
. . . .

Leniency Error
. . . .
. . . .
. . . .

Severity Error
. . . .
. . . .
. . . .

Halo Effect

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....
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Contrast Error

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Diagnostic Interview

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Stress Interview

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Hypnotic Interview

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Cognitive Interview

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....
....

Open-ended questions

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....

Closed questions

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....
....

Leading questions

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....
....

Concepts you should master.

1. What issues do you face in assessing the reliability of an interview?

2. How could the reliability of a clinical interview be increased?

3. What issues do you face in assessing the validity of an interview?

4. Suppose you were faced with the task of developing an interview to assess high school students' interests on one of the six Holland scales. How would you go about developing the interview?

APPENDIX

Statistical Terms and Procedures You Should Know

References: Murphy & Davidshofer, Chapter 4
Aiken, Appendix A
Cohen et. al. Chapter 3, Chapter 4 p.p.s. 130-138

Background Concepts and Terms.   You should know the difference between descriptive and inferential statistics.

Descriptive Statistics

Inferential Statistics

Population
Sample
Random Sample

Numerical Scales   You should know the difference between the different uses of numbers and the implications that each places on statistical computations.

Nominal Scale

Ordinal Scale

Interval Scale

Ratio Scale

Frequency Distributions   You should be familiar with typical frequency distributions and what they look like.

Normal Distribution

Skewed Distribution

Positive Skew

Negative Skew

Percentile

Cumulative Frequency
Distribution

| Measures of Central Tendency | You should be familiar with typical measures of central tendency. You should know why the mean is important and what the mean represents in a normal distribution. In skewed distributions, you should know the relationship between the mean, median, and mode. |

Mean

Median

Mode

$\overline{X}$

| Measures of Variability | You should know the basic measures of variability and how they are interpreted. It is important that you know the relationship between the MEAN, the STANDARD DEVIATION, and the NORMAL CURVE. |

Range

Variance

Standard Deviation

S

S^2

σ^2

σ

| Z scores | You should know how to interpret and compute a z-score |

Z score

Standard Score

T score

Correlation and Regression

You should be familiar with what the correlation coefficient is and what it represents. Specifically, you should know how the strength and direction of the correlation are assessed and how to interpret a correlation coefficient.

Correlation Coefficient

r

Positive Correlation

Negative Correlation

Zero Correlation

Linear Relationship

Regression

Restriction of Range

Standard Error of Estimate

Model Career Planning Summary Letter

Dennis C. Sweeney, Ph.D.
363 Carmell Drive
Pittsburgh, PA 15241

July 17, 199X

Mr. XXX YYY
447 Smith Road
Apartment 33
Anyville, PA 15xxx

Dear XXX:

This letter is a report of the career counseling session you and I had this month. At the beginning of the session you told me that you had little direction as to the career you wanted to pursue and did not want to waste either your time or your parents' money on college if you were not confident as to your career choice. To assist you in making your decision I gave you a series of intellectual, work style, skills, and interest tests. I compared your performance on these tests to undergraduate, liberal arts college students. This letter is a summary of the test results combined with the discussions we have had over the past three weeks.

Intellectual skills.

As part of the test battery I gave you a series of tests that focused on your verbal and quantitative skills. These tests can give an estimate of your capacity to complete college and the types of courses in which you would be most comfortable.

While you never were an avid student in high school, your performance on the intellectual skills tests indicates that you have the basic abilities required of a college student. You have a strong vocabulary and express yourself in a direct, articulate fashion. Your verbal reasoning skills are consistent with a person who is practical and pragmatic in reaching conclusions. Your are the sort of person who wants to know the whys and hows of situations. Your basic math skills are quite rusty. You have never been particularly interested in math, and this showed up in your scores on a measure of basic mathematical applications. On the other hand, you have the ability to do better if your applied yourself; your scores on a measure of abstract reasoning fell at the 42nd percentile for college students indicating that you have the capacity to do better. All you need is the motivation. In selecting college courses I would recommend that you focus on those that are pragmatic, direct, and applied in nature. Unless you can the see direct relevance of what you are learning, you will have difficulty maintaining your interest in the course or major.

Work Style

As part of the career counseling battery I gave you a series of personality tests. These tests can be interpreted in terms of how you would approach the job and your work style.

You are a conscientious, reliable, task-oriented person. You like getting the job done and doing it well. You tend to be competitive person, and not satisfied with being second-best. You are a moderately active person. On the job you like getting the work done and can be quite impatient with delays. Socially, you are more laid-back and relaxed. You have a strong sense of personal responsibility. When you make a commitment to do something, you do not avoid it. You are the sort of person to be counted on to get the job done.

Your administrative style is mixed. You like having a number of projects going at once and can become bored when things become too routine and predictable. On the other hand, you are not one who always completes everything he begins. As a consequence, you have number of balls in the air at one time and can let a couple of them fall to the ground when you lose interest in them. You are not someone who is particularly comfortable in situations that require consistent attention to details. You prefer seeing the big picture. In the working world you will need to discipline yourself to set deadlines for completing projects and then having someone remind you of these deadlines.

You have a balanced decision making style. You can be decisive when the situation calls for it, but are not impetuous in this regard. You will be responsive to people in authority and those whom you respect, but are prepared to question situations when you either do not understand or do not agree. You can make decisions on your own. While you do not want someone looking over your shoulder, you can be responsive to guidelines set by others. You are self-confident and have the conviction that your decisions are correct and appropriate. You are not the sort of person who second guesses himself.

Your interpersonal style is mixed. Socially, you tend to be somewhat aloof, picking your acquaintances with care. You tend to be somewhat independent and are not a "joiner". Being a self-sufficient person you are not one who has a great deal of tolerance for others who are overly dependent or who complain. On the job your style is more direct. You can be quite blunt with people who work for and with you and tend to be the person to whom others look for direction.

Career Interests.

The career interests test gave us an indication of the types of careers you would be most interested in. You completed a basic interests measure, one designed that focused on your basic interests.

It is clear that you would be most interested in a career track that involved work with tangible goods or physical activity. You would not be comfortable in an academic situation unless it was practical and applied. You will like an active job. Being a frank, practical person you would be most content in a career where you could see concrete results from your efforts. Frequently such careers involve physical activity, working outdoors, or working with machinery, tools, and equipment. You are not the sort of person who would be content spending large amounts of time in a passive administrative position.

You like being in control. You would be most comfortable in a career or job track that gave you the opportunity to be in charge and to direct and control others. You do not appear to be motivated to control people for power's sake, you do have a natural interest in leading, directing and supervising others.

A third characteristic of a career that would meet your interests is one in which you saw your activities being a benefit to others. You have a strong desire to aid, assist, or support others.

There are some activities in which you show minimal interest. For example, you are not someone who would enjoy repetitive, clerical activities and should avoid jobs with a high administrative component. You also indicated that you had little interest in being involved in artistic pursuits. While you may enjoy the arts, you have little interest in

Summary

In summary, you would be most comfortable in jobs/careers that had the following characteristics:

- that gave you considerable amount of freedom to operate without close day-to-day supervision.
- that provided you with variety and change.
- that had clear rules and guidelines.
- that had a management structure that you respected.
- gave you the opportunity to direct, manage, or supervise others.
- kept you physically active.
- was clear, direct, and concrete in nature.

You should avoid jobs with the following characteristics.

- where the results are intangible or in which you had to play an administrative role. For example, you would not be happy in any of the accounting or bookkeeping professions.
- that kept you at a desk. You would not be interested in headquarters-level jobs that isolated you from day-to-day operations.
- that held you accountable for administrative details.
- that was predictable, routine, and passive.

Some of the careers we discussed that would be compatible with your skills, interests, and intellectual make up were any of the public safety professions including police work and firefighting. You would also be a good fit in a small business where the work involved general manufacturing. Your present position as in landscaping has helped you to get a better feel for what it is like to be on your own, and your insights as to the limits of this type of work are accurate. My advice to you is that you do not try to find the one best job. Choose a class of jobs that you are interested in, manufacturing, business, management, public safety and then select a college that has a degree program that would help to prepare you for this career.