

Preface xv

PART I *An Overview*

1 Psychological Testing and Assessment 1

TESTING AND ASSESSMENT 1

Psychological Testing and Assessment Defined 1

The Tools of Psychological Assessment 5

WHO, WHAT, WHY, AND WHERE? 16

Who Are the Parties? 16

In What Types of Settings Are Assessments Conducted, and Why? 20

Where to Go for Authoritative Information: Reference Sources 26

CLOSE-UP Types of Computer-Generated Psychological Reports 13

EVERYDAY PSYCHOMETRICS "The Following Film Is Rated PG-13" . . . But Whodunnit?

How? And Why? 19

SELF-ASSESSMENT 30

WEB WATCH 30

2 Historical, Cultural, and Legal/Ethical Considerations 31

A HISTORICAL PERSPECTIVE 31

Antiquity to the Nineteenth Century 31

The Nineteenth Century 32

The Twentieth Century 35

CULTURE AND ASSESSMENT 37

Evolving Interest in Culture-Related Issues 38

Some Issues Regarding Culture and Assessment 40

Tests and Group Membership 43

LEGAL AND ETHICAL CONSIDERATIONS 45

The Concerns of the Public 45

The Concerns of the Profession 49

The Rights of Testtakers 57

CLOSE-UP Assessment, Admissions, and Affirmative Action: *Grutter v. Bollinger et al.* (2003) 50

EVERYDAY PSYCHOMETRICS Life-or-Death Psychological Assessment 55

SELF-ASSESSMENT 60

WEB WATCH 61

PART II *The Science of Psychological Measurement*

3 A Statistics Refresher 62

SCALES OF MEASUREMENT 63

Nominal Scales 64

Ordinal Scales 65

Interval Scales 66

Ratio Scales 66

Measurement Scales in Psychology 66

DESCRIBING DATA 68

Frequency Distributions 69

Measures of Central Tendency 74

Measures of Variability 77

Skewness 81

Kurtosis 82

THE NORMAL CURVE 83

The Area Under the Normal Curve 83

STANDARD SCORES 86

z Scores 87

T Scores 87

Other Standard Scores 88

EVERYDAY PSYCHOMETRICS Consumer (of Graphed Data), Beware! 73

CLOSE-UP The Normal Curve and Psychological Tests 84

SELF-ASSESSMENT 90

WEB WATCH 91

4 Of Tests and Testing 92

SOME ASSUMPTIONS ABOUT PSYCHOLOGICAL TESTING
AND ASSESSMENT 92

Assumption 1: Psychological Traits and States Exist 92

Assumption 2: Psychological Traits and States Can Be Quantified
and Measured 94

Assumption 3: Test-Related Behavior Predicts Non-Test-Related Behavior 95

Assumption 4: Tests and Other Measurement Techniques Have Strengths
and Weaknesses 96

Assumption 5: Various Sources of Error Are Part of the Assessment Process 96

Assumption 6: Testing and Assessment Can Be Conducted in a Fair and
Unbiased Manner 97

Assumption 7: Testing and Assessment Benefit Society 97

WHAT'S A "GOOD TEST"? 98

Reliability 98

Validity 98

Other Considerations 99

NORMS	99
Standardization, Sampling, and Norming	103
Types of Norms	106
Fixed Reference Group Scoring Systems	109
Norm-Referenced Versus Criterion-Referenced Evaluation	110
CORRELATION AND INFERENCE	114
The Concept of Correlation	114
The Pearson r	115
The Spearman Rho	117
Graphic Representations of Correlation	118
Regression	122
INFERENCE FROM MEASUREMENT	125
Meta-Analysis	125
Culture and Inference	125
EVERYDAY PSYCHOMETRICS	Putting Tests to the Test 100
CLOSE-UP	Good Ol' Norms and the GRE 111
SELF-ASSESSMENT	127
WEB WATCH	128
5 Reliability	129
THE CONCEPT OF RELIABILITY	129
Sources of Error Variance	130
RELIABILITY ESTIMATES	132
Test-Retest Reliability Estimates	132
Parallel-Forms and Alternate-Forms Reliability Estimates	133
Split-Half Reliability Estimates	135
Other Methods of Estimating Internal Consistency	137
Measures of Inter-Scorer Reliability	140
USING AND INTERPRETING A COEFFICIENT OF RELIABILITY	141
The Purpose of the Reliability Coefficient	141
The Nature of the Test	142
Alternatives to the True Score Model	146
RELIABILITY AND INDIVIDUAL SCORES	149
The Standard Error of Measurement	149
The Standard Error of the Difference Between Two Scores	152
CLOSE-UP	The Reliability of the Bayley-II 143
EVERYDAY PSYCHOMETRICS	The Reliability Defense and the Breathalyzer Test 147
SELF-ASSESSMENT	155
WEB WATCH	155
6 Validity	156
THE CONCEPT OF VALIDITY	156
Face Validity	158

CONTENT VALIDITY	159
The Quantification of Content Validity	159
Culture and the Relativity of Content Validity	161
CRITERION-RELATED VALIDITY	163
What Is a Criterion?	163
Concurrent Validity	164
Predictive Validity	164
CONSTRUCT VALIDITY	175
Evidence of Construct Validity	176
VALIDITY, BIAS, AND FAIRNESS	181
Test Bias	181
Test Fairness	184
CLOSE-UP	Base Rates and Predictive Validity 172
EVERYDAY PSYCHOMETRICS	Adjustment of Test Scores by Group Membership: Fairness in Testing or Foul Play? 186
SELF-ASSESSMENT	188
WEB WATCH	189
7 Test Development	190
TEST CONCEPTUALIZATION	190
Some Preliminary Questions	191
Pilot Work	193
TEST CONSTRUCTION	194
Scaling	194
Writing Items	201
Scoring Items	210
TEST TRYOUT	211
What Is a Good Item?	212
ITEM ANALYSIS	212
The Item-Difficulty Index	212
The Item-Reliability Index	214
The Item-Validity Index	214
The Item-Discrimination Index	215
Item-Characteristic Curves	217
Other Considerations in Item Analysis	220
Qualitative Item Analysis	222
TEST REVISION	225
Test Revision as a Stage in New Test Development	225
Test Revision in the Life Cycle of an Existing Test	226
EVERYDAY PSYCHOMETRICS	Psychometrics in the Classroom 195
CLOSE-UP	Designing an Item Bank 207
SELF-ASSESSMENT	231
WEB WATCH	231

**8 Intelligence and Its Measurement 232****WHAT IS INTELLIGENCE? 232**

Intelligence Defined: Views of the Lay Public 233

Intelligence Defined: Views of Scholars and Test Professionals 234

Factor-Analytic Theories of Intelligence 236

The Information-Processing View 241

MEASURING INTELLIGENCE 243

Types of Tasks Used in Intelligence Tests 243

Theory in Intelligence Test Development and Interpretation 244

INTELLIGENCE: SOME ISSUES 246

Nature Versus Nurture 246

The Stability of Intelligence 250

Other Issues 251

A PERSPECTIVE 261**EVERYDAY PSYCHOMETRICS** Being Gifted 252**CLOSE-UP** Culture Fair/Culture Loaded 258**SELF-ASSESSMENT** 262**WEB WATCH** 263**9 Tests of Intelligence 264****THE STANFORD-BINET INTELLIGENCE SCALES 265**

The Stanford-Binet Intelligence Scales: Fifth Edition 268

THE WECHSLER TESTS 273

The Wechsler Adult Intelligence Scale-Third Edition (WAIS-III) 275

The Wechsler Intelligence Scale for Children-Fourth Edition (WISC-IV) 279

The Wechsler Preschool and Primary Scale of Intelligence-Third Edition (WPPSI-III) 282

Wechsler, Binet, and the Short Form 284

The Wechsler Tests in Perspective 286

OTHER MEASURES OF INTELLIGENCE 286

Tests Designed for Individual Administration 286

Tests Designed for Group Administration 291

Measures of Specific Intellectual Abilities 296

CLOSE-UP Factor Analysis 287**EVERYDAY PSYCHOMETRICS** The Armed Services Vocational Aptitude Battery (ASVAB):

A Test You Can Take 293

SELF-ASSESSMENT 298**WEB WATCH** 298

10 Preschool and Educational Assessment 300

PRESCHOOL ASSESSMENT 300

Tools of Preschool Assessment 301

ACHIEVEMENT TESTS 305

Measures of General Achievement 306

Measures of Achievement in Specific Subject Areas 307

APTITUDE TESTS 311

The Elementary School Level 313

The Secondary School Level 314

The College Level and Beyond 316

DIAGNOSTIC TESTS 318

Reading Tests 319

Math Tests 320

Other Diagnostic Tests 321

PSYCHOEDUCATIONAL TEST BATTERIES 321

The Kaufman Assessment Battery for Children (K-ABC) 322

The Differential Ability Scales (DAS) 324

The Woodcock-Johnson III (WJ III) 327

OTHER TOOLS OF ASSESSMENT IN EDUCATIONAL SETTINGS 329

Performance, Portfolio, and Authentic Assessment 329

Peer Appraisal Techniques 331

Measuring Study Habits, Interests, and Attitudes 332

EVERYDAY PSYCHOMETRICS First Impressions 302

CLOSE-UP Tests of Minimum Competency 309

SELF-ASSESSMENT 333

WEB WATCH 333

PART IV *The Assessment of Personality*

11 Personality Assessment: An Overview 335

PERSONALITY AND PERSONALITY ASSESSMENT DEFINED 335

Personality 335

Personality Assessment 336

Traits, Types, and States 336

PERSONALITY ASSESSMENT: SOME BASIC QUESTIONS 340

Who? 341

What? 345

Where? 347

How? 347

DEVELOPING INSTRUMENTS TO ASSESS PERSONALITY 355

Logic and Reason 356

Theory 356

Data Reduction Methods	357
Criterion Groups	359
PERSONALITY ASSESSMENT AND CULTURE	370
Acculturation and Related Considerations	370
EVERYDAY PSYCHOMETRICS	Some Common Item Formats 350
CLOSE-UP	Assessing Acculturation and Related Variables 372
SELF-ASSESSMENT	374
WEB WATCH	375
12 Personality Assessment Methods	376
OBJECTIVE METHODS	376
PROJECTIVE METHODS	378
Inkblots as Projective Stimuli	379
Pictures as Projective Stimuli	384
Words as Projective Stimuli	391
Sounds as Projective Stimuli	394
The Production of Figure Drawings	395
Projective Methods in Perspective	399
BEHAVIORAL ASSESSMENT METHODS	402
The Who, What, When, Where, Why, and How of It	404
Approaches to Behavioral Assessment	407
Issues in Behavioral Assessment	414
A PERSPECTIVE	417
EVERYDAY PSYCHOMETRICS	Confessions of a Behavior Rater 408
CLOSE-UP	Personality, Life Outcomes, and College Yearbook Photos 415
SELF-ASSESSMENT	418
WEB WATCH	418

PART V *Testing and Assessment in Action*

13 Clinical and Counseling Assessment	419
AN OVERVIEW	419
Clinical Assessment and Managed Care	421
The Diagnosis of Mental Disorders	421
THE INTERVIEW	423
Types of Interviews	424
Psychometric Aspects of the Interview	428
Cultural Aspects of the Interview	429
CASE HISTORY DATA	434
PSYCHOLOGICAL TESTS	435
The Psychological Test Battery	435
SPECIAL APPLICATIONS OF CLINICAL MEASURES	436
The Assessment of Addiction and Substance Abuse	436

Forensic Psychological Assessment	438
Custody Evaluations	446
Child Abuse and Neglect	448
THE PSYCHOLOGICAL REPORT	452
The Barnum Effect	452
Clinical Versus Mechanical Prediction	455
CLOSE-UP Assessment of Dangerousness and the Secret Service	440
EVERYDAY PSYCHOMETRICS Elements of a Typical Report of Psychological Assessment	453
SELF-ASSESSMENT	457
WEB WATCH	457

16 Assessment, Careers, and Business 458

CAREER CHOICE AND CAREER TRANSITION 458

Measures of Interest	459
Measures of Ability and Aptitude	462
Measures of Personality	469
Other Measures	472

SCREENING, SELECTION, CLASSIFICATION, AND PLACEMENT 474

The Résumé and the Letter of Application	475
The Application Form	475
Letters of Recommendation	476
Interviews	476
Portfolio Assessment	477
Performance Tests	477
Physical Tests	479

PRODUCTIVITY, MOTIVATION, ATTITUDE, AND ORGANIZATIONAL CULTURE 482

Measures of Cognitive Ability	482
Productivity	483
Motivation	485
Attitude	489
Organizational Culture	490

OTHER APPLICATIONS OF TOOLS OF ASSESSMENT 491

Consumer Psychology	492
The Measurement of Attitudes	494
Motivation Research Methods	497

CLOSE-UP Validity Generalization and the GATB 465

EVERYDAY PSYCHOMETRICS Assessment of Corporate and Organizational Culture 492

SELF-ASSESSMENT 502

WEB WATCH 502

Glossary/Index I-1