CHAPTER 8

• INTELLIGENCE AND MENTAL ABILITIES

INTELLIGENCE

• Intelligence = a general intellectual ability

• How intelligent are you?
  – Intelligence Test = instrument used to measure general mental abilities
• General notion of intelligence USUALLY correlates to “good” school performance

THEORIES OF INTELLIGENCE

• Spearman - intelligence is general
  – bright in one area means being bright in other areas
• Thurstone - intelligence is specific
  – abilities are independent of one another
• Cattell - two types of mental abilities
  – crystallized intelligence-specific skills
  – fluid intelligence-spatial & visual imagery

CONTEMPORARY THEORIES

• Sternberg Triarchic Theory
  – three types of intellectual abilities
    • Componential intelligence--acquire new knowledge, learn how to do things
    • Experiential intelligence--adjust to new concepts, task, in general respond to new situations
    • Contextual intelligence--capitalize on one’s strengths and compensate for their weakness
• Gardner--Theory of Multiple Intelligences
  – like Thurstone-distinctive abilities
    • How many? Seven? More than seven?
    • Interpersonal Intelligence
  – Logical-mathematical intelligence
  – Linguistic intelligence
  – Spatial intelligence
  – Musical intelligence
  – Bodily-kinesthetic intelligence
  – Interpersonal intelligence
  – Intrapersonal intelligence

• Goleman--Theory of Emotional Intelligence
  – Very new idea of intelligence
  – how well people perceive their and other’s emotions and how they manage their emotions
• Five Traits of emotional intelligence
  – Knowing one’s own emotions
  – Managing one’s emotions
  – Using emotions to motivate self
  – Recognizing the emotions of other people
  – Managing relationships

INTELLIGENCE TEST
• Alfred Binet & Theodore Simon--1905
  – Binet-Simon Scale
    • 30 test arranged in order of increasing difficulty
    • Intelligence Quotient (IQ)--IQ = MA/CA X 100
• Many revisions
  – individualized test
  – used most effectively on children
  – 15 different sub-test; each arranged in ascending order of difficulty
• David Wechsler-Wechsler Adult Intelligence Scale (WAIS-III)
  – Individual Test
  – First developed in 1939-Wechsler-Bellevue

• WAIS-III
  – Divided into two parts
    • Verbal skills & performance skills
    • provides an overall score and scores for verbal & performance sub-scales
    • Each sub-scale provides level of performance

• Wechsler Intelligence Scale for Children (WISC-III)
  – organized in same fashion as WAIS

  Individual vs. Group Test

• Individual Test:
  – one on one test setting
  – takes trained examiner

• Group Test:
  – one examiner - many participants
  – no “trained” examiner
  – reduce bias on part of examiner

  CULTURE-FAIR TEST

• Performance Test -- minimize or eliminate use of words

• Culture-Fair Test -- eliminate the effect of culture on test taking
  – Cattell’s Culture-fair Intelligence Test

  GOOD TEST

• Reliability
  – consistency, can the instrument produce similar results over time/administrations

• Validity
  – does the instrument measure what it is intended to measure

• These two concepts measured by correlation coefficients
Criticisms of IQ Test

• Content - what is included in IQ test
• Good test takers
• Test administration
• Unfair to minorities
• Language and language usage
• Time issue
• Limited mental abilities tested

IQ & SUCCESS

• IQ test scores related to success in school
• Higher IQ - higher status occupations
• IQ & High Grades in College - little relationship to occupational success--now being challenged
• Is IQ the same as intelligence?

Determinates of Intelligence

• Heredity
  – Tyron-behavioral genetics
    • maze bright and maze dull rats
  – Twin Studies

• Environment
  – How environment, culture, family, education influence IQ performance
HUMAN DIVERSITY

• Gender
  – restricted to specific cognitive skills--appear to be decreasing
    • differences in socialization & expectations

• Culture
  – differences in cultural expectations
  – differences in educational processes:teachers, instructional systems & student expectations

EXTREMES OF INTELLIGENCE

• Mental Retardation
  – scores below 70 on IQ test
    • mild (50s to 70)
    • moderate (mid 30s to low 50s)
    • severe (low 20s to mid 30s)
    • profound (below 20 or 25)

• Giftedness
  – top 2% of population