Defining & Assessing Intelligence and Adaptive Behavior

Questions to Think About

• What is intelligence?
• Is intelligence “fixed” at birth or can it change across time?
• What are the implications of which view you take?
• What are the terms MA and IQ?
• What sources of bias may be present in assessment?

How you as a teacher view intelligence has a profound effect on how you teach the students in your class.

Small Group Work: How do you perceive intelligence??

McGrew and Evans (2003) describe Burke’s conceptualization of intelligence as seeing the “mental jug or cup being ‘half-empty’ or ‘filled to the brim’”(p.1). They go on to cite research suggesting that over 80% of gen and sp educators apparently share this view of intelligence. Discuss in your group the evidence that McGrew & Evans then use to challenge this conceptualization of intelligence. Do you agree? Disagree?

By the end of your discussion, be sure that all group members understand and can articulate why this view of intelligence is inaccurate and how it is potentially damaging to students with disabilities in our educational system.

How we assess intelligence is linked to how we define it

What is the construct on which the test is based?
What type of items are used?
Who was included in the norming group?
Intelligence Tests

• First developed about 100 years ago in France.
  – Intent of this was to identify children in the schools who needed more individualized instruction
• Are imperfect instruments but are the best we have
• Are standardized, normed instruments

Conceptualizations of Intelligence

• As a single factor (‘g’)
• As many factors (multifactorial)
• As multiple, different intelligences
• As an information processing system

Example of a theory from a psychometric view

• Carroll’s three-stratum theory
  – Stratum 1: general ability (global factor)
  – Stratum 2: broad abilities
  – Stratum 3: primary abilities (many more narrow abilities)

Theories based on idea that there are multiple intelligences

• Based on the idea that there are different types of intelligence

• Examples include Gardner’s Theory of Multiple Intelligences and Greenspan’s Model of Personal Competence

Gardner’s Theory of Multiple Intelligences

– Proposes eight types of intelligences: linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, intrapersonal, interpersonal, and naturalistic

– Few validations of this theory yet many educators have embraced it
### Sternberg’s Triarchic Theory of Intelligence

- **Intelligence/internal World**
  - Metacomponents – higher order, executive processes (plan, monitor, evaluate)
  - Performance components – lower order info-processing
  - Knowledge-acquisition components – used to learn how to do what the other components do

- **Intelligence and Experience** - ability to deal with novelty; also the ability to automatize info processing

- **Intelligence and External World** - how an individual uses mental abilities to adapt to the environment, shape the environment, and/or select an environment

### Related Terms: Mental Age (MA)

- Mental age (MA) – estimate of an individual’s intellectual level
  - Norm referenced to average intellectual development at various chronological ages
  - Person A scored on an IQ test the same as the average person at x age scored on that particular test
  - Is a composite score; does not provide information about specific skill levels

### Related Terms: IQ

- Intelligence Quotient (IQ) – currently refers to a deviation IQ; person’s raw score minus the mean raw score of all people in her age group divided by the raw score SD for all people in that age group
- Most individually administered, norm-referenced intelligence tests used today have a mean of 100 and a SD of 15

### Related Terms: SEM

- Standard Error of Measurement - how much a given score may vary from the “true” score – estimated to be ± 3-4 IQ pts
Recap from last week

• To be diagnosed with an intellectual disability, a person must show “significant limitations in intellectual functioning” (Luckasson et al., 2002)
• Intelligence is assessed by administering a standardized test of intelligence individually to the person. Person must score 2 or more SDs below the mean.

Issues of Measurement

• Cultural bias
• Environmental conditions during testing
• Scoring errors
• Rapport with evaluator
• Norming problems
• How results will be used
• Other??

For more information on tests used in education and how to understand and interpret results, go to:

• Wright’s Law (wrightslaw.com)

Tests and Measurements for the Parent, Teacher, Advocate & Attorney
by Peter W. D. Wright, Esq. and Pamela Darr Wright, M.A., M.S.W.

Adaptive Behavior

“collection of conceptual, social, and practical skill that have been learned by people in order to function in their everyday lives” (p. 73, Luckasson et al., 2002)

“. . . behavioral skills that are demonstrated in response to environmental demands.” (Widaman & McGrew, 1996 as cited in Bierne-Smith et al., 2002, p. 95)


Adaptive Behavior

Conceptual Skills

Social Skills

Practical Skills

Conceptual Bases of Adaptive Behavior Instruments

• Emphasizes what a person actually does in typical situations rather than what a person can do or might do under the best of circumstances
• Is a dynamic, ever-changing construct
• Is influenced by such factors as cultural norms, age-related expectations, and a combination of anticipated and idiosyncratic behaviors
Considerations for Assessment of Adaptive Behavior for determining diagnosis of ID
- Can score 2 SDs below the mean in one or more domains or in only one area
- Emphasis is on performance of relevant skills vs. acquisition of skills (2002 AAMR definition)
- Consider adaptive behavior in context and in both formal and informal settings

Considerations for Assessment of Adaptive Behavior for determining diagnosis of ID
- Rater(s) should be someone who knows individual well
- Must rule out physical or mental health limitations, lack of opportunity
- Use multiple data sources (e.g., teach, parent, etc.)

Relevant Educational Assessment
- Progress Monitoring
  - Frequent, data-based measures of IEP goal attainment
- Transition Planning
  - Assessment of occupational interests and aptitudes that begins by age 14
- High-Stakes Testing
  - Participation in state and local standardized assessments, which may include accommodations or alternate assessments for students with most significant disabilities

Adult Assessment
- The Supports Intensity Scale – designed to assess the types of supports required for successful functioning in a variety of life areas
- Informal Assessments
  - Often used in adult education programs
- Formal Assessments
  - Often used when requesting services or disability benefits

Legal Assessments
- Diminished Capacity
  - Ability to establish either criminal intent or the motivation to engage in criminal behavior and to understand it as such (a finding of diminished capacity requires a diagnosis of a mental disorder)
- Competence to Stand Trial
  - Ability to understand the charges, the legal process, and to assist his/her attorney in the defense
  - Should include intellectual testing; perceptual-motor examination; achievement test, adaptive behavior/skills; socioemotional scale; and an instrument specifically designed for the assessment of competence
- Malingering
  - Feigning mental retardation to avoid culpability
  - One tool available: The Validity Indicator Profile