VII. Assessment of Physically Challenged Individuals

A. Reading: Sattler Ch 3 (pages from chapters on other tests: 559-561, 563-564, 566-567, 615-616)

B. Overview
1. Individuals with Disabilities Educational Act (IDEA): 1997 revision
   a. Individualized Education Plan (IEP)
   b. Autism, blindness, deaf-blindness, deafness, emotional disturbance, mental retardation, multiple disorders, orthopedic impairment, other health impairment, specific learning disability, speech or language problem, traumatic brain injury, visual impairment, developmental delay

2. 15 requirements for assessment under the IDEA (Sattler, pp 50-51) (overhead)

C. Assessment
1. Introduction
   a. 2 basic strategies
      1) Use/modification of standard intelligence tests
      2) Use of alternative tests w/ limited sensory/motor demands
   b. Limitations of each
      1) Don't know effect of changing presentation of stimuli, administration of standard tests
      2) Limited range of info for alternative tests: limited type stimuli, functions
   c. Determining appropriateness of tests
      1) Input (test stimuli): modality -- vision, hearing
      2) Output (required response): speech, gross/fine motor
      3) Directions (often forgotten) -- usually auditory
   d. Evaluate sensory motor abilities (new Sattler chapters -- guidelines for evaluation of visual and hearing difficulties)
   e. Do NOT administer any test requiring the impaired ability - will not be valid

2. Modification of standard tests
   a. WISC-III and WPPSI-R/III
      1) look at validity of short forms, r w/ FSIQ
      2) WPPSI-III: better because less timed tasks and more substitutions:
         a)only 4 subtests youngest age group (+ 1 supplementary)
         b) 7 subtests older age group but 5 supplementary subtests can use to substitute
3) Verbal subtests:
   a) visually impaired - should be ok for most WISC-III subtests (except easiest items);
      new WPPSI-III subtests (Receptive Vocab, Picture naming-sup) require vision,
      also more picture/visual items for beginning items
   b) can't hear, but can read: can type out verbal stimuli
      1> Arith: not equivalent, no memory component
         2> D Span, Sentences: no way to do these

4) Nonverbal (Performance)
   a) hearing impaired - ok for stimuli and response, however, directions require hearing:
      pantomime or write out directions
   b) need adequate vision, no way modify if vision severely impaired
   c) PC: vision and speech - can point or write if speech problem
   d) BD, OA, AP: vision and motor; can do untimed, but if severe motor problems - can't
      administer
   e) D Sym, Cod, Mazes: vision and fine motor; same as above
   f) Sym Srch: can give response orally
   g) WPPSI-III: Matrix Reasoning, Picture Concepts better; no motor response

b. Stanford-Binet:
   1. More flexible test: can use w/out having change standard administration
   2. Flexible admin of subtests: designed use diff number subtests calculate area scores,
      Composite scores, factors
      a) Hearing impaired: Nonverbal Reasoning/Visualization tests plus Memory for
         Objects
      b) Visually impaired: Voc, Comp, Mem Sent, Mem Digits, Verbal Relations, Number
         Series (but not at all ages)
   3. Some subtests multiple modes of presentation of stimuli: Voc, some of Quantitative
      (hear and read)
   4. Some subtests multiple modes of response allowed: Quant, Number Series, Equation
      Building: write or speak
   5. Most tests untimed: better for physically challenged
   6. Cautions:
      a) DK effect on presenting in one modality (e.g., only read or only hear Vocab)
      b) Many subtests that are nonverbal or visual have auditory verbal directions
7. Can modify directions, stimuli or response
   a) let read directions from card, write, or pantomime (hearing impaired)
   b) let write out or point to responses (hearing or speech impaired)

c. Woodcock-Johnson III: Tests of Cognitive Abilities
   1. Also very flexible, can select subtests; nonverbal tests
   2. Good for individuals with physical disabilities, non-English-speaking, ESL

3. Alternative tests
   a. Leiter International Performance Scale, Leiter-Revised (Leiter-R; Roid & Miller, 1997)
      1) Leiter:
         a) from Leiter's 1929 MA thesis, adapted Arthur (1949)
         b) 2-18, no time limit (30-45 min), 54 subtests, age scale, picks out next in a series
         c) nonverbal intelligence: perceptual organization and discrimination: requires vision, some motor
         d) language and hearing impaired - pantomime instructions
         e) motor problems
         f) also "culture fair" - use with English second language, ethnic minority, from other cultures
         g) outdated norms; uses ratio IQ; underestimates IQ (add 5 points; higher r with PIQ
      2) Leiter-R (1997)
         a) new norms (fairly good); acceptable reliability; ages 2-20
         b) 2 test batteries: Visualization and Reasoning; Attention and Memory: each has 10 subtests
         c) pantomime directions, 90 mins
         d) Visualization and Reasoning similar format original – easel with cards, chips, puzzles, etc
         e) Attention and Memory: immediate and delayed memory for objects, visual stimuli
         f) M=100, SD=15; subtests: M=10, SD=3
         g) good for individuals with little or no speech (or hearing); but limited domain

b. Test of Nonverbal Intelligence (TONI), TONI-2, TONI-3 (Brown et al., 1997)
   1) TONI: originally published in 1982
      a) language free, pantomime instructions, pointing response (MC format)
      b) ages 5 years to 85 years, 11 mo
      c) not timed, 15 min administration
      d) 55 items + 6 samples; 2 parallel forms
e) normed on a representative national sample

f) scores mean of 100, SD of 15

g) narrow range of abilities: nonverbal visual problem solving, abstract reasoning; r with “g”

2) TONI-3 (1997)
a) also nonverbal problem solving and abstract reasoning, MC format, language free, pantomime instructions, pointing response

b) fewer items; new norms; ages 6-89

c) Forms A & B: each 45 items (plus 5 training items)

d) M=100, SD=15; measures IQs from 60-150 but reduced validity at extremes

e) limited domain evaluated (nonverbal reasoning)

c. (Raven's) Progressive Matrices (Raven et al., 1986; 1998)
1) originally published in 1938; British norms; probs with reliability, validity

a) 3-adult, no time limits, needs to pick our correct pattern

b) 3 versions:
   1) standard (6-17 and adults)
   2) advanced (older adolescents and adults, especially average or higher intelligence)
   3) coloured (5-11, or for lower IQ, MR)

c) easy admin, pointing response, can pantomime instructions

d) nonverbal intelligence, visuospatial perception and organization, reasoning through analogy; requires vision, some motor

e) good for language and hearing impaired; motor problems: can speak response; English second language, ethnic minority, other culture

f) raw scores changed to percentiles

2) 1986 and 1998 US norms but not fully representative samples

d. Porteus Mazes (similar to Vineland)
a) 3 forms:
   1) Vineland Revision (Porteus, 1959) 12 mazes III-adult
   2) Extension (Porteus, 1955) 8 mazes III-adult
   3) Supplement (Porteus, 1965) 8 mazes VII-adult

b) Extension and supplement are parallel forms

c) measure of visual planning and foresight

d) sensitive to effects of brain damage
e. Columbia Mental Maturity Scale
   a) 3-10, untimed, 15-20 mins

   b) row of 4 pictures, pick out one that's different/not fit – somewhat like Picture Concepts on WPPSI-III
   c) nonverbal intelligence and reasoning, visual perception, ability form and use concepts, nonverbal abstract thinking

   d) requires vision, some motor

   e) language and hearing impaired - pantomime instructions; motor problems; ESL; ethnic minority, other culture

   f) good standardization, reliability

f. Peabody Picture Vocabulary Test (PPVT), PPVT-R and PPVT-III (Dunn & Dunn, 1997)
   1) PPVT
      a) 2 1/2-40 yrs, untimed, 10-20 min, basal and ceiling; 2 forms: L,M

      b) select picture that illustrates the word (MC) – like Receptive Vocab on WPPSI-III

      c) receptive vocabulary, understanding of word meanings, not broad enough to equate with intelligence; measures a very limited domain

      d) requires hearing, vision, some motor; good for language (expressive) impaired; severe handicapped with motor problems

      e) requires English, not as "culture fair" as nonverbal tests

      f) 1981 renorming

   2) PPVT-III (1997)
      a) ages 2-6 to 90+; new norms; about half new words

      b) like original, 2 alternate forms, not timed, about 10 mins to admin, MC

      c) good reliability and validity

      d) like original, a screening test, limited domain

   g. Shipley Institute of Living Scale
      1) 14-adult, norms: 16-69 (70); paper-and pencil test

      2) 2 subtests: timed, 10 min each
         1) MC Vocab: word knowledge (remember, Voc r hiest w/ IQ)

         2) Abstraction: complete the series: verbal abstraction, reasoning, sequencing

         3) standard scores each subtest, estimate of total IQ

         4) requires vision, reading, fine motor

         5) hearing impaired, expressive lang diff (good supplement to standard tests where can’t admin Voc, Sim); fine motor prob: let speak response
6) not culture fair - heavily dependent education, culture

8) limited domain: both verbal, education based, not full range of abilities

VIII. Assessment of Culturally and Linguistically Diverse Children
A. Reading: Sattler Ch 3, 19, 20; APA Guidelines; Brooks-Gunn et al. (1996)

B. Overview
1. APA Guidelines (1993) for working with ethnic, linguistic and culturally diverse populations
   a. 9 standards listed Sattler pp. 43-44
   b. Guidelines include illustrative statements

2. Criticisms against intelligence testing for racial, ethnic and linguistic minorities
   a. Banned in NYC 1960's
   b. Calif lawsuits: 1971, 1988; Larry P. vs. Riles (1979) case: judge rules standardized intelligence tests are racially/culturally biased; upheld in appeals court in 1984; courts in other states (IL, GA) not agree
   c. reflect white, middle class values
   d. appropriateness of norms questioned
   e. differences in motivation, test practice and attitudes
   f. problems developing rapport
   g. test results lead to self-fulfilling prophecy, placement in special education, used for allocation of resources
   i. Valde & Figueroa (1994): suggest never using standardized tests with bilingual children
   i. African Americans score about 1 SD below Whites on most standardized tests; Sattler – difference not sufficient evidence of bias: need show differential validity for the groups

3. Ways in which tests are culturally anchored (beyond item content)
   a. Context: W, middle SES; emph on tests, academics, individual achievement, speed (Greenfield, 1997)

   b. Assumptions about knowledge and ways of knowing
      1) Helms (1992): tests based on Eurocentric values; Afrocentric centered info processing strategies (handout)
      2) Greenfield (1997) collectivistic vs individualistic

   c. Value orientations of ethnic groups: Sattler p. 638 (overhead)
d. Content: W, middle SES content, exposure, "correct" responses not always adaptive, attempts to reduce bias on revised tests

1) do not address issues raised by Helms

2) Black Intell Test of Cult Homogeneity (BITCH)
   a> addressed content, not type items, philosophy of correct/incorrect responses
   b> other problems?

e. Examiner: difference in ethnicity, SES, cultural background, religion, rural/urban, education, part of country

1) behavior, attitudes, language, attire

2) comfort, trust, rapport, motivating for test

3) Sattler: no evid African Am children score lower w/ White examiner; however, a number of the above variables need to be considered, recognize possible biases – when race/ethnicity of examiner and examinee differ (and even when they are the same!)

4) Psychopath studies on interviewing: more time more similar to the interviewer

5) Greenfield (1997) rapport more important many cultures

4. Other Factors
 a. Language: major issue- not resolved

1) not valid if not good command of the language

2) lack of equivalency of translations (Suzuki & Valencia)

3) also pros and cons of working with an interpreter

4) some studies show bilingual children do more poorly in both languages; however, Sattler notes that may have an advantage in both verbal and nonverbal skills (multiple coding??)

5) use nonverbal tests but limited domain; also remember MacMillan et al. (1998): if used FSIQ with Hispanic students labeled MR, if used PIQ labeled LD since achievement significantly lower than IQ

6) not just other language but nonstandard English and dialects: Sattler table on African American dialect

b. SES: plays a major role

1) Wechsler tests: Whites 1 SD (15 points) higher than African Am but high SES 21 points higher than low SES

2) differences in educational opportunities, wealth

3) factors that go w/ low SES that further contribute: poverty, poor nutrition, prenatal care, low birth weight, parent's educat and occupation (high predictor of child's IQ), emphasis of surviving
4) **Brooks-Gunn et al. (1996):**
   a) looked at SB:FE at age 3 and WPPSI at age 5 in low birth wt children in Infant Health and Development Program Data set
   b) found significant diff in IQs Black and White children (1 SD)
   c) however, difference eliminated when controlled for neighborhood economics, family poverty, maternal education, learning experiences

   a) intell tests predict academic and occupational perf for minorities (no differential validity)
   b) however, they Q if it (i.e., academic and occupational perf) is an appropriate criterion given the barriers to successful performance in school and work

5. Strategies to address the above concerns:
   a. Updating test content, items to make more culture fair
   b. Updating norms to include representative sample of ethnic minorities acc to US census
   c. Consideration of cultural, ethnic, SES, background factors in interpretation
   d. Development of separate sets of norms based on SES, ethnicity
   e. Development of "culture free" or culture fairer tests
   f. Social action *(Brooks-Dunn et al., 1996)*: policies to reduce poverty, move to better neighborhoods, improve pre-school and elementary schools, etc

6. Adaptation of traditional intelligence tests
      1) Inclusion ethnic minority individuals in stimuli
      2) Elimination of items with heavy cultural loading
      3) Use of representative norms
      4) Interpretation according to background
      5) Look at culture fairer subtests: nonverbal (not PC, PA)
   b. Separate norms based on SES, demographic factors: pluralistic norms:
      SOMPA: System of Multicultural Pluralistic Assessment (Mercer, 1979)
      1) age 5 through 11-1
      2) Takes scores from WISC, Bender, Adaptive Behavior Inventory for Children (ABIC) and changes to Estimated Learning Potential score (ELP) based on consideration of SES, family size and structure, urban acculturation
      3) Model: 3 components
         a) medical: Bender, health hx, aud/visual acuity, dexterity
         b) social: WISC-R, ABIC
         c) pluralistic: equation to change IQ to ELP
4) Criticized:
   a) norms from Calif
   b) no beh obs or other data
   c) not address the language issue
   d) no evd it measures potential
   e) uses tests criticized as biased (WISC-R)
   f) might lead to false expectations

7. "Culture Fair" and "Culture Free" Intelligence Tests
   a. Nonverbal intelligence tests
      1) less tied to culture, educational opportunities
      2) Leiter, Raven's Progressive Matrices
      3) Columbia Mental Maturity - more tied to culture since objects (familiarity with objects, their use)
      4) Peabody Picture Vocab - even more tied to culture, language, exposure to objects, words
      5) limited domain; Greenfield: even the MC format of test like Raven's culturally loaded

   b. BITCH: Black Intelligence Test of Cultural Homogeneity
      1) MC Vocab test of inner city slang - (Williams, 1972)
      2) Criticisms:
         a) tied to a specific subculture time: St Louis, 70's e.g., San Francisco African Am 25 points lower
         b) tied to SES: middle class: African Am > Whites
            lower SES: African Am = Whites
         c) limited domain: vocabulary only

      1) more neuropsych basis; less emphasis academic preparation (traditional tests blend intelligence w/ achievement)
      2) PASS model: Planning, Attention, Simultaneous and Sequential processing (no evd minorities do better)

   d. Learning Potential Assessment Device (LPAD; Feuerstein et al., 1979)
      1) Dynamic assessment: an interactive approach to testing
      2) best assessment of ability learn in ability to learn not measuring previous knowledge which assumes all have equal opportunity to learn material
      3) problem: time 4-8 hrs; subjective; relies on clinical judgment
      4) need empirical studies to validate
8. Recommendations for working with ethnic minority individuals
   a. Broad range of assessment
   b. Select tests w/ adequate norms
   c. ALWAYS consider context, background in interpretation
   d. Focus on strengths
   e. Recognize limitations of tests
   f. Evaluate language as well as degree of acculturation (see table in Sattler)
   g. Consider adding "culture fair" nonverbal tests
   h. Remember that a test is limited sample of behavior, in a limited domain, time
   i. Sensitive to developing rapport: language, nonverbal beh; differences; self-monitor
   j. Learn about language, culture, tradition of the client
      1) appreciate different perspectives
      2) don’t stereotype – can use generalizations about other groups to help inform, but don’t use as a stereotype
      3) become more aware of your own biases, stereotypes