

## Certification Exam

### I. HUMAN DEVELOPMENT AND LEARNING THEORY

Infancy – birth to 2

Early Childhood – 3 to 6

Middle to Late Childhood – 6 to 11 or 12

Adolescence – 11 or 12 to 18-20

#### A. Understand cognitive development (birth through young adulthood).

##### 1. Piaget Cognitive Development Theory

###### a. Sensorimotor: birth to 2

- Characterized by building on reflexive action and acting to maintain or repeat interesting sensations
- develop the ability to coordinate sensory input with motor action
- learning to differentiate between self and objects
- Primitive - use word or object to identify what they want
- Object Permanence – (symbolic thought 18 months) out of sight doesn't mean out of mind

###### b. Preoperational: 2-7

- Characterized by intentional experimentation on physical objects, involving increasingly thoughtful planning and internal representations of physical objects
- Has trouble decentering to consider more than one characteristic at a time
- Language and conceptual development
- internal mental operation
- symbolic function getting better allow child to progress in cognitive functions
- thinking can now include events from past (show, breakfast) and anticipate future events (know where their going and what doing)
- understand what other things are going on in other places and other than where he is right now
- Centration – tendency to focus on one feature of problem and exclude all other features
- Irreversibility – inability of a child to envision reversing an action if a child can't reverse thought, can't follow line of reasoning of why, can't explain why did something
- Egocentrism – thinking is to your own perception inability to view others perceptions, assume they make sense all of the time, self-centered and ok because world revolves around them
- Animism – belief that all things are living, difficulty distinguishing between reality and fantasy

- c. Concrete Operation: 7-11
    - logical reasoning and thought
    - characterized by increasingly sophisticated mental manipulations of the internal representations of concrete objects
    - can decenter to consider more than one characteristic at a time
    - Conservation – awareness that physical quantities remain constant in spite of changes of shape or appearance number, liquid, volume
  - d. Formal Operation: 12-16
    - abstract thinking and logical reasoning
    - hypothetical and purely symbolic (complex verbal) thinking becomes possible
    - Thinking becomes more scientific as the person develops the ability to generate and test all of the logical combinations pertinent to a problem
    - Concerns about identity and social issues emerge
2. Practice Book
- Four-year-old children continue the relatively rapid cognitive growth begun during infancy in areas including perception, reasoning, memory, and attention span
  - Although there exists a great deal of individual variation among four year olds with respect to attention span and concentration, most children of this age have acquired the ability to follow simple two-step directions involving familiar actions or objects.
  - The ability to add three or four single-digit numbers, interpret simple graphs, or understand the difference between fantasy and reality generally develops during the early elementary years as a result of the combined effects of maturation processes, formal education, and individual experiences
3. Critical Issues

## **B. Understand language development (birth through young adulthood).**

1. Developmental Changes Associated with Language Acquisition
- a. Prenatal
    - Responsivity to human voices
  - b. First Several Months
    - Cooing, which comprises all possible phones
    - As sounds become more meaningful, the infant's perception of the sounds becomes more selective, and the infant's ability to remember sounds increases
  - c. About the second 6 months after Birth
    - Babbling, which comprises only the distinct phonemes that characterize the primary language of the infant
  - d. About 1 to 3 years of age
    - One-word utterances

- Two-word utterances
  - Telegraphic Speech – two-or three-word utterances where articles, preposition, and other function morphemes are left out like in a telegram, and even slightly longer ones, if they have these same characteristic omission of some function morphemes
  - As fluency and comprehension increase, the ability mentally to manipulate linguistic symbols increases, as does conceptual development
  - Overextension errors occur when children try to apply their limited vocabulary to a variety of situations, but as children’s vocabulary becomes more specialized, these errors occur less often
  - Feature hypothesis suggests that children form definition that include too few features (e.g., four legged creatures are all doggies)
  - Functional hypothesis suggest that children first learn to use words that describe important functions or purposes
  - Age 2 = vocabulary of 300 words
  - Age 3 = vocabulary of 1000 words
- e. About 3 to 4 years
- Simple sentences that reflect tremendous expansion of vocabulary, as well as remarkably adept understanding of syntax, despite errors of overregularization
  - Vocabulary and concepts continue to expand in terms of both comprehension and fluency, and the child internalized rules of syntax
  - Overregularization errors offer insights into how children form rules about language structures
- f. By about 4 years of age
- Basic adult sentence structure
  - Some increases in complexity of structure continue through adolescence
  - Vocabulary continues to increase, although at a declining rate
  - Children’s language patterns and strategies for language acquisition are studied in much the same ways as those for adults; however, their metacognitive strategies for acquiring vocabulary become increasingly sophisticated throughout childhood
- g. By age 5
- Understand and produce quite complex and uncommon sentence constructions
- h. By age 10
- Children’s language is fundamentally the same as that of adults
2. Practice Book Objective
- As children develop more advanced conceptual abilities during middle childhood, their use of language undergoes related changes. For example, an increased ability to discriminate among objects and organize them into classes may in turn lead to greater specificity and accuracy in language use (e.g., the class of objects referred to simply

as “rocks” in early childhood may become “pebbles,” “stones,” and “boulders” during middle childhood). Similarly, improved abilities in logic and reasoning may lead to increased sophistication in way children structure the thoughts and ideas they wish to communicate.

- Although the attending skills of many children do improve during middle childhood, such improvements do not generally have a strong relationship to language skills.
- In general, neither auditory discrimination nor auditory memory exhibit significant improvements during middle childhood and so are unrelated to improved language use during this stage of development.

### **C. Understand social emotional development, including the acquisition of adaptive behavior skills (birth through young adulthood).**

#### 1. Practice Book Objective

- According to Erik Erikson, psychosocial development occurs throughout out the life span and involves a series of eight major crises, each of which the individual must meet and resolve. If the crisis associated with a particular stage is not fully resolved, the individual will experience problems in dealing with crises associated with later stages.

#### 2. Erikson Stages

##### a. Trust vs. Mistrust

- Infancy
- Developing general security, optimism, and trust in others (based on consistent experiences involving satisfaction of basic needs)
- When the development of trust by the infant depends upon the quality and consistency of care provided by caregivers

##### b. Autonomy vs. Shame and Doubt

- Toddlerhood
- Developing a sense of autonomy and confident self-reliance, taking setbacks in stride (based on consistent experiences involving encouragement and limit setting without rejection or blame)

##### c. Initiative vs. guilt

- Early Childhood
- Developing initiative in exploring and manipulating the environment (based on consistent experiences of tolerance, encouragement, and reinforcement)

##### d. Industry vs. Inferiority

- Middle Childhood
- Enjoyment and mastery of the developmental tasks of childhood, in and out of school (based on consistent experiences of success and recognition of progress)
- Through successful resolution of this crisis, individuals come to appreciate the value of work and personal accomplishment

##### e. Identity vs. Identity Confusion

- Adolescence
  - Achievement of stable and satisfying sense of identity and direction (based on consistent personal experiences involving success and satisfaction combined with social acceptance and recognition)
- f. Intimacy vs. Isolation
- Young Adults
  - Development of the ability to maintain intimate personal relationships (based on personal openness and confidence complemented by consistently rewarding experiences with intimate others)
  - The ability to resolve this crisis determines whether individuals will be able to achieve intimacy or to form serious and mature relationships with others
- g. Generality vs. Stagnation
- Adulthood
  - Satisfaction of personal and familial needs supplemented by development of interest in the welfare of others and the world in general (based on achievement of a secure and rewarding personal life and a freedom from pressures that limit one to self-preoccupation)
- h. Integrity vs. Despair
- Old Age
  - Recognizing and adjusting to aging and the prospect of death with a sense of satisfaction about the past and readiness about the future (based on consistent success in prior stages, which provides a real basis for satisfaction in having led a full and good life and for accepting death without morbid fears or feelings of failure)
  - Related to the ability to accept one's life as having been worthwhile and meaningful

**D. Understand physical / sensory-motor development (birth through young adulthood).**

1. Gross and Fine Motor
  - a. 0 to 1 year old
    - Gross – lift head, rolling, sitting, crawling, pull themselves up, walking, roll
    - Fine – reaching / grasping, swatting, transfer objects from one hand to the other, bang (pots), controlled release (throwing), pincergrasp (picking up with thumb and index finger)
  - b. 1 to 2 years old
    - Gross – walking (alone), walk backwards, pick up toys / balance (w/o falling over), climb stairs, run, music / move
    - Fine – turn knobs throw ball, stack 3 small blocks, rings, turn pages 2-3 at a time, scribble
  - c. 2 to 3 Years old
    - Gross – kicking a ball, jump with feet together, stand on one foot with help

- Fine – turn single pages, hold crayon between thumb and fingers, clay
- d. 3 to 4 years old
  - Gross – run around obstacle, ride tricycle, jump over things, alternate feet up and down stairs
  - Fine – stack 16 blocks, copy shapes
- e. 4 to 5 years old
  - Gross – skip, walk backward toe to heel, throw over head, somersaults
  - Fine – cut on line, writ name and letters, cut out shapes, tie shoes, dial phone

## **E. Analyze the effects of developmental influences.**

### 1. Parenting Styles

- Perception of their own child makes a difference
- Authoritative – most useful, most effective, give and take, still limitations and control, become socially responsible competent
- Authoritarian – restrictive, firm limits, little affection, little verbal communication, socially unsure, low confidence and self esteem
- Neglectful – don't know where child is
- Indulgent – real involved, little demands and control, lack of self-control

### 2. Cultural Issues

- Communication, family size, whose role model, how child is perceived, social economic issue, gender, 1 out of 2 mothers with child under 5 working in African American whom live in a single parent home

### 3. Working Moms

- Young girls see mom as a positive role model
- Young boys are more affected
- High divorce rate – 68%

### 4. Divorce

- Effects depend on age and gender
- Family Structure Model – differences in children from different family structures are due to structure variations
- Multiple Factor Model – look at strengths and weaknesses before divorce to give baseline, coping kills, get behavior back
- important are type of custody, visitation patterns, socioeconomic status, post divorce

### 5. TV

- Can be positive or negative, if do a lot of then missing important things like play, sex roles can be interpreted from TV

### 6. Peer Relationships

- Provide opportunities to learn how to interact with others control their social behavior; develop age-relevant skills and interests, and share problems and feelings.

- Elementary-School Age Children – play primarily with same-sex peers, friendships tend to be relatively superficial, focused on pursuing shared interests and engaging in enjoyable activities
- Adolescence – begin to develop more intimate friendships with one or a few same-sex peers, less personal activity-based interactions with other friends continue, but interactions with close friends begin to include more self-disclosure, emotional support and sharing of views on intimate topics
- Jr. High and High School Age – become involved in cliques and crowds, increase in perceived importance of the peer group and in felt needs to conform to the values, customs, and fads

**F. Understand ways in which developmental stages and processes affect education and assessment (birth through young adulthood).**

**G. Understand theories of personality development (e.g., maturation, behavioral, adaptation, psychodynamic).**

**H. Understand learning theory.**

1. Behavioral Learning Theories
  - a. Classical Conditioning (Pavlov)
    - When a neutral stimulus (one that elicits no particular response is repeatedly paired with a stimulus that naturally elicits a particular response (respondent behavior) the result is that eventually the neutral stimulus alone will elicit the response
  - b. Instrumental Conditioning (Thorndike)
    - using conditioning and reinforcement principles to teach problem-solving methods or other behaviors that were instrumental to goal accomplishment
    - law of exercise – repetition of a conditioned response would strengthen the stimulus-response bond
    - law of effect – responses followed by reward would be strengthened and responses followed by punishment would be weakened
  - c. Operant Conditioning (Skinner)
    - applies reinforcement principles to condition or shape operant behaviors
    - Operant behaviors – are voluntary responses, not elicited automatically by any known stimulus, that are used to operate on the environment
    - Contingent reinforcement – reinforcing the performance of a target behavior by delivering reinforcements only when the behavior has been performed to some criterion
    - Positive Reinforcement – or reward – Responses that are rewarded are likely to be repeated (credit toward grades as reinforcement for participation in lessons)

- Negative Reinforcement – Responses that allow avoidance of or escape from undesired situations are likely to be repeated (exemption from a major test as reinforcement for good performance on quizzes)
  - Extinction or nonreinforcement – Responses that are not reinforced are unlikely to be repeated (ignoring students who call out answers without first raising their hands and being recognized should extinguish this tendency to call out)
  - Punishment – Responses that bring painful or undesirable consequences will be suppressed (penalizing students who call out answers by withdrawing privileges should cause the students to suppress their calling out) the behavioral potential will remain, however, so the response may reappear if reinforcement contingencies change
- d. Schedules of Reinforcement
- Continuous Reinforcement – reinforcing the target response every time it occurs following presentation of the controlling cue stimulus would strengthen the persistence of the response
  - Partial Reinforcement – are schedules that call for delivering reinforcement following only some, rather than all, of the performances of the target behavior
- e. Social Cognitive Theory (Bandura)
- Symbolization – Based on our social experiences, we construct cognitive models of social reality to guide our thinking and decision making about social behavior
  - Vicarious Learning – By observing others, we learn about potential actions and their probable consequences in various social situations, gradually integrating into a knowledge including skills, values, attitudes, and expectations
  - Forethought – We can draw upon our accumulated social learning in order to generate ideas about potential actions, assess these actions for appropriateness to the situation, and predict their probable consequences
  - Self-regulation – In response to modeling and socialization from significant others, we develop standards concerning acceptable and unacceptable behavior
  - Self-reflection – We can monitor our thoughts and actions, look back at them, and draw inferences about the future
- f. Behavior Modification
- Behavior Modification – the use of techniques based on behaviorist principles to shape and control behavior
  - Applied Behavior Analysis – concentrates on using reinforcement principles to bring behavior under stimulus control
- g. Cognitive Behavior Modification
- Designed to develop in learners the capacity for controlling their own behavior through goal setting, planning, self-instruction, self-monitoring, and self-reinforcement

## 2. Practice Book Objective

- Behavioral learning theory emphasized the importance of positive reinforcement in student motivation and learning.
- The promise of special privileges would be expected to shape students' behavior by increasing their motivation to memorize the state capitals.
- In contrast, studies have indicated as effective in motivating student learning.
- Promising a field trip if all students in the class master the assigned material, is a reward based on the results of collective rather than individual behavior. This type of reward system would not have as great an effect on individual motivation as an individual reward system because students would be less likely to feel that they can control the situation (i.e., gain access to rewards) through individual efforts to learn assigned materials.

### **I. Understand the relationship between motivation and learning.**

#### 1. Authentic Learning

- Authentic work - involves classroom tasks and assignments that are clearly applicable to everyday living

#### 2. Keller's Principles for Motivational Design of Instruction

##### a. Interest

- The extent to which the learner's curiosity is aroused and sustained over time

##### b. Relevance

- The learner's perception that instruction is related to personal needs or goals

##### c. Expectancy

- The learner's perceived likelihood of achieving success through personal control

##### d. Satisfaction

- The learner's intrinsic motivation and responses to extrinsic rewards

#### 3. Strategies for Encouraging Students to Value Academic Activities

##### a. Extrinsic-motivation Strategies

- Motivation that occurs from reinforcers, feedback, or rewards that are not inherent in the activity itself
- Offer rewards as incentives
- Call attention to the instrumental value of academic activities

##### b. Intrinsic-motivation Strategies

- Motivation resulting from personal reinforcers and interests that are inherent in the activity itself
- Adapt tasks to students' interests
- Plan for novelty and variety
- Provide more opportunities for students to respond and to receive feedback

## II. IDENTIFICATION AND INTERVENTION

### A. Apply procedures for identifying and remediating special reading needs.

1. Definition
  - a. a type of learning disability in which children fail to master basic processes, such as letter recognition and sound blending, despite adequate intelligence and educational opportunities
  - b. suggests that the term reading disability does not refer to children who are dull, have had poor educational experiences, or have missed schooling
2. Reading involves a variety of cognitive functions including:
  - a. attention, concentration ability to form associations within and between sensory modalities, and such overlapping subskills and abilities as phonological awareness, rapid decoding, verbal comprehension, and general intelligence
    - Phonological Awareness – awareness of the sound characteristics of a word, likely underlies the ability to segment and analyze speech, an ability particularly important in decoding unknown words
    - Rapid Decoding – the ability to recognize words quickly and automatically, helps the child process information rapidly, thereby freeing the child to attend to comprehending the material rather than to decoding (or recognizing) the words
    - Verbal Comprehension – is necessary for the child to understand words and word order, a crucial skill underlying reading
    - General Intelligence – relates to overall skills
    - Deficient Semantic or Syntactic Development – will impede the ability to learn to identify whole words, whereas deficient phonological development will impede the development of phonetic decoding skills and code acquisition in general
3. Subtypes of Reading Disabilities
  - a. Auditory-linguistic deficit
    - Exhibit poor auditory sequential memory span, sound blending and discrimination difficulties, sound confusion, bizarre spelling problems, and sequencing problems
    - Primary difficulty is in integrating symbols with sounds
    - Have little understanding of letter-sound relationships
    - Most common type
  - b. Visual-spatial subtype
    - Have poor visual sequential memory, visual discrimination and directional problems, difficulty in spelling words that are phonetically irregular, visual analysis and synthesis difficulties, and spatial problems
    - Primary difficulty is in reading words as wholes (perceiving letters and whole words as configurations or gestalts)

- c. Mixed deficit subtype
  - Have problems in both language-related areas and visual-spatial areas
- 4. Description of Word Features
  - a. Graphic
    - The particular visual patterns of a word that are formed by the unique array of letters that comprise the word (bad vs. dad)
    - In learning to read, children must store featural information in order to distinguish accurately among printed words.
  - b. Orthographic
    - The internal structural features of a word. These features include structural regularities, such as sequential dependencies (sta acceptable, xtz unacceptable), and letter-sound correspondences (at in fat, cat, and rat).
    - The child who discovers the regularities and redundancies of orthography is developing efficient processing strategies for making fine-grained discriminations among visually similar words (e.g., fat/rat, was/saw) and reducing the amount of visual information that must be processed in doing so.
  - c. Semantic
    - The particular concept or entity symbolized by a word.
    - Semantic properties are dynamic – they change as a result of the child’s experience. It is these properties that make the word a linguistic unit that can be remembered.
  - d. Syntactic
    - The more abstract qualities of a word – those features it has in common with other words by virtue of grammatical rules.
    - Syntactic classes include nouns, verbs, adjectives, and adverbs.
    - Children use syntactic clues to determine whether words make sense in given locations. Implicit knowledge of such markers helps make words memorable.
  - e. Phonologic
    - The particular sound characteristics of words defined by the unique ordering of phonemes that comprise given words.
- 5. Acquired Dyslexia vs. Developmental Dyslexia
  - a. Developmental Dyslexia
    - Failure to develop the ability to read
  - b. Acquired Dyslexia
    - Loss of ability already acquired, usually as a result of brain injury
    - Two types – surface dyslexia and phonological dyslexia
    - Surface Dyslexia – whole word recognition is impaired (e.g., sour as sowl)
    - Phonological Dyslexia – whole word recognition may be intact, but phonological skills are limited, have difficulty sounding words out (e.g., bowl as barrel)
- 6. Remediation of Reading Disability

- A phonics approach should be used in early reading programs.
- Emphasis early in the program should be on learning the alphabetic code rather than reading for meaning, letter-sound correspondences should be taught together with blending, the initial reading material should be controlled for letter-sound regularity, and skills that help children segment words into phonemes should be stressed.

7. Informal Assessments

a. Informal assessment of reading skills

- Degree of fluency (hesitations, smooth transitions)
- Inflection (appropriate or inappropriate)
- Ability to make use of linguistic context in identifying words in sentences
- Ability to comprehend what is read

b. Recording oral reading errors

- After recording, evaluate types of errors that occurred and how they affected the child's reading

c. Word prediction abilities (or cloze procedures)

- The way a child uses semantic and syntactic cues to identify words can be studied

d. Phonological awareness

8. Practice Book Objective

- Word attack skills involve the ability to decode unfamiliar written words in terms of their pronunciation or meaning
- Only pronouncing nonsense words would help assess a child's word attack skills. Using this approach, an evaluator may be assured that the child's ability to pronounce a given word is due entirely to the child's ability to recognize sound-symbol relationships and is not a result of word recognition through previous reading experience
- A child's ability to comprehend a passage written at grade level would not be a good method for assessing word attack skills since most or possibly all the words included in the passage would be expected to be familiar to the student
- Matching words with objects is an exercise typically used to test student comprehension of previously taught words; such an exercise could be used to assess word attack skills only if the evaluator were able to ensure that all the words tested were previously unknown to the student
- Identifying word pairs as same or different requires no word attack skills, but could be used instead to evaluate student's skills in discriminating among letters.

**B. Apply procedures for identifying and remediating special mathematics needs.**

1. PL 94-142 lists mathematics calculation and mathematics reasoning as two areas in which a student can have a learning disability.
2. Students with learning disabilities are described as having difficulty in:
  - a. assessing their abilities to solve problems

- b. identifying and selecting appropriate strategies
  - c. organizing information to be learned
  - d. monitoring problem-solving processes
  - e. evaluating problems for accuracy
  - f. generalizing strategies to appropriate situations
3. Learning difficulties in math
    - a. Visual Perception – Figure-ground, Discrimination, Spatial
    - b. Auditory Perception
    - c. Motor
    - d. Memory – Short-term, Long-term, Sequential
    - e. Language – Receptive, Expressive
    - f. Reading – math vocab
    - g. Abstract Reasoning
    - h. Metacognition
    - i. Social and Emotional Factors – Impulsive, Short Attention/Distractibility, Passivity, Self-Esteem
  4. Assessment of Math Skills
    - a. General math skills – operations, word problems, measurement, etc. using standardized or informal survey tests to identify the overall strengths and weaknesses of the student
    - b. Specific skills assessment – standardized diagnostic tests or inform tests to determine specific teaching objectives
    - c. Diagnostic interviews and informal testing – used to evaluate the student’s attitudes and feelings about learning math
  5. Determining Level of Understanding
    - a. Concrete Level – involves the manipulation of objects
    - b. Semiconcrete Level – involves working with illustrations of items in performing math tasks (e.g., dots, lines, pictures of objects)
    - c. Abstract Level – involves the use of numerals

**C. Apply procedures for identifying and remediating special expressive and receptive language needs (both spoken and written).**

1. Informal Assessment of Written Expression
  - Analysis of classroom writing assignments
  - Comparison of a child’s writing assignment with those of a random sample of other children
  - Analysis of how the child copies letters, words, sentences, and short paragraphs, presented in cursive, printed form, or both, from near-point and far-point
  - Analysis of how the child writes letters, words, or sentences from dictation (using both uppercase and lower-case cursive or print or both)
  - Analysis of how the child writes original sentences for 10 different pictures
  - Analysis of the child’s behavior during a writing assignment period
2. Practice Book Objective

- A student is unable to repeat a set of three numbers that he or she has just heard, this problem is most likely associated with a deficit in the area of auditory sequential memory, which involves the ability to recall the sequence of information presented aloud
- Assessing auditory association skills would require that the student exhibit an ability to somehow associate or relate, rather than simply repeat, orally presented information
- Verbal expression would generally be assessed by having a student describe or discuss a familiar topic; the ability to repeat words in order would be of little use in evaluating overall verbal expression skills. Similarly, syntactic structure, or the ability to order words correctly in a sentence, also could not be tested using an activity involving only word repetition.

**D. Apply procedures for identifying and remediating physical, motor, and sensory impairments.**

**E. Apply procedures for identifying and remediating emotional disorders, behavior disorders, autism, and neurological impairments.**

1. Practice Book Objective

- Students who are described as having attention-deficit disorders with hyperactivity are easily distracted and have difficulty focusing their attention for even short periods of time.
- An effective classroom intervention for such students is to limit classroom distractions and provide a highly structured curriculum.
- Distractions can often be reduced by assigning the student to a study carrel or to a place in the classroom where visual and auditory stimuli are minimized. A structured curriculum would probably involve shortened lessons that build upon previously learned material in incremental fashion. This type of curriculum helps students stay on task since it provides goals and subgoals that can be attained in relatively brief periods.
- Creating a more stimulating environment would be detrimental in the situation described since this would likely increase the student's distractibility. Similarly, having the student work with classmates would be likely to create additional distractions for the student, and so would intensify rather than reduce the problem.
- Providing the student with a model for more focused behavior would probably not be helpful since it is unlikely that he or she would internalize the attending behaviors of the model student.

**F. Apply procedures for identifying and remediating learning disabilities.**

1. Major aims of assessment

- Obtain an estimate of general intelligence in order to determine whether the child has the ability for higher achievement despite past or present performance
  - Determine areas of impaired functioning that may lend themselves to remediation
  - Find areas of strength that may prove helpful in remediation efforts
2. Establishing a learning disability – Public Law 94-142 Guidelines
    - a. A team may determine that a child has a specific learning disability if:
      - The child does not achieve commensurate with his or her age and ability levels in one or more of the areas listed below, when provided with learning experiences appropriate for the child’s age and ability levels; and the team finds that a child has a severe discrepancy between achievement and intellectual ability in one or more of the following areas: Oral expression, Listening comprehension, Written expression, Basic reading skills, Reading comprehension, Mathematics calculation, or mathematics reasoning
      - The team may not identify a child as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of : a visual, hearing, or motor handicap; mental retardation; emotional disturbance; or environmental, cultural or economic disadvantage
  3. Defining a severe discrepancy
    - a. Deviation from grade or age level
      - Is inadequate because the grade-equivalent scores that it uses have few acceptable psychometric properties
    - b. Expectancy formulas
      - Based on the child’s mental age (MA) and chronological age (CA).
      - Problem is that they assume that the correlation between scores on the ability test and scores on the achievement test is 1.0, which is rarely the case
    - c. Regression equations
      - Takes into account regression-to-the-mean effects, which occur when the correlation between two measures is less than perfect, and the standard error of measurement of the difference score
    - d. Difference between standard scores
      - A criterion level for a significant discrepancy is set, such as a difference of 1 standard deviation between the academic achievement test score and the general ability test score
      - The tests must be based on the same standard score distribution, if they are not one must be changed to the other’s scale or both can be changed to z scores
  4. Guidelines for Assessment of Learning Disabilities
    - a. It is important to evaluate the following
      - Developmental-cognitive processes (for example, verbal-linguistic, visual-spatial-constructional, sequential-analytic, and planning processes)

- Achievement skills (for example, reading, spelling, mathematics, and written expression)
  - Environmental demands (for example, demands on the child in the school and family)
  - Reactions of others (for example, how the parents, teachers, and peers respond to the child's failures)
  - Interaction effects (for example, how the above areas interact over time to affect the child's performance and adjustment)
5. Practice Book Objective
- Writing disabilities are usually associated with neurological dysfunction and result in a partial inability to write or copy letters, words, and numbers.
  - The most appropriate instructional modification would be to allow the affected student to tape class notes and rough drafts of written assignments, such as reports. This would allow the student to participate to the fullest extent possible in regular classroom activities, while reducing the frustration and embarrassment that is often associated with a writing disability.
  - Since a ninth grade student with such a disability would most likely be motivated internally to improve his or her handwriting skills, the provision of concrete reinforcement for improved legibility would probably not have a significant effect on either motivation or skills level. Although a student diagnosed as having a writing disability might well spend time in school engaging in activities and exercises to improve handwriting skills, this should not be done at the expense of required coursework in English or any other area.
  - Providing a student with extra physical education time may improve general motor coordination, but is unlikely to result in specific improvements in writing ability.

## **G. Apply procedures for identifying and remediating cognitive disabilities.**

1. Definition
  - a. Mental retardation describes a heterogeneous group of conditions characterized by low or very low intelligence and deficits in adaptive behavior.
  - b. American Association on Mental Deficiency (AAMD) – MR refers to significantly subaverage (2 or more sd below the mean) general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period (birth to 18).
2. Characteristics
  - a. Mild / Educable, sd  $-2.01$  to  $-3.00$ , SB = 67-52, Wechsler = 69-55, 2.7% of population
  - b. Moderate / Trainable, sd  $-3.01$  to  $-4.00$ , SB = 51-36, Wechsler = 54-40, 0.2% of population
  - c. Severe / Trainable (dependent), sd  $-4.01$  to  $-5.00$ , SB = 35-20, Wechsler = 39-25, 0.1% of population

- d. Profound / Custodial (life support), sd <-5.00, SB = <20, Wechsler = <25, 0.05% of population
3. Assessment
    - a. SB: FE has a somewhat lower floor than the Wechsler scales, yet neither were designed to assess severely and profoundly retarded children.
    - b. MR persons tend to show less change in IQ when retested.
    - c. Relative strengths and weaknesses should be evaluated.
    - d. Standardized tests and scales, criterion referenced tests, and normal developmental scales are of limited use with severely and profoundly handicapped children.
    - e. Suggested assessment procedures for severe and profound include task analysis, systematic observation, controlled teaching trials, informal assessment of communicative competence, adaptive behavior questionnaires, checklists, and interviews, and criterion-referenced instruments.
  4. Educational Programming
    - a. Should be based on the results of a battery of tests, including an intelligence test, an achievement test, an adaptive behavior scale, and one or more special ability tests.
    - b. Programs must be geared to the ages of children and to their levels of functioning.

**H. Recognize the needs of Limited English Proficient students.**

**I. Recognize the impact of cultural differences within the student population.**

1. Practice Book Objective
  - Teachers can often improve their ability to address the needs of culturally different students by researching aspects of student cultural background that may affect classroom functioning.
  - By investigating culture-specific adult-child interaction patterns, for example, a teacher may gain insight into what a culturally different child is likely to want and expect in a relationship with a teacher. Such investigation would also be expected to help avoid potential student-teacher misunderstandings in a variety of areas.
  - Providing special rewards for class members to assist a new student from a different culture would be far less appropriate or helpful since this would likely send students the unintended message that human kindness, when extended to those from culturally different background, must be tangibly rewarded. In addition, this approach would seem to reinforce among students an emphasis on cultural differences rather than human similarities.
  - Adhering to current instructional programs and standards may often be an unfair and unrealistic method of dealing with a student who is just entering a new culture, particularly since such students often lack adequate knowledge of the dominant language used in the classroom.

- Providing a culturally different student with instruction in the social and cultural values of the United States is unnecessary since the student would no doubt gain this type of knowledge more effectively through direct experience. More importantly, such instruction may transmit the patronizing message that the values of the student's native culture are somehow inferior and not appropriate to maintain within the school environment.

#### **J. Identify the needs of gifted students.**

1. Definition
  - a. The term gifted is used to describe children with exceptionally high IQs, those who have creative talents, and those who are high on both dimensions. Estimated 3-5% of population.
2. Identification
  - a. Any means of identification is in part dependent on the goals of the program.
  - b. May include the use of standardized tests, parent and teacher reports, direct observation of the child's behavior, and review of the child's creative work.
  - c. Most effective means of identification combines the results from several procedures, such as IQ, achievement, and behavioral-checklist.
  - d. Teacher nomination is used more extensively than any other approach, yet it is successful in identifying gifted children only about 45% of the time.
  - e. Group intelligence tests also are less effective as they tend to yield lower IQ's than individually administered tests.
  - f. Special ability/academic tests should be used to supplement intelligence tests.
  - g. Wechsler scales, SB:FE, and K-ABC are useful instruments for assessing the gifted.
3. Educating Gifted Children
  - a. Gifted children should receive education at a level commensurate with their abilities and interests.
  - b. Simplest way is to place children in existing classes at more advanced grade levels.

### **III. ASSESSMENT**

#### **A. Understand components of the assessment process.**

1. Practice Book Objective
  - Standardized assessments should be free of questions that place individuals at a disadvantage because of their gender, ethnic origin, religion, social class, or regional background.
  - A question that assesses the ability to use stock market terminology correctly would probably result in bias based on social class differences.

That is, students from lower income families are less likely to be familiar with such terminology through personal experience than students from higher income families.

- Regardless of individual background, graduating seniors would be expected to have learned through either their personal experience or their education about the economic consequences of war, the relationship between drought and food prices, and methods for calculating the cost of grocery purchases.

**B. Understand informal assessment techniques and procedures.**

**C. Apply principles of intellectual assessment.**

1. Practice Book Objective

- Although individually administered intelligence tests provide the single most accurate method for assessing intellectual ability; such tests allow only one person to be tested at a time by a trained examiner and thus are costly and inefficient to use for testing a large number of examinees.
- Only Cognitive Abilities Test is a group-administered intelligence test that can be administered easily and efficiently, the Stanford-Binet Intelligence Scale, and the Slosson Intelligence Test for Children and Adults are among the more commonly used individually administered intelligence tests.

**D. Apply knowledge of personality, perceptual processing, learning style, and vocational and interest assessment.**

**E. Understand principles of validity and reliability.**

**F. Understand issues related to and procedures for implementing nondiscriminatory assessment techniques.**

**G. Apply knowledge of test administration.**

**H. Understand test scoring procedures and concepts.**

1. Practice Book Objective

- Mode is determined by identifying the test score in a set of scores that occurs with the greatest frequency. This measure is used primarily to indicate the point at which the greatest concentration of test scores occurs.
- Identifying the average score of all scores earned on a test; this information would be used to determine the arithmetic mean of the scores received.
- Determining the midpoint between the highest and lowest scores earned on a test or the score that represents the 50<sup>th</sup> percentile would be used to determine the median.

## **I. Integrate results from an assessment battery.**

### **1. Practice Book Objective**

- One of the major goals of student assessment is to identify student strengths and weaknesses so that instruction can be adapted to meet specific student needs.
- A strength in the area of spatial reasoning is based upon the student's high WISC-III scores in the block design, object assembly, and mazes subtests.
- The woodcock-Johnson reading test score was relatively low, suggesting that the student's word recognition skills are not particularly strong.
- The student's verbal conceptual skills are also not strong, as evidenced by the low scores received on the WISC-III similarities and comprehension subtests.
- The student's fairly average standard score on the Woodcock-Johnson math test combined with the low WISC-III arithmetic subtest score indicate that quantitative skills are not an area of particular strength for this student.

## **IV. PUPIL SERVICES AND PROFESSIONAL KNOWLEDGE**

### **A. Identify major counseling approaches (e.g., behavioral, psychodynamic, person-centered, rational-emotive) and interviewing techniques.**

#### **1. Practice Book Objective**

- Social modeling and desensitization are techniques typically employed by counselors using a behavioral approach. Through this approach, counselors seek to alter undesirable behaviors by introducing modifications into the individual's environment. Such modifications may include, for example, the use of rewards for exhibiting desired behaviors or the provision of role models who serve as models of appropriate behavior.
- Gestalt therapy stresses the importance of achieving counseling generally emphasizes the importance of understanding one's own motives and behaviors through examination of the origins of inner conflicts and anxieties.
- Transactional analysis relies on a number of concepts from psychodynamic theories, although individual counseling occurs within a group context, and the focus of counseling is on the analysis of behaviors the individual exhibits in "transactions" with others.

### **B. Understand major consultation approaches (e.g., behavioral, organizational development, mental health).**

### **C. Identify basic principles of instruction.**

### **D. Understand specialized instructional approaches.**

**E. Understand procedures for monitoring student progress and achievement.**

**F. Understand the historical and theoretical foundations of school psychology.**

1. 1896 Lightner Witmer
  - practice theory
  - opened 1<sup>st</sup> psychological clinic in country
  - assessments focused on kids with learning problems
  - before this was only psychoanalytic
  - School Psy still young in field
2. 1911-1925
  - 50 school districts that had Research Bureaus; they didn't do research they tested children, 1<sup>st</sup> system not called school psy but same characteristics
  - School psy has strong ties to clinical psy, especially in child psy
  - After clinical psy came counseling, school, and industrial
  - Initially clinical psy only looked at adults but one group formed subset of child psy
3. 1949 Boulder Conference
  - purpose was to try to establish a training model that addressed scientifically based standards
  - Scientist- practitioner training model – advocated that preparation “should be grounded on and in research in general and experimental psychology” and that professional psychologists should be expected to do research
  - Already practicing school psy embraced this training system
4. Organizational Influences
  - Professional associations influence development of profession as well as organized it
  - Thayer Conference – 1954 in NY-NIMH sponsored conference National Institutes of Mental Health and was about school psy
  - Issues discussed – definition, functions, qualifications and general principles for training
  - Conference embraced 2 levels of training in school psy which were 2 year MA and 4 year PhD, also distinguished between clinical and school psy
  - APA does not consider you a psy unless at a doctoral level but NASP does, this is a continued struggle between them
5. March 1968
  - School psy came together because of concern of APA's position in doctoral training
  - Commitment to pursue a National effort
  - One year later NASP was formed when group came together again
  - NASP was formed to provide support for MA level school psy

**G. Understand the role and responsibilities of the school psychologist.**

1. Roles
  - Individual Child Study and Consultation & Intervention consume majority of time
  - Inservice (more initiative and creative)
  - Research is least amount of time
2. Models – influence of on service delivery
  - Medical – something is wrong with child; problem resides with child, ex. SED
  - Behavioral Model – function of environmental events
  - Ecological Model – interaction between child in the environment
  - Direct vs Indirect – are services centralized or decentralized, are services proactive or reactive (wait till kids fail then do something)
3. Practice Book Objective
  - As a result of professional responsibilities associated with the Individuals with Disabilities Education Act (IDEA), school psychologists are frequently called upon to conduct assessments of students with special needs.
  - Besides intelligence and achievement testing, these assessments often include an evaluation of student learning styles or the means by which individual students learn most effectively. Data obtained regarding a student's learning style are important in the development of appropriate instructional strategies designed to meet individual student needs.
  - A school psychologist would not evaluate teachers' classroom management practices; this is more often the responsibility of the school principal or the supervisor of instruction.
  - Class schedules for students identified as having a behavior disorder would most likely be arranged by the school counselor or building administrator, while the design of curricula for students identified as having a learning disability is likely to be the responsibility of a special education teacher or the district director of special education.

**H. Identify journals and organizations related to the professional development of school psychologists.**

**I. Understand professional standards and ethics related to school psychology.**

1. Practice Book Objective
  - According to the National Association of School Psychologists' (NASP) Principles for Professional Ethics, school psychologists are required to explain to students how information obtained through assessment will be used. Furthermore, this explanation should be given in language that students can understand in order to ensure that they comprehend the reasons for their evaluation and the implications of their performance.

- Although confidentiality is an important issue for school psychologist, student approval is not required for the release of information to a student's parent.
- A school psychologist are not required to provide students with the names of individuals who refer them for evaluation; such a practice might discourage school staff from making referrals.
- Since criteria used in selecting assessment instruments may be fairly complex and are at any rate unlikely to be of interest to students, school psychologists are not required to describe these criteria to students.

**J. Understand legal and ethical issues related to assessment.**

1. Practice Book Objective

- The school psychologist is required to protect the confidentiality of individual student records by requiring parental permission before sharing records with professionals outside the school, including a student's physician. The obligation of the school psychologist to ensure confidentiality does not extend to school administrators, such as principals, who have a legitimate educational interest in the content of student records.
- There are no ethical guidelines specifically related to the arrangement of meetings with divorced parents. Therefore, there is no ethical reason to avoid arranging a separate meeting with each parent if it is preferable for those involved to do so.
- It is not unethical for a school psychologist to use summary statistics to describe a class's assessment results in a professional journal article since the use of such statistics precludes the identification of individual student results and thus does not violate confidentiality guidelines.

**K. Identify legal issues related to special education.**

1. Practice Book Objective

- Section 504 of the Rehabilitation act of 1973 is a key federal law prohibiting discrimination against individuals with disabilities. According to this legislation, schools and other agencies and programs receiving federal funds must provide ramps elevators, lavatories, and other physical amenities that will allow access to individuals with disabilities. Furthermore, applicants to federally funded programs who are "otherwise qualified" may not be excluded from participation on the basis of their disabilities. Failure to comply with these requirements may result in the withdrawal of federal funding.
- The Individuals with Disabilities Education Act (IDEA) of 1990, ensures a free, appropriate public education for all children with disabilities.
- The Education of the Handicapped Act Amendments of 1983 include a variety of statutes related to special education program administration and services, but do not specifically address issues related to discrimination against individuals with disabilities.

- The Family Rights and Privacy Act of 1974, also known as the Buckley Amendment, provides parents of school-age children with the right to inspect their children's school records and control access to these records.

**L. Identify procedures for conducting a comprehensive case study evaluation.**

1. Practice Book Objective

- Multidisciplinary teams, which are comprised of professionals from diverse areas in education, are formed to help ensure that students with special needs are provided with an appropriate education. One of the major responsibilities of the multidisciplinary team is to review comprehensive assessment data that have been collected for each student who may require special education services. The results of such reviews are then used by team members to develop instructional plans to promote optimal student development.
- Although members of the multidisciplinary team are likely to be supportive of special education goals and services, their role does not require them to serve as community advocates for special education.
- Screenings of high-risk students would not be conducted by the multidisciplinary team, although one or more of the professionals within a team may conduct such screening as one of their job responsibilities.
- Although multidisciplinary teams often evaluate the special education program of individual students, they do not evaluate a school's overall special education services.

**M. Understand the principles of research design.**

**N. Analyze the principles of data collection.**

1. Practice Book Objectives

- To evaluate the effectiveness of a behavior management program, the school psychologist would have to determine whether the program had succeeded in modifying student behavior according to specified goals. The most direct way to collect data for this purpose would be to observe the actual classroom behavior patterns of students in the program.
- Depending on the precise nature of the data desired, the school psychologist could use any of a number of specific observational techniques, including rating scales, time sampling, and behavior checklists.
- Work samples are used to assess student performance on given types of tasks rather than to assess student behavior.
- Student interviews would be far more appropriate for determining students' feelings and attitudes toward a behavior management program than for evaluating the effectiveness of the program in actually modifying behavior.
- Case studies, which involve the extensive collection of data about individual students and their family background, would be unnecessarily

time-consuming and would not, at any rate, provide much useful information for assessing a behavior management program.

**O. Identify procedures for reporting research results.**

**P. Identify components of program evaluation.**