

# Lifespan Development

Middle Childhood  
Chapter 9: Physical & Cognitive  
Development



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# Agenda

- Intelligence – perspectives
  - Historical – Binet/Terman
    - Stanford-Binet IQ test
  - Contemporary – Sternberg/Gardner
  - Applied – Wechsler
- Intelligence assessment



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# Intelligence

- History
  - Alfred Binet – early 1900's contracted with the Paris schools to create a test to identify students likely to have difficulties
  - Terman's revision – Stanford Binet
- What is Intelligence?
  - ability to understand complex ideas
  - adapt to environment
  - learn from experience
  - engage in effective reasoning
- Other experts perspectives



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## Intelligence

- Newer conceptualizations
  - Sternberg's Triarchic Theory
  - Gardner's Multiple Intelligences

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## Sternberg's Triarchic Model

- Componential- skills that contribute to intelligent behavior
  - Performance
  - Knowledge acquisition
  - Metacomponents
- Experiential – deal with novel tasks, use relevant information
- Contextual – practical – survival skills

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## Gardner's Multiple Intelligences

- Linguistic
- Logical-mathematical
- Musical
- Spatial
- Bodily-kinesthetic
- Interpersonal
- Intrapersonal
- Naturalistic
- Existential?

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## Intelligence

- Wechsler's conceptualization
  - the aggregate capacity to act purposefully, think rationally, and deal effectively with his or her environment
  - Wechsler-Bellevue Intelligence Scale (1939)

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## Wechsler Tests – current

- Wechsler Adult Intelligence Scale-4<sup>th</sup> edition (WAIS-IV)
- Wechsler Intelligence Scale for Children-4<sup>th</sup> edition (WISC-IV)
- Wechsler Preschool and Primary Scale of Intelligence-3<sup>rd</sup> edition (WPPSI-III)
- verbal, performance, and total (FS) IQ score
- mean = 100, standard deviation = 15

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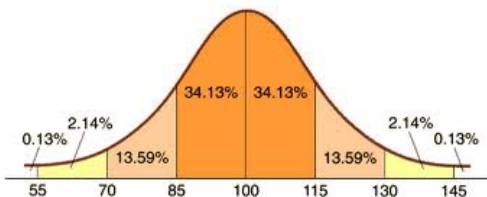
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## Distribution of IQs in the population



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## IQ and attainment

TABLE 4.6 IQ Levels and Typical Social, Educational, and Occupational Attainments

IQ	Criteria
125-130	Mean of persons receiving medical, doctorate, and law degrees; mean for technical degrees such as chemistry and engineering
115-120	Mean of college graduates; mean for professional positions such as teachers, managers, and policemen
105-110	Mean of high school graduates; 50/50 chance of graduating from college
100	Average for the general population; about half of all persons score in the 90 to 109 range
90-95	Mean of persons from inner city, low income, and rural settings
85-90	Mean of unskilled laborers and persons employed for simple assembly line work
75-80	About 50/50 chance of reaching high school; need special education services; difficulty coping with modern technological society
65-70	Mild mental retardation likely; may achieve social and vocational adequacy with special training and supervision
55-60	Mild mental retardation definite; partial independence in living arrangements; may achieve fourth grade academic level
45-50	Moderate mental retardation likely; function well in a sheltered workshop; need supervised housing
35-40	Severe mental retardation likely; little or no communication skills; sensory and motor impairments; trainable in basic health habits
Below 25	Profound mental retardation likely; minimal functioning and incapable of self-maintenance; need constant nursing care and supervision

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## What determines intelligence?

- Nature vs. Nurture
  - Genes
  - Environment
  - Interaction
- Genes setting limits within which environmental factors determine final outcome
- Twin research