Physical & Cognitive Development of Tweens (6-12 year olds)

Psychology 307, Development
Guest Lecture 3/24/09
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Topics We Will Cover Include:

- Growth
- Motor Development
- Learning Disabilities
- Cognitive & Language Development
- Quantifying Intelligence

Re-acquaint yourself (2003-2009)

music

Back In My Day...

music

Growing Up

- Height & Weight Changes, AKA awkward school dances
  - variations in height up to 6-7"
  - typically grow 2-3" / year
  - girls, enjoy being taller while you can!
  - Around the world: diet, nutrition, disease

And Growing Out...

- Obesity
  - 40% 9-10 year old girls try to lose weight

- Great divide between reality & media

- Genetic & social influences
  - Poor diet - school lunches as the culprit?
Motor Development

- Gross
  - Gender differences pronounced in this age group (likely social)
  - Examples of Gross motor skills through development
    - 6 year olds: skipping; 7 year olds: hopscotch, jumping jacks

- Fine
  - 6 year olds: tie shoes, fasten buttons; 8 year olds: use hands independently
  - 11-12 year olds: near adult capacity

Health

- Accidents:
  - Car & bike accidents most frequent, then fires, burns, drownings & gun-related deaths
  - Boys rate > girls

- Cyberstalkers:
  - Software & Parent monitoring
  - Awareness of risks & what information is appropriate to provide

Psychological Disorders:

- Using Rx's that aren't meant to treat children, dosage?
- Long term effects & disorders later in life?
- Used when traditional methods are ineffective
- Risks of Suicide (SSRIs)

Learning Disorders

- Sensory Problems:
  - Visual (rare): blindness (below 20/200 acuity affected)
  - Color perception & depth perception not addressed

- Auditory:
  - Types of problems: particular pitches/ frequency, amplification
  - How is language effected?
    - Comprehension?
    - Production? (3-5% kids have speech impairment, e.g. stuttering – don’t interrupt, draw attention)

Intellectual & Language Development

- Piagetian Stage: Concrete Operational
  - Active & appropriate use of logic (e.g. Ozonas on Margarita Monday)
  - Decentering
  - Reversibility
  - So how does this hold up across cultures?

- Information Processing
  - Memory: encoding, storing, retrieving
  - Improved working memory (strategies: e.g. rehearsal)
  - Metamemory

- Learning Problems:
  - E.g. Dyslexia
  - ADHD
  - Inattention, impulsiveness, low tolerance for frustration
  - Est 3-7% under 18 are affected

- Treatments: behavioral therapy, diet modification, medication controversy
  - Long term effects unknown
  - Stimulants: incr attn span, concentration, compliance
  - But irritability, reduced appetite, depression

Teaching Tweens

- Vygotsky’s Contribution:
  - Interactive, experiment-based environment
  - Both child-child and adult-child interactions promote cog growth

- Cooperative Learning (insights of others, serve as other’s tutor/pupil)

- Reciprocal Teaching (reading comprehension)
Language Development

• Syntax:
  • use of conditional (if-then) and passive voice (was-ed)

• Lexicon:
  • from 8000-14000 words

• Phonology:
  • j,v, th, zh (post 7 years)

• Pragmatics:
  • stress & intonation
  • turn-taking to give and take

Language Development continued

• Metalinguistic Awareness

5 years:
• understand concept of syntax
• blame themselves for miscommunications/misunderstandings

8 years:
• may be due to other person (dynamic communication, asking for clarification)

~10 years
• understand explicitly what some of the rules are

Bilingualism

• Bilingual Education: teach in native language, introduce English (strong in content)

• Immersion: all subjects in English (encourages students to learn English)

• Advantages of being Bilingual:
  • greater metalinguistic awareness
  • increased cognitive ability (verbal & non-verbal)
  • enhances ability to learn other languages

Tests of Intelligence

• Binet's Test: Mental Age/Chronological Age
  • Average = 100
  • Bell Curve Population

• Stanford-Binet (age appropriate items)
• Wechsler (verbal: comprehension; nonverbal: copying, sequencing, assembling),
• Kaufman (ability to integrate different stimuli simultaneously, sequential thinking - more flexible)

• Fluid v. Crystallized Intelligence
  • Binet:
    • trial & error
doesn't address
  • underlying nature of intelligence
  • good at test

  • Fluid: processing capacities, reasoning, memory (grouping according to a criterion)
  • Crystallized: cumulative of skill, info, strategies (puzzle, mystery)

Theories and Controversy

• Vygotsky: look at those processes in development

• Gardner: 8 independent types of intelligence

• Sternberg’s Triarchic Theory of Intelligence
  • Componential
  • Experiential
  • Contextual

• Racial Differences in IQ and The Bell Curve

Mental Retardation & The Gifted

• Mental Retardation Mainstreaming v. Full Inclusion
  • Familial retardation (biological, no history) - FAS or Downe’s
  • Mild: 90% at low deficit levels (IQ 50-70) - 3rd-6th grade achievable
  • Moderate: 35-50 5-10% - 2nd grade achievable (schooling not always possible, slow overall intellectual development
  • Severe: 20-35 Nursing home care, some basic self-care skills,
  • Profound: below 20

• The Gifted
  • 3-5% of population
  • programs often cut for budgetary reasons
  • healthier, better coordinated, better adjusted, earned more $, than other classmates
  • Acceleration v. Enrichment
Topics We Covered (1 more slide left, don’t pack up!):

- Growth
- Motor Development
- Learning Disabilities
- Cognitive & Language Development
- Quantifying Intelligence

End

- This lecture will be posted on elearning tonight
- Dr. Bortfeld will be back on Thursday 3/26/09
- If you have any questions about this lecture you can email me: eswen@mac.com or speak with Dr. Bortfeld about its content
- Cool NY Times article on Tweens: