

TEST BANK

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Adolescence

Ninth Edition

Student: _____

1. Which of the following is *not* one of the five chief changes in cognition during adolescence?
 - A. multidimensional thought
 - B. metacognition
 - C. abstract reasoning
 - D. increased imagination
2. Dan, an adolescent, has more developed cognitive skills than his 6-year-old brother Timmy because Timmy's imagination is limited to:
 - A. thinking that things can be different from how he observes them.
 - B. moving easily between specific and abstract ideas.
 - C. systematically generating alternative possibilities and explanations.
 - D. comparing what he actually observes with what he believes is possible.
3. Bickering and squabbling between teenagers and their parents is largely caused by:
 - A. the generation gap.
 - B. hormonal changes in adolescents.
 - C. adolescents' ability to formulate counterarguments.
 - D. adolescents' anti-social tendencies.
4. Tam is good at drawing conclusions from given information, and Lan is good at using information to generate many possible conclusions. Thus, Tam is good at _____ reasoning and Lan is good at _____ reasoning.
 - A. deductive; deductive
 - B. deductive; inductive
 - C. inductive; deductive
 - D. inductive; inductive
5. Which of the following is *not* a characteristic of deductive reasoning in adolescence, as described by the text?
 - A. inhibiting a prepotent response
 - B. having the ability to stop oneself from acting automatically
 - C. making an inference based on accumulated evidence
 - D. recognizing when a question cannot be answered with certainty
6. Making "educated guesses" about problems would be considered which type of reasoning?
 - A. inductive reasoning
 - B. deductive reasoning
 - C. argumentative reasoning
 - D. cognitive reasoning
7. Joey enjoys playing the devil's advocate and is always stirring up discussions with his contrary positions. This ability may be referred to as:
 - A. hypothetical thinking.
 - B. social cognition.
 - C. mutual perspective-taking.
 - D. impression formation.
8. Which of the following terms applies more to adolescent thought than to childhood thought?
 - A. conservation, reversibility, structure
 - B. assimilation, accommodation, complexity
 - C. preoperational, egocentric, scheme
 - D. flexible, speculative, abstract

9. The ability to see beyond what is directly observable and reason in terms of what might be possible is called:
- social perspective taking.
 - hypothetical thinking.
 - imaginary audience.
 - formal operations.
10. Mai can understand the metaphor, "My heart is an open book," because she is able to focus on the:
- concrete and familiar associations.
 - semantic structure of the sentence.
 - abstract and conceptual relations.
 - observable features of the objects.
11. Renee, a 6-year-old, is unable to answer the question, "How are a motorcycle and a bicycle alike?" Mohammed, a 17-year-old, answers the same question by saying, "They are both types of transportation." What statement about Renee and Mohammed is most true?
- Renee's inability to answer the question is very unusual for a child her age.
 - Mohammed has demonstrated the ability to think concretely.
 - Mohammed has demonstrated the ability to think abstractly.
 - According to Piaget's theory, Renee and Mohammed are both developmentally delayed.
12. Javier spends a great deal of time talking about relationships, politics, philosophy, religion, and morality with his friends, demonstrating his ability to think:
- abstractly.
 - preoperationally.
 - concretely.
 - deductively.
13. Adolescents develop the ability to think about social issues, a concept more generally referred to as:
- socialization.
 - social cognition.
 - abstract reasoning.
 - metacognition.
14. The ability to think about one's own thoughts is called:
- hypothetical think.
 - egocentric logic.
 - metacognition.
 - social cognition.
15. All of the following are indicators of metacognition, *except*:
- introspection.
 - self-consciousness.
 - intellectualization.
 - deductive reasoning.
16. Teenagers often become self-conscious because they believe that people are talking about them. Which characteristic are they exhibiting?
- an imaginary audience
 - a personal fable
 - propositional logic
 - metacognition
17. The erroneous belief that one's thoughts, feelings, and experiences are unique is called:
- an imaginary audience.
 - a personal fable.
 - propositional logic.
 - metacognition.

18. Dave knows that kids who drink and drive sometimes get killed, but he believes that he is somehow immune to having such a terrible thing happen to him. Dave's belief is an example of:
- the imaginary audience.
 - a personal fable.
 - social cognition.
 - metacognition.
19. John is a junior in high school. Although he is sociable, he feels very self-conscious. He feels as if everyone is evaluating him. David Elkind refers to this loss of perspective in adolescence as:
- self-reflection.
 - personal fable.
 - imaginary audience.
 - impression formation.
20. Who coined the term adolescent egocentrism?
- Piaget
 - Elkind
 - Binet
 - Sternberg
21. Research testing Elkind's theory of adolescent egocentrism has found that certain aspects:
- peak at age 12 and then drastically decline.
 - may remain present throughout the adolescent and adult years.
 - are virtually a nonexistent phenomenon in adolescence or adulthood.
 - are less prevalent among college students.
22. The text suggests that _____ is/are *not* a good explanation of adolescent egocentrism.
- cognitive deficiencies
 - emotional reasons
 - social reasons
 - the impact of other people's opinions
23. Fifteen-year-old Hermione is able to write a much more complex answer than 10-year-old Ginger to the question, "Compare the advantages and disadvantages of using simple spells for self-protection." This is because, as an adolescent, Hermione is able to think:
- egocentrically.
 - deductively.
 - in metacognitive ways.
 - in multiple dimensions.
24. Multidimensional thinking helps adolescents understand:
- sarcasm.
 - imaginary audiences.
 - formal operations.
 - concrete examples.
25. What thought process helps adolescents appreciate the sarcasm and satire of *Mad* magazine and *The Simpsons*?
- selective attention
 - sensation-seeking
 - mutual role taking
 - multidimensional thinking
26. The extreme skepticism observed in many adolescents is most likely a result of:
- seeing knowledge as relative rather than as absolute.
 - thinking in terms of what's possible rather than what's real.
 - thinking about the process of thinking.
 - viewing reality in terms of multiple dimensions.

27. _____ theorists believe that changes in cognitive abilities appearing during adolescence are qualitative, whereas _____ theorists believe they are quantitative.
- Cognitive-developmental; information-processing
 - Cognitive-developmental; behavioral decision
 - Information-processing; cognitive-developmental
 - Information-processing; behavioral decision
28. Dr. Martino argues that development proceeds in stages and that each stage is marked by fairly consistent behavior. Then, as the child's biological development progresses and new experiences are acquired, a shift occurs and development breaks through to the next level. Dr. Martino's view is most consistent with that expressed by the:
- triarchic theory of intelligence.
 - information-processing perspective.
 - psychometric theory.
 - Piagetian perspective.
29. Juan is 5 years old. His language skills are excellent, but his thinking skills demonstrate limitations such as egocentrism. What Piagetian stage of thought would you suspect he is in?
- formal operational
 - sensorimotor
 - concrete operational
 - preoperational
30. According to Piaget, the period of cognitive development that is based on theoretical, abstract principles of logic is called:
- sensorimotor.
 - preoperational.
 - concrete operations.
 - formal operations.
31. Rose solves a chemistry problem by systematically testing several hypotheses. According to Piaget, which stage is Rose functioning at?
- preoperational
 - concrete operations
 - formal operations
 - sensorimotor
32. According to the textbook, in early adolescence, formal thinking:
- has a "now you see it, now you don't" quality to it.
 - is very integrated into the individual's general approach to reasoning.
 - is very similar to preadolescents in Piaget's preformal stage.
 - is employed regularly.
33. Piaget theorists believe that the use of _____ is the chief feature of adolescent thinking that differentiates it from the type of thinking employed by children.
- egocentric reasoning
 - abstract logical reasoning
 - multidimensional reasoning
 - systematic reasoning
34. Adolescent thinking can be distinguished from the thinking of children in several respects. All of these differences stem from improvement(s) in _____ during adolescence.
- abstract logical reasoning
 - personal life experiences
 - synaptic pruning
 - autonomy and personal responsibility

35. LaToya has a secure relationship with her parents, whereas Karen has an insecure one. Based on research cited in the text, who is more likely to display formal operational thinking?
- LaToya
 - Karen
 - both girls
 - unable to determine
36. Much research on adults as well as adolescents indicates that the gaps between _____ & _____ in everyday situations are very large, with everyday decision making laden with logical errors that cannot be explained by cognitive incompetence.
- what individuals want to do & what they actually do
 - what individuals want to do & what they have time for
 - logical reasoning abilities & personal experience
 - logical reasoning abilities & their actual use of logical reasoning
37. For which of the following subjects will Andrew, a competent 12th grader, display the worst reasoning ability?
- adolescent dating
 - misbehavior in school
 - retirement planning
 - driving a motor vehicle
38. The transition from concrete operational thought to formal operational thought occurs:
- very suddenly and evenly across all domains of functioning.
 - at the same age, regardless of the environment.
 - very gradually and unevenly across domains of functioning.
 - the change is barely noticeable.
39. The improvements in organizational strategies seen in adolescence include all but:
- increasing use of mnemonic devices.
 - becoming more flexible with strategy use.
 - increasing speed of information processing.
 - becoming more efficient with strategy use.
40. Dr. Brown argues that adolescents can solve problems better than younger children because they can store more information in memory and because they have more effective strategies. Dr. Brown's view is most consistent with which of the following perspectives?
- triarchic theory of intelligence
 - information-processing perspective
 - psychometric theory
 - Piagetian perspective
41. Jesse is in the 7th grade at a school that has open classrooms with multiple teachers instructing their classes in one large area. Which of the following cognitive processes will help Jesse focus on his teacher?
- working memory
 - selective attention
 - long-term memory
 - divided attention
42. Charlie is able to tune out the television so that he can focus on his art project, which is due in class tomorrow. This is an example of:
- selective attention.
 - divided attention.
 - short-term memory.
 - long-term memory.

43. While studying for her biology exam, Jennifer watches her favorite show on TV. This is an example of:
- selective attention.
 - divided attention.
 - short-term memory.
 - long-term memory.
44. Which of the following statements about the changes in information-processing abilities during adolescence is *false*?
- There are advances in short-term but not long-term memory.
 - The speed of processing information increases.
 - Adolescents are more "planful" than children.
 - There are advances in selective and divided attention.
45. All of the following are ways that scientists study brain maturation *except*:
- by using DTI to see the ways in which various regions of the brain are connected
 - by using fMRI to examine patterns of activity in various regions of the brain while individuals are performing a variety of tasks
 - by electroencephalography to measure event-related potentials in response to different stimuli or events
 - by using fMRI to measure event-related potential in response to different stimuli or events
46. Neurons are cells that carry information by transmitting electrical charges across the body. When the electrical charge travels through a neuron, it stimulates _____:
- the release of neurotransmitters
 - synaptic pruning
 - myelination
 - the brain to process some piece of information
47. The formation of synapses is:
- almost entirely genetically programmed.
 - almost entirely formed through experience.
 - both genetically programmed and formed through experience.
 - random.
48. One type of structural change in the brain has to do with changes in the levels of grey and white matter in the brain. Which of the following statements is true?
- grey matter decreases while white matter increases
 - grey matter increases while white matter decreases
 - both grey matter and white matter decrease
 - both grey matter and white matter increase
49. All of the following statements about structural and functional change involving the prefrontal cortex during adolescence are true *except*:
- patterns of activation within the prefrontal cortex generally become more focused
 - individuals are more likely to use multiple parts of the brain simultaneously and coordinate activity between prefrontal regions and other areas of the brain
 - the full structural maturation of the prefrontal cortex is not complete until the mid-20s
 - all of the above are true
50. One aspect of brain maturation that is associated with the "remodeling" that takes place in the brain during adolescence is:
- formal operational thought.
 - myelination.
 - metacognition.
 - information-processing gains.

51. Which statement regarding increases in cognitive abilities is *false*?
- A. Increases in cognitive abilities are due to growth in the size of the brain.
 - B. Pruning of the synapses leads to increases in cognitive abilities.
 - C. Changes in levels of neurotransmitters reduce sensitivity to reward, leading to an increase in sensation-seeking.
 - D. Maturation of the prefrontal cortex allows for complex activities such as planning, decision making, goal setting, and metacognition.
52. Changes in the limbic system during adolescence may cause all of the following, *except*:
- A. increased emotionality.
 - B. increased responsiveness to stress.
 - C. decreased risk-taking.
 - D. decreased responsiveness to rewards.
53. Jane, an adolescent, can attribute her better planning skills to developments in her _____ and she can attribute her gut-level, intuitive decision making to her _____.
- A. dorsolateral prefrontal cortex; orbitofrontal cortex
 - B. dorsolateral prefrontal cortex; ventromedial prefrontal cortex
 - C. ventromedial prefrontal cortex; dorsolateral prefrontal cortex
 - D. orbitofrontal cortex; ventromedial prefrontal cortex
54. In addition to an increase in responsiveness to stress, changes in the _____ may also help explain why adolescents' concerns about what their peers think increase during this time.
- A. prefrontal cortex
 - B. dorsolateral prefrontal cortex
 - C. limbic system
 - D. levels of grey matter
55. The first intelligence test was derived in France for the purpose of determining whether:
- A. a student should be graduated from high school.
 - B. an individual was qualified to serve in the army.
 - C. a student would profit from formal education.
 - D. a student was qualified for a job.
56. When calculating individual performance on an IQ test, a child who was of average intelligence would have an IQ score of:
- A. 100.
 - B. 200.
 - C. 150.
 - D. There is no "average" IQ
57. Sternberg's "triarchic theory of intelligence" proposes that to assess an individual's intellectual capabilities it is necessary to look at three distinct, but interrelated, types of "intelligence":
- A. verbal, mathematical, and spatial.
 - B. componential, experiential, and contextual.
 - C. componential, kinesthetic, and experiential.
 - D. verbal, mathematical, and interpersonal.
58. Steve gets all As in his course work but has a hard time relating to the real world. According to Sternberg, Steve is above average in _____ intelligence but below average in _____ intelligence.
- A. componential; experiential
 - B. componential; contextual
 - C. experiential; componential
 - D. contextual; experiential

59. When evaluating the three different forms of intelligence described in his triarchic theory of intelligence, Sternberg would disagree with which statement?
- A. Individuals with high componential intelligence are more intelligent than individuals with either experiential or contextual intelligence.
 - B. An individual who scores high on experiential or contextual intelligence may be equally as intelligent as someone who scores high in componential intelligence.
 - C. Society needs individuals with all three forms of intelligence.
 - D. It is time we should be assessing experiential and contextual intelligence as much as we test componential intelligence.
60. According to Gardner's theory of multiple intelligences, sports figures Babe Ruth, Michael Jordan, Joe Montana, and Martina Navratilova are all considered above average in:
- A. spatial intelligence.
 - B. componential intelligence.
 - C. kinesthetic intelligence.
 - D. experiential intelligence.
61. Sam took an IQ test in 4th grade and scored below average. Sam's middle school is administering the test again. This time, Sam's score is likely to be:
- A. below average.
 - B. average.
 - C. above average.
 - D. there's no way to predict.
62. During adolescence, individuals' IQ scores _____, whereas their mental abilities _____.
- A. remain stable; increase
 - B. remain stable; decrease
 - C. increase; remain stable
 - D. decrease; remain stable
63. Adolescents who score higher than their peers on an IQ test will probably:
- A. score lower than their peers on their next IQ test.
 - B. continue to score higher than their peers on future IQ tests.
 - C. score the same as their peers on their next IQ test.
 - D. cannot make a prediction based on the instability of intelligence.
64. It now appears that the only reliable sex difference in mental abilities is in the area of:
- A. spatial abilities.
 - B. verbal abilities.
 - C. math abilities.
 - D. creative abilities.
65. Mary is having trouble understanding how to do a math problem. Her teacher asks her just the right question and Mary understands the problem. Vygotsky would refer to the structuring process used by the teacher to guide Mary's thinking as:
- A. laddering.
 - B. enabling.
 - C. pillaring.
 - D. scaffolding.
66. According to Vygotsky, adolescents learn best when:
- A. their lessons are within their zone of proximal development.
 - B. a more experienced instructor is present.
 - C. the instructor engages in scaffolding.
 - D. All of the above

67. The finding that Black and Hispanic adolescents receive lower scores on IQ tests than their White peers is probably a result of the:
- lack of schooling ethnic minorities receive.
 - genetic differences between these groups.
 - biased construction of these tests.
 - instability of intelligence during adolescence.
68. The growth of _____ during adolescence is directly related to an improved ability to think abstractly.
- long-term memory
 - social cognition
 - automatization
 - short-term memory
69. While children tend to use _____ when asked to describe others, adolescents are more likely to describe people in terms of _____.
- attitudinal descriptors; interests and personality characteristics.
 - concrete descriptors; global descriptors.
 - personality descriptors; global and concrete descriptors.
 - global and concrete descriptors; interests and personality characteristics.
70. With age, adolescents develop a more sophisticated theory of mind, which is the ability to:
- understand that others have beliefs, intentions, and knowledge that may be different from one's own.
 - understand their own thought processes.
 - separate what they know from what they think.
 - separate what is real from what is possible.
71. Chris and his parents had an argument because they did not want him to go to a New Year's Eve party across town. A few days after the argument, Chris's anger subsided because he realized his parents were worried about his safety. Which cognitive process did Chris use to reach this conclusion?
- implicit personality theory
 - mutual role-taking
 - automatization
 - social perspective-taking
72. Billy is able to convince his parents to get him his own phone line by pointing out advantages for his parents as well as himself. According to Selman, Billy has reached which stage of social perspective-taking?
- critical thinking
 - selective attention
 - mutual role-taking
 - concrete operations
73. Most research on adolescents' beliefs about rights and civil liberties comes from:
- studies of ethnic minority samples
 - studies of Western, middle-class youth
 - diverse SES samples
 - adolescent girls
74. All of the following are themes that have emerged from the research findings of studies that investigate different aspects of social cognition during adolescence *except*:
- as individuals move into and through adolescence they become better able to step outside themselves and see things from other vantage points.
 - adolescents are better able to see that the social rules we follow are not absolute and are therefore subject to debate and questioning.
 - with age, adolescents develop a more differentiated, more nuanced understanding of social norms.
 - with age, all adolescents increasingly reject the authority of adults by challenging and dismissing the morals established by their parents.

75. Early in adolescence, moral guidelines are:
- A. seen as absolutes.
 - B. seen as subjective.
 - C. based on principles such as equality, justice, or fairness.
 - D. based on abstract guidelines.
76. When the teacher asks a question in class, students raise their hands to answer. This example illustrates:
- A. social conventional behavior.
 - B. a specialized structural system.
 - C. metacognitive behavior.
 - D. dominance theory.
77. Selena's friends often come to her to help them resolve their problems because she has exceptional insight and judgment, and offers good advice about their complex or unclear issues. Developmental psychologists would concur that Selena has:
- A. good intuition.
 - B. wisdom.
 - C. deductive reasoning skills.
 - D. social cognition.
78. Which theory helps researchers understand adolescent risk-taking?
- A. behavioral decision theory
 - B. alternative choices theory
 - C. desirability theory
 - D. cognitive development theory
79. According to research on behavioral decision theory, adolescents often decide to engage in behavior that seems risky to adults because adolescents:
- A. cannot consider as many consequences for their actions as do adults.
 - B. have thinking processes that are still predominantly preoperational.
 - C. place a different value on the possible consequences than do adults.
 - D. wish to assert their independence from adults in every possible way.
80. Are adults, or adolescents, more likely to think of themselves as invulnerable?
- A. adults
 - B. adolescents
 - C. both are equally likely
 - D. Neither group thinks of themselves as invulnerable
81. What emotional characteristic makes an individual more likely to engage in risky behaviors?
- A. depression
 - B. moodiness
 - C. sensation-seeking
 - D. anxiety
82. Behavioral decision theory draws heavily on _____, and is a rational process in which individuals _____.
- A. psychoanalytic theory; are forced to think about the root of their behaviors.
 - B. information-processing theory; naturally advance in cognitive skills.
 - C. economics; calculate the costs and benefits.
 - D. behaviorism; make choices based on rewards and punishments.
83. Compared to childhood, reward-seeking and sensation seeking during adolescence:
- A. are equally as high during childhood and adolescence.
 - B. are lower during adolescence than childhood.
 - C. are caused by biological forces during adolescence while it is typically caused by environmental forces in childhood.
 - D. are higher during adolescence than childhood.

84. According to the textbook, a good deal of adolescents' risk taking takes place in contexts in which:
- A. they are unsupervised by adults and exposed to peer pressure.
 - B. older, opposite sex peers are present.
 - C. they are in a new, exciting environment.
 - D. there are at least 3 peers present.
85. According to the textbook, the main contributor to the increased rate of automobile accidents among teenagers is:
- A. driving under the influence.
 - B. driving with other teenagers in the car.
 - C. texting while driving.
 - D. talking on the phone, especially having an emotional conversation.
86. According to the textbook, all of the following are potentially successful ways to reduce adolescent risk-taking *except*:
- A. classroom-based education programs designed to teach adolescents about the dangers of various activities, make better decisions, and resist peer pressure to engage in risky activity.
 - B. limiting adolescents' opportunities to put themselves in risky situations and making risky substances harder for adolescents to obtain.
 - C. making the penalties for engaging in certain risky behaviors more severe and increasing the salience of the potential costs of engaging in the risky behavior.
 - D. Finding ways to permit adolescents to take risks without putting themselves in situations in which they can hurt themselves.
87. In what five ways are the intellectual abilities of adolescents superior to those of children? Explain and give a concrete illustration of each developmental trend.
88. You join your friends for coffee and notice they are arguing about whether the Piagetian or the information processing perspective offers a better explanation of cognitive development. They ask for your opinion, and you tell them that each is useful but each has limitations. You suggest a third approach that integrates the two perspectives. What do you tell your friends?
89. Your roommate is taking an anatomy class and has noticed differences in the brains of younger and older rats. She knows ethical reasons prohibit euthanizing humans to examine their brains, and asks you how we learn about adolescent human brains. What can you tell her about how human brains are studied?

90. Describe a class that Lev Vygotsky would teach. What components would be important in his classroom? What tactics would the teacher employ to facilitate learning?
91. Steve gets all As in his course work but has a hard time relating to the real world. Jessica has been failing her courses but is an exceptional artist. The guidance counselor, Miss Willingham, has stated that Steve is "smarter" than Jessica. Do you agree or disagree with Miss Willingham's conclusion? Support your answer.
92. Mr. Goldberg, a high school teacher, approaches you (a brilliant adolescent psychologist) regarding two of his students. He is concerned about their behavior and hopes you can explain what is going on. One student, Sharon, occasionally engages in unprotected sex. The other student, Michael, constantly wears pants to hide what he believes are skinny legs. Using David Elkind's research results, how would you characterize Sharon's behavior? How would you characterize Michael's behavior? Be sure to justify your answer.
93. Fifteen-year-old Randall was a participant in a research study on risk-taking. According to his answers on the survey, Randall understands the dangers of drinking and driving, having unprotected sex, and using marijuana. However, at a party last week, Randall was seen smoking marijuana and getting into a car with an intoxicated driver. How would you explain this inconsistency in Randall's behavior in terms of the four main aspects of brain development? Obviously, he knows the right answers, yet he engages in risky behavior.

94. Nicole is an adolescent and has experienced changes in cognition and social perspective-taking. Her mom and dad believe that these changes have both positively and negatively influenced their relationship with their daughter. How would an adolescent development psychologist explain the effects of these normative developmental changes in cognition?

02 Key

1. Which of the following is *not* one of the five chief changes in cognition during adolescence?
A. multidimensional thought
B. metacognition
C. abstract reasoning
D. increased imagination
2. Dan, an adolescent, has more developed cognitive skills than his 6-year-old brother Timmy because Timmy's imagination is limited to:
Steinberg - Chapter 02 #1
A. thinking that things can be different from how he observes them.
B. moving easily between specific and abstract ideas.
C. systematically generating alternative possibilities and explanations.
D. comparing what he actually observes with what he believes is possible.
3. Bickering and squabbling between teenagers and their parents is largely caused by:
Steinberg - Chapter 02 #2
A. the generation gap.
B. hormonal changes in adolescents.
C. adolescents' ability to formulate counterarguments.
D. adolescents' anti-social tendencies.
4. Tam is good at drawing conclusions from given information, and Lan is good at using information to generate many possible conclusions. Thus, Tam is good at _____ reasoning and Lan is good at _____ reasoning.
Steinberg - Chapter 02 #3
A. deductive; deductive
B. deductive; inductive
C. inductive; deductive
D. inductive; inductive
5. Which of the following is *not* a characteristic of deductive reasoning in adolescence, as described by the text?
Steinberg - Chapter 02 #4
A. inhibiting a prepotent response
B. having the ability to stop oneself from acting automatically
C. making an inference based on accumulated evidence
D. recognizing when a question cannot be answered with certainty
6. Making "educated guesses" about problems would be considered which type of reasoning?
Steinberg - Chapter 02 #5
A. inductive reasoning
B. deductive reasoning
C. argumentative reasoning
D. cognitive reasoning
7. Joey enjoys playing the devil's advocate and is always stirring up discussions with his contrary positions. This ability may be referred to as:
Steinberg - Chapter 02 #6
A. hypothetical thinking.
B. social cognition.
C. mutual perspective-taking.
D. impression formation.
Steinberg - Chapter 02 #7

8. Which of the following terms applies more to adolescent thought than to childhood thought?
- A. conservation, reversibility, structure
 - B. assimilation, accommodation, complexity
 - C. preoperational, egocentric, scheme
 - D. flexible, speculative, abstract**

Steinberg - Chapter 02 #8

9. The ability to see beyond what is directly observable and reason in terms of what might be possible is called:
- A. social perspective taking.
 - B. hypothetical thinking.**
 - C. imaginary audience.
 - D. formal operations.

Steinberg - Chapter 02 #9

10. Mai can understand the metaphor, "My heart is an open book," because she is able to focus on the:
- A. concrete and familiar associations.
 - B. semantic structure of the sentence.
 - C. abstract and conceptual relations.**
 - D. observable features of the objects.

Steinberg - Chapter 02 #10

11. Renee, a 6-year-old, is unable to answer the question, "How are a motorcycle and a bicycle alike?" Mohammed, a 17-year-old, answers the same question by saying, "They are both types of transportation." What statement about Renee and Mohammed is most true?
- A. Renee's inability to answer the question is very unusual for a child her age.
 - B. Mohammed has demonstrated the ability to think concretely.
 - C. Mohammed has demonstrated the ability to think abstractly.**
 - D. According to Piaget's theory, Renee and Mohammed are both developmentally delayed.

Steinberg - Chapter 02 #11

12. Javier spends a great deal of time talking about relationships, politics, philosophy, religion, and morality with his friends, demonstrating his ability to think:
- A. abstractly.**
 - B. preoperationally.
 - C. concretely.
 - D. deductively.

Steinberg - Chapter 02 #12

13. Adolescents develop the ability to think about social issues, a concept more generally referred to as:
- A. socialization.
 - B. social cognition.**
 - C. abstract reasoning.
 - D. metacognition.

Steinberg - Chapter 02 #13

14. The ability to think about one's own thoughts is called:
- A. hypothetical think.
 - B. egocentric logic.
 - C. metacognition.**
 - D. social cognition.

Steinberg - Chapter 02 #14

15. All of the following are indicators of metacognition, *except*:
- A. introspection.
 - B. self-consciousness.
 - C. intellectualization.
 - D. deductive reasoning.**

Steinberg - Chapter 02 #15

16. Teenagers often become self-conscious because they believe that people are talking about them. Which characteristic are they exhibiting?
A. an imaginary audience
B. a personal fable
C. propositional logic
D. metacognition

Steinberg - Chapter 02 #16

17. The erroneous belief that one's thoughts, feelings, and experiences are unique is called:
A. an imaginary audience.
B. a personal fable.
C. propositional logic.
D. metacognition.

Steinberg - Chapter 02 #17

18. Dave knows that kids who drink and drive sometimes get killed, but he believes that he is somehow immune to having such a terrible thing happen to him. Dave's belief is an example of:
A. the imaginary audience.
B. a personal fable.
C. social cognition.
D. metacognition.

Steinberg - Chapter 02 #18

19. John is a junior in high school. Although he is sociable, he feels very self-conscious. He feels as if everyone is evaluating him. David Elkind refers to this loss of perspective in adolescence as:
A. self-reflection.
B. personal fable.
C. imaginary audience.
D. impression formation.

Steinberg - Chapter 02 #19

20. Who coined the term adolescent egocentrism?
A. Piaget
B. Elkind
C. Binet
D. Sternberg

Steinberg - Chapter 02 #20

21. Research testing Elkind's theory of adolescent egocentrism has found that certain aspects:
A. peak at age 12 and then drastically decline.
B. may remain present throughout the adolescent and adult years.
C. are virtually a nonexistent phenomenon in adolescence or adulthood.
D. are less prevalent among college students.

Steinberg - Chapter 02 #21

22. The text suggests that _____ is/are *not* a good explanation of adolescent egocentrism.
A. cognitive deficiencies
B. emotional reasons
C. social reasons
D. the impact of other people's opinions

Steinberg - Chapter 02 #22

23. Fifteen-year-old Hermione is able to write a much more complex answer than 10-year-old Ginger to the question, "Compare the advantages and disadvantages of using simple spells for self-protection." This is because, as an adolescent, Hermione is able to think:
A. egocentrically.
B. deductively.
C. in metacognitive ways.
D. in multiple dimensions.

Steinberg - Chapter 02 #23

24. Multidimensional thinking helps adolescents understand:

- A.** sarcasm.
- B. imaginary audiences.
- C. formal operations.
- D. concrete examples.

Steinberg - Chapter 02 #24

25. What thought process helps adolescents appreciate the sarcasm and satire of *Mad* magazine and *The Simpsons*?

- A. selective attention
- B. sensation-seeking
- C. mutual role taking
- D.** multidimensional thinking

Steinberg - Chapter 02 #25

26. The extreme skepticism observed in many adolescents is most likely a result of:

- A.** seeing knowledge as relative rather than as absolute.
- B. thinking in terms of what's possible rather than what's real.
- C. thinking about the process of thinking.
- D. viewing reality in terms of multiple dimensions.

Steinberg - Chapter 02 #26

27. _____ theorists believe that changes in cognitive abilities appearing during adolescence are qualitative, whereas _____ theorists believe they are quantitative.

- A.** Cognitive-developmental; information-processing
- B. Cognitive-developmental; behavioral decision
- C. Information-processing; cognitive-developmental
- D. Information-processing; behavioral decision

Steinberg - Chapter 02 #27

28. Dr. Martino argues that development proceeds in stages and that each stage is marked by fairly consistent behavior. Then, as the child's biological development progresses and new experiences are acquired, a shift occurs and development breaks through to the next level. Dr. Martino's view is most consistent with that expressed by the:

- A. triarchic theory of intelligence.
- B. information-processing perspective.
- C. psychometric theory.
- D.** Piagetian perspective.

Steinberg - Chapter 02 #28

29. Juan is 5 years old. His language skills are excellent, but his thinking skills demonstrate limitations such as egocentrism. What Piagetian stage of thought would you suspect he is in?

- A. formal operational
- B. sensorimotor
- C. concrete operational
- D.** preoperational

Steinberg - Chapter 02 #29

30. According to Piaget, the period of cognitive development that is based on theoretical, abstract principles of logic is called:

- A. sensorimotor.
- B. preoperational.
- C. concrete operations.
- D.** formal operations.

Steinberg - Chapter 02 #30

31. Rose solves a chemistry problem by systematically testing several hypotheses. According to Piaget, which stage is Rose functioning at?
- A. preoperational
 - B. concrete operations
 - C. formal operations**
 - D. sensorimotor

Steinberg - Chapter 02 #31

32. According to the textbook, in early adolescence, formal thinking:
- A.** has a "now you see it, now you don't" quality to it.
 - B. is very integrated into the individual's general approach to reasoning.
 - C. is very similar to preadolescents in Piaget's preformal stage.
 - D. is employed regularly.

Steinberg - Chapter 02 #32

33. Piaget theorists believe that the use of _____ is the chief feature of adolescent thinking that differentiates it from the type of thinking employed by children.
- A. egocentric reasoning
 - B. abstract logical reasoning**
 - C. multidimensional reasoning
 - D. systematic reasoning

Steinberg - Chapter 02 #33

34. Adolescent thinking can be distinguished from the thinking of children in several respects. All of these differences stem from improvement(s) in _____ during adolescence.
- A.** abstract logical reasoning
 - B. personal life experiences
 - C. synaptic pruning
 - D. autonomy and personal responsibility

Steinberg - Chapter 02 #34

35. LaToya has a secure relationship with her parents, whereas Karen has an insecure one. Based on research cited in the text, who is more likely to display formal operational thinking?
- A.** LaToya
 - B. Karen
 - C. both girls
 - D. unable to determine

Steinberg - Chapter 02 #35

36. Much research on adults as well as adolescents indicates that the gaps between _____ & _____ in everyday situations are very large, with everyday decision making laden with logical errors that cannot be explained by cognitive incompetence.
- A. what individuals want to do & what they actually do
 - B. what individuals want to do & what they have time for
 - C. logical reasoning abilities & personal experience
 - D. logical reasoning abilities & their actual use of logical reasoning**

Steinberg - Chapter 02 #36

37. For which of the following subjects will Andrew, a competent 12th grader, display the worst reasoning ability?
- A. adolescent dating
 - B. misbehavior in school
 - C. retirement planning**
 - D. driving a motor vehicle

Steinberg - Chapter 02 #37

38. The transition from concrete operational thought to formal operational thought occurs:
- A. very suddenly and evenly across all domains of functioning.
 - B. at the same age, regardless of the environment.
 - C.** very gradually and unevenly across domains of functioning.
 - D. the change is barely noticeable.

Steinberg - Chapter 02 #38

39. The improvements in organizational strategies seen in adolescence include all but:
- A. increasing use of mnemonic devices.
 - B. becoming more flexible with strategy use.
 - C.** increasing speed of information processing.
 - D. becoming more efficient with strategy use.

Steinberg - Chapter 02 #39

40. Dr. Brown argues that adolescents can solve problems better than younger children because they can store more information in memory and because they have more effective strategies. Dr. Brown's view is most consistent with which of the following perspectives?
- A. triarchic theory of intelligence
 - B.** information-processing perspective
 - C. psychometric theory
 - D. Piagetian perspective

Steinberg - Chapter 02 #40

41. Jesse is in the 7th grade at a school that has open classrooms with multiple teachers instructing their classes in one large area. Which of the following cognitive processes will help Jesse focus on his teacher?
- A. working memory
 - B.** selective attention
 - C. long-term memory
 - D. divided attention

Steinberg - Chapter 02 #41

42. Charlie is able to tune out the television so that he can focus on his art project, which is due in class tomorrow. This is an example of:
- A.** selective attention.
 - B. divided attention.
 - C. short-term memory.
 - D. long-term memory.

Steinberg - Chapter 02 #42

43. While studying for her biology exam, Jennifer watches her favorite show on TV. This is an example of:
- A. selective attention.
 - B.** divided attention.
 - C. short-term memory.
 - D. long-term memory.

Steinberg - Chapter 02 #43

44. Which of the following statements about the changes in information-processing abilities during adolescence is *false*?
- A.** There are advances in short-term but not long-term memory.
 - B. The speed of processing information increases.
 - C. Adolescents are more "planful" than children.
 - D. There are advances in selective and divided attention.

Steinberg - Chapter 02 #44

45. All of the following are ways that scientists study brain maturation *except*:
- A. by using DTI to see the ways in which various regions of the brain are connected
 - B. by using fMRI to examine patterns of activity in various regions of the brain while individuals are performing a variety of tasks
 - C. by electroencephalography to measure event-related potentials in response to different stimuli or events
 - D.** by using fMRI to measure event-related potential in response to different stimuli or events
- Steinberg - Chapter 02 #45*
46. Neurons are cells that carry information by transmitting electrical charges across the body. When the electrical charge travels through a neuron, it stimulates _____:
- A.** the release of neurotransmitters
 - B. synaptic pruning
 - C. myelination
 - D. the brain to process some piece of information
- Steinberg - Chapter 02 #46*
47. The formation of synapses is:
- A. almost entirely genetically programmed.
 - B. almost entirely formed through experience.
 - C.** both genetically programmed and formed through experience.
 - D. random.
- Steinberg - Chapter 02 #47*
48. One type of structural change in the brain has to do with changes in the levels of grey and white matter in the brain. Which of the following statements is true?
- A.** grey matter decreases while white matter increases
 - B. grey matter increases while white matter decreases
 - C. both grey matter and white matter decrease
 - D. both grey matter and white matter increase
- Steinberg - Chapter 02 #48*
49. All of the following statements about structural and functional change involving the prefrontal cortex during adolescence are true *except*:
- A. patterns of activation within the prefrontal cortex generally become more focused
 - B. individuals are more likely to use multiple parts of the brain simultaneously and coordinate activity between prefrontal regions and other areas of the brain
 - C. the full structural maturation of the prefrontal cortex is not complete until the mid-20s
 - D.** all of the above are true
- Steinberg - Chapter 02 #49*
50. One aspect of brain maturation that is associated with the "remodeling" that takes place in the brain during adolescence is:
- A. formal operational thought.
 - B.** myelination.
 - C. metacognition.
 - D. information-processing gains.
- Steinberg - Chapter 02 #50*
51. Which statement regarding increases in cognitive abilities is *false*?
- A.** Increases in cognitive abilities are due to growth in the size of the brain.
 - B. Pruning of the synapses leads to increases in cognitive abilities.
 - C. Changes in levels of neurotransmitters reduce sensitivity to reward, leading to an increase in sensation-seeking.
 - D. Maturation of the prefrontal cortex allows for complex activities such as planning, decision making, goal setting, and metacognition.
- Steinberg - Chapter 02 #51*

52. Changes in the limbic system during adolescence may cause all of the following, *except*:
- A. increased emotionality.
 - B. increased responsiveness to stress.
 - C.** decreased risk-taking.
 - D. decreased responsiveness to rewards.
53. Jane, an adolescent, can attribute her better planning skills to developments in her _____ and she can attribute her gut-level, intuitive decision making to her _____.
Steinberg - Chapter 02 #52
- A. dorsolateral prefrontal cortex; orbitofrontal cortex
 - B.** dorsolateral prefrontal cortex; ventromedial prefrontal cortex
 - C. ventromedial prefrontal cortex; dorsolateral prefrontal cortex
 - D. orbitofrontal cortex; ventromedial prefrontal cortex
54. In addition to an increase in responsiveness to stress, changes in the _____ may also help explain why adolescents' concerns about what their peers think increase during this time.
Steinberg - Chapter 02 #53
- A. prefrontal cortex
 - B. dorsolateral prefrontal cortex
 - C.** limbic system
 - D. levels of grey matter
55. The first intelligence test was derived in France for the purpose of determining whether:
Steinberg - Chapter 02 #54
- A. a student should be graduated from high school.
 - B. an individual was qualified to serve in the army.
 - C.** a student would profit from formal education.
 - D. a student was qualified for a job.
56. When calculating individual performance on an IQ test, a child who was of average intelligence would have an IQ score of:
Steinberg - Chapter 02 #55
- A.** 100.
 - B. 200.
 - C. 150.
 - D. There is no "average" IQ
57. Sternberg's "triarchic theory of intelligence" proposes that to assess an individual's intellectual capabilities it is necessary to look at three distinct, but interrelated, types of "intelligence":
Steinberg - Chapter 02 #56
- A. verbal, mathematical, and spatial.
 - B.** componential, experiential, and contextual.
 - C. componential, kinesthetic, and experiential.
 - D. verbal, mathematical, and interpersonal.
58. Steve gets all As in his course work but has a hard time relating to the real world. According to Sternberg, Steve is above average in _____ intelligence but below average in _____ intelligence.
Steinberg - Chapter 02 #57
- A. componential; experiential
 - B.** componential; contextual
 - C. experiential; componential
 - D. contextual; experiential

59. When evaluating the three different forms of intelligence described in his triarchic theory of intelligence, Sternberg would disagree with which statement?
A. Individuals with high componential intelligence are more intelligent than individuals with either experiential or contextual intelligence.
B. An individual who scores high on experiential or contextual intelligence may be equally as intelligent as someone who scores high in componential intelligence.
C. Society needs individuals with all three forms of intelligence.
D. It is time we should be assessing experiential and contextual intelligence as much as we test componential intelligence.
- Steinberg - Chapter 02 #59*
60. According to Gardner's theory of multiple intelligences, sports figures Babe Ruth, Michael Jordan, Joe Montana, and Martina Navratilova are all considered above average in:
A. spatial intelligence.
B. componential intelligence.
C. kinesthetic intelligence.
D. experiential intelligence.
- Steinberg - Chapter 02 #60*
61. Sam took an IQ test in 4th grade and scored below average. Sam's middle school is administering the test again. This time, Sam's score is likely to be:
A. below average.
B. average.
C. above average.
D. there's no way to predict.
- Steinberg - Chapter 02 #61*
62. During adolescence, individuals' IQ scores _____, whereas their mental abilities _____.
A. remain stable; increase
B. remain stable; decrease
C. increase; remain stable
D. decrease; remain stable
- Steinberg - Chapter 02 #62*
63. Adolescents who score higher than their peers on an IQ test will probably:
A. score lower than their peers on their next IQ test.
B. continue to score higher than their peers on future IQ tests.
C. score the same as their peers on their next IQ test.
D. cannot make a prediction based on the instability of intelligence.
- Steinberg - Chapter 02 #63*
64. It now appears that the only reliable sex difference in mental abilities is in the area of:
A. spatial abilities.
B. verbal abilities.
C. math abilities.
D. creative abilities.
- Steinberg - Chapter 02 #64*
65. Mary is having trouble understanding how to do a math problem. Her teacher asks her just the right question and Mary understands the problem. Vygotsky would refer to the structuring process used by the teacher to guide Mary's thinking as:
A. laddering.
B. enabling.
C. pillaring.
D. scaffolding.

66. According to Vygotsky, adolescents learn best when:
- A. their lessons are within their zone of proximal development.
 - B. a more experienced instructor is present.
 - C. the instructor engages in scaffolding.
 - D.** All of the above

Steinberg - Chapter 02 #66

67. The finding that Black and Hispanic adolescents receive lower scores on IQ tests than their White peers is probably a result of the:
- A. lack of schooling ethnic minorities receive.
 - B. genetic differences between these groups.
 - C.** biased construction of these tests.
 - D. instability of intelligence during adolescence.

Steinberg - Chapter 02 #67

68. The growth of _____ during adolescence is directly related to an improved ability to think abstractly.
- A. long-term memory
 - B.** social cognition
 - C. automatization
 - D. short-term memory

Steinberg - Chapter 02 #68

69. While children tend to use _____ when asked to describe others, adolescents are more likely to describe people in terms of _____.
- A. attitudinal descriptors; interests and personality characteristics.
 - B. concrete descriptors; global descriptors.
 - C. personality descriptors; global and concrete descriptors.
 - D.** global and concrete descriptors; interests and personality characteristics.

Steinberg - Chapter 02 #69

70. With age, adolescents develop a more sophisticated theory of mind, which is the ability to:
- A.** understand that others have beliefs, intentions, and knowledge that may be different from one's own.
 - B. understand their own thought processes.
 - C. separate what they know from what they think.
 - D. separate what is real from what is possible.

Steinberg - Chapter 02 #70

71. Chris and his parents had an argument because they did not want him to go to a New Year's Eve party across town. A few days after the argument, Chris's anger subsided because he realized his parents were worried about his safety. Which cognitive process did Chris use to reach this conclusion?
- A. implicit personality theory
 - B. mutual role-taking
 - C. automatization
 - D.** social perspective-taking

Steinberg - Chapter 02 #71

72. Billy is able to convince his parents to get him his own phone line by pointing out advantages for his parents as well as himself. According to Selman, Billy has reached which stage of social perspective-taking?
- A. critical thinking
 - B. selective attention
 - C.** mutual role-taking
 - D. concrete operations

Steinberg - Chapter 02 #72

73. Most research on adolescents' beliefs about rights and civil liberties comes from:
- A. studies of ethnic minority samples
 - B.** studies of Western, middle-class youth
 - C. diverse SES samples
 - D. adolescent girls

Steinberg - Chapter 02 #73

74. All of the following are themes that have emerged from the research findings of studies that investigate different aspects of social cognition during adolescence *except*:
- A. as individuals move into and through adolescence they become better able to step outside themselves and see things from other vantage points.
 - B. adolescents are better able to see that the social rules we follow are not absolute and are therefore subject to debate and questioning.
 - C. with age, adolescents develop a more differentiated, more nuanced understanding of social norms.
 - D.** with age, all adolescents increasingly reject the authority of adults by challenging and dismissing the morals established by their parents.

Steinberg - Chapter 02 #74

75. Early in adolescence, moral guidelines are:
- A. seen as absolutes.
 - B.** seen as subjective.
 - C. based on principles such as equality, justice, or fairness.
 - D. based on abstract guidelines.

Steinberg - Chapter 02 #75

76. When the teacher asks a question in class, students raise their hands to answer. This example illustrates:
- A.** social conventional behavior.
 - B. a specialized structural system.
 - C. metacognitive behavior.
 - D. dominance theory.

Steinberg - Chapter 02 #76

77. Selena's friends often come to her to help them resolve their problems because she has exceptional insight and judgment, and offers good advice about their complex or unclear issues. Developmental psychologists would concur that Selena has:
- A. good intuition.
 - B.** wisdom.
 - C. deductive reasoning skills.
 - D. social cognition.

Steinberg - Chapter 02 #77

78. Which theory helps researchers understand adolescent risk-taking?
- A.** behavioral decision theory
 - B. alternative choices theory
 - C. desirability theory
 - D. cognitive development theory

Steinberg - Chapter 02 #78

79. According to research on behavioral decision theory, adolescents often decide to engage in behavior that seems risky to adults because adolescents:
- A. cannot consider as many consequences for their actions as do adults.
 - B. have thinking processes that are still predominantly preoperational.
 - C.** place a different value on the possible consequences than do adults.
 - D. wish to assert their independence from adults in every possible way.

Steinberg - Chapter 02 #79

80. Are adults, or adolescents, more likely to think of themselves as invulnerable?
A. adults
B. adolescents
C. both are equally likely
D. Neither group thinks of themselves as invulnerable
81. What emotional characteristic makes an individual more likely to engage in risky behaviors?
A. depression
B. moodiness
C. sensation-seeking
D. anxiety
82. Behavioral decision theory draws heavily on _____, and is a rational process in which individuals _____.
A. psychoanalytic theory; are forced to think about the root of their behaviors.
B. information-processing theory; naturally advance in cognitive skills.
C. economics; calculate the costs and benefits.
D. behaviorism; make choices based on rewards and punishments.
83. Compared to childhood, reward-seeking and sensation seeking during adolescence:
A. are equally as high during childhood and adolescence.
B. are lower during adolescence than childhood.
C. are caused by biological forces during adolescence while it is typically caused by environmental forces in childhood.
D. are higher during adolescence than childhood.
84. According to the textbook, a good deal of adolescents' risk taking takes place in contexts in which:
A. they are unsupervised by adults and exposed to peer pressure.
B. older, opposite sex peers are present.
C. they are in a new, exciting environment.
D. there are at least 3 peers present.
85. According to the textbook, the main contributor to the increased rate of automobile accidents among teenagers is:
A. driving under the influence.
B. driving with other teenagers in the car.
C. texting while driving.
D. talking on the phone, especially having an emotional conversation.
86. According to the textbook, all of the following are potentially successful ways to reduce adolescent risk-taking *except*:
A. classroom-based education programs designed to teach adolescents about the dangers of various activities, make better decisions, and resist peer pressure to engage in risky activity.
B. limiting adolescents' opportunities to put themselves in risky situations and making risky substances harder for adolescents to obtain.
C. making the penalties for engaging in certain risky behaviors more severe and increasing the salience of the potential costs of engaging in the risky behavior.
D. Finding ways to permit adolescents to take risks without putting themselves in situations in which they can hurt themselves.

Steinberg - Chapter 02 #80

Steinberg - Chapter 02 #81

Steinberg - Chapter 02 #82

Steinberg - Chapter 02 #83

Steinberg - Chapter 02 #84

Steinberg - Chapter 02 #85

Steinberg - Chapter 02 #86

87. In what five ways are the intellectual abilities of adolescents superior to those of children? Explain and give a concrete illustration of each developmental trend.

There are five chief ways in which the thinking of adolescents is more advanced, more efficient, and more effective than that of children. First, during adolescence individuals become better able to think about what is possible, instead of limiting their thought to what is real. Second, they become better able to think about abstract things, rather than being limited to the concrete. Third, during adolescence individuals begin thinking more often about the process of thinking itself. Fourth, adolescents' thinking tends to become multidimensional, rather than limited to a single issue. Finally, adolescents are more likely than children to see things as relative, rather than absolute. Several examples of each of these trends are given in the text.

Key Points

- a) Think about what is possible.
- b) Think about abstract concepts.
- c) Think about thinking - metacognition.
- d) Thinking is multidimensional.
- e) See things as relative rather than absolute.

88. You join your friends for coffee and notice they are arguing about whether the Piagetian or the information processing perspective offers a better explanation of cognitive development. They ask for your opinion, and you tell them that each is useful but each has limitations. You suggest a third approach that integrates the two perspectives. What do you tell your friends?

Steinberg - Chapter 02 #87

Piaget laid the groundwork to understand that cognition develops qualitatively, with different ways of reasoning and understanding the world from birth through adolescence. Awareness that abstract reasoning skills do not develop until adolescence has had a positive impact on education. Although not always used, particularly if tasks are not personally relevant, these skills enable the adolescent to think in terms of possibilities, multidimensionally, and metacognitively. However, research suggests that the skills develop gradually and continuously, not in abrupt stages, and the Piagetian approach is not clear about which specific aspects of intellectual development are most important. The information-processing view explains quantitative increases in cognitive skills (e.g., memory, attention, processing speed, organizational strategies, and metacognition), but omits the fact that adolescents do think in a way that is qualitatively different from children. An integrative approach, says that while cognitive development proceeds in discrete stages, the process is linked to physical changes in the brain and is better studied in terms of the cognitive components (e.g., memory, attention) used by information-processing theorists. Paul Klaczynski's integrative approach examines both the analytic and intuitive cognitive systems to explain why, despite our cognitive skills, our behavior is often so illogical.

Key Points

- a) Piaget's theory has had a positive impact on education.
- b) Research suggests gradual, rather than discrete, development.
- c) Piaget was not clear about which aspects of cognition were most important.
- d) Information-processing offers specific information about aspects of cognition.
- e) Information-processing ignores qualitative changes.
- f) Integrative approaches incorporate qualitative and quantitative concepts.
- g) Integrative approaches ask useful questions, such as why we don't use our skills.

Steinberg - Chapter 02 #88

89. Your roommate is taking an anatomy class and has noticed differences in the brains of younger and older rats. She knows ethical reasons prohibit euthanizing humans to examine their brains, and asks you how we learn about adolescent human brains. What can you tell her about how human brains are studied?

Explain how fMRI (functional magnetic resonance imaging), DTI (diffusion tensor imaging) and EEG (electroencephalography) have been used to study brain growth and changes in brain chemistry. Mention that fMRI, a noninvasive procedure, is used to look at activity in brain regions during performance of various tasks, and can be used to compare adolescents and adults on the same task. DTI is also noninvasive and can be used to compare the connections made by the brain in adolescents and adults. EEG measures electrical activity at different locations on the scalp. EEG can be used to examine changes in electrical activity (event related potentials [ERP]) in response to different stimuli or events. Scientists often compare ERPs between people of different ages to determine when/if patterns of brain activity undergo developmental change. Other techniques include studying brain growth and development in other animals, studies of changes in brain chemistry in humans and other species, and postmortem studies of brain anatomy.

Key Points

- a) fMRI, DTI, and PET are useful for studying changes in brain growth and brain chemistry.
- b) fMRI allows comparison of brain activity
- c) DTI allows comparison of brain connections
- d) EEG allows comparison of electrical activity

Steinberg - Chapter 02 #89

90. Describe a class that Lev Vygotsky would teach. What components would be important in his classroom? What tactics would the teacher employ to facilitate learning?

Vygotsky argued that children and adolescents learn best in their zone of proximal development, or in everyday situations when they encounter tasks that are neither too simple nor too advanced, but just slightly more challenging than their abilities permit them to solve on their own. The role of the teacher is to "scaffold," or to help structure the learning situation so that it is within reach of the student. Therefore, Vygotsky would use real-life examples, and have students practice what they learn. For example, a class on amphibians might take place at a local pond.

Key Points

- a) Zone of proximal development.
- b) Role of the teacher is to scaffold.
- c) Use real-life examples to have students practice what they learn.

Steinberg - Chapter 02 #90

91. Steve gets all As in his course work but has a hard time relating to the real world. Jessica has been failing her courses but is an exceptional artist. The guidance counselor, Miss Willingham, has stated that Steve is "smarter" than Jessica. Do you agree or disagree with Miss Willingham's conclusion? Support your answer.

Disagree with Miss Willingham's conclusion. Sternberg's triarchic theory of intelligence shows that intelligence consists of three different components: (1) componential - school smarts, (2) experiential - creativity and insight, and (3) contextual - street smarts. Steve excels in the componential aspects of intelligence but falls behind in the contextual aspects of intelligence. Jessica excels in the experiential aspect of intelligence but falls behind in the componential area. Each is more skilled in a certain aspect of intelligence and less skilled in another. Because no single aspect of intelligence is more important than another, it is not a valid conclusion to state that Steve is smarter than Jessica or vice versa.

Key Points

- a) Sternberg's triarchic theory of intelligence would lead us to disagree.
- b) Steve exhibits componential aspects (school smarts).
- c) Jessica exhibits experiential aspects (creativity and insight).

- Steinberg - Chapter 02 #91*
92. Mr. Goldberg, a high school teacher, approaches you (a brilliant adolescent psychologist) regarding two of his students. He is concerned about their behavior and hopes you can explain what is going on. One student, Sharon, occasionally engages in unprotected sex. The other student, Michael, constantly wears pants to hide what he believes are skinny legs. Using David Elkind's research results, how would you characterize Sharon's behavior? How would you characterize Michael's behavior? Be sure to justify your answer.

These two phenomena result from Elkind's theory of adolescent egocentrism. Sharon's behavior is a classic example of what Elkind refers to as the personal fable. She believes that what she does and what happens to her is unique. Her belief is that nothing will happen to her if she occasionally engages in unprotected sex. Michael's behavior is related to what Elkind refers to the imaginary audience. He believes that everyone's thoughts are about him - that they are constantly looking at him (as if he were on stage).

Key Points

- a) David Elkind's theory of adolescent egocentrism.
- b) Sharon's behavior may be characterized by the personal fable.
- c) Michael exhibits portions of the imaginary audience phenomenon.

93. Fifteen-year-old Randall was a participant in a research study on risk-taking. According to his answers on the survey, Randall understands the dangers of drinking and driving, having unprotected sex, and using marijuana. However, at a party last week, Randall was seen smoking marijuana and getting into a car with an intoxicated driver. How would you explain this inconsistency in Randall's behavior in terms of the four main aspects of brain development? Obviously, he knows the right answers, yet he engages in risky behavior.

1. Synaptic pruning -unused connections between neurons are eliminated, but different regions of the brain are pruned at different points in development. During adolescence the prefrontal cortex (PFC) is pruned, making more efficient pathways for information processing. Because Randall is 15, he is not likely to have completely finished undergoing PFC synapse pruning.

2. Myelination -Related to the idea of synaptic pruning is the myelination of the preserved neurons. This process, which involves covering parts of neurons in myelin (fat) sheaths, makes information transfer quicker and more efficient.

3. Changes in neurotransmitters in the Limbic system -Notably, changes in the levels of dopamine and serotonin, two neurotransmitters, in brain regions known to process emotional stimuli can make adolescents like Randall more emotional and responsive to stress or rewards. This too contributes to Randall's risk-taking behavior—he is highly concerned with what his peers think of him and his limbic system is motivating him to take greater risks in order to relieve boredom.

4. Frontal lobe maturation -the prefrontal cortex is also maturing at this point in Randall's life. The PFC is not finished maturing until the mid-20s, so 15-year-old Randall may have some advanced cognitive skills relative to his preadolescent self, but he is not yet fully mature. This, too, explains the discrepancy in his understanding of right and wrong and his choices to make risky decisions.

Key Points:

Synaptic pruning (name and define)

Myelination (name and define)

PFC maturation (name and define)

Changes in neurotransmitters (name and define)

Relate all four changes to Randall's current risk-taking behavior

94. Nicole is an adolescent and has experienced changes in cognition and social perspective-taking. Her mom and dad believe that these changes have both positively and negatively influenced their relationship with their daughter. How would an adolescent development psychologist explain the effects of these normative developmental changes in cognition?

With age, adolescents develop a more sophisticated theory of mind, which is the ability to understand that others have beliefs, intentions, and knowledge that may be different from one's own. With this advancement, they are better able to interpret the feelings of others and to infer their motives and feelings, even when specific information is not directly observable. Additionally, adolescents experience considerable improvements in their ability to view events from the perspective of others (social perspective taking). Nicole's gains in social perspective taking also allow her to improve in communication, as she is more capable of formulating arguments in terms that are more likely to be understood by her parents (people whose opinion might be different). As Nicole is better able to see more things from her parents' point of view, this might explain why Nicole's parents have noticed a positive change in their relationship. While there are advancements in the ability to see things from other vantage points, these improvements in social perspective-taking also lead to changes in the way in which adolescents think about relationships with parents and transform their beliefs about authority. With age, adolescents increasingly distinguish between moral issues and conventional issues, and between which issues authority figures have the right to regulate and issues that are their own personal choice. As adolescents begin to make these distinctions, they may come to question their parent's authority in various contexts. Issues that had been viewed as matters of right and wrong start to seem like matters of personal choice (and beyond the boundaries of parental control). Additionally, Nicole's parents might believe their relationship quality has declined because Nicole has become more argumentative. Research indicates that adolescents are better able than young children to envision and therefore anticipate the possible responses of an opponent and to have handy counterarguments available. This means that Nicole is probably a better arguer than she was as a child. Finally, as Nicole experiences changes in the way in which she thinks, she will stop accepting other people's view without questioning. Because Nicole will shift from seeing things in absolute terms to seeing things as relative, she will be more likely to question others' assertions and less likely to accept facts as absolute truths (this increase in relativism might cause her parents to think that Nicole is questioning everything for the sake of argument).

Key points:

Define social perspective taking

Explain why seeing things from others' perspective might positively influence parent-child relationships and communication

Explain why increases in social perspective taking may lead to changes in Nicole's beliefs about authority

Explain why Nicole might become more argumentative during adolescence

02 Summary

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