Chapter 4

Cognitive Development 1: Piaget and Vygotsky

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• = lower level items
• • = higher level items

Note: Correct responses are marked with a superscript asterisk (*).

**Multiple-Choice Questions**

• 1. Which of the following is the best example of *accommodation*?
   a. When Cornelius is camping with his family in the mountains, he sees a hummingbird and calls it an insect.
   b. Charles thinks that spiders are insects until he learns that insects have 6 legs but spiders have 8.*
   c. Opal says she isn’t sure whether worms are insects.
   d. Larissa believes that fireflies (lightning bugs) have internal light switches.

• 2. Which of the following alternatives best characterizes the concept of *equilibration* in Piaget’s theory of cognitive development?
   a. A process that promotes increasingly complex thought and knowledge*
   b. A feeling of mental discomfort about a confusing situation
   c. The ability to think logically about abstract concepts and phenomena
   d. The recognition that an object’s mass doesn’t change, despite a change in shape, if nothing is added or taken away.
3. Research has shown that Mexican children whose families make pottery for a living acquire conservation skills much earlier than Piaget thought. Which of the basic issues in the study of development does this example address?
   a. nature vs. nurture
   b. continuity vs. discontinuity
   c. universality vs. diversity*
   d. qualitative vs. quantitative change

4. Three-year-old Rafael’s grandfather, Emilio, lets Rafael help him repair their car. Emilio calls out the tool that he needs and Rafael eagerly goes about trying to find it. This situation best illustrates:
   a. the situative perspective
   b. legitimate peripheral participation*
   c. scaffolding
   d. a preoperational apprenticeship

5. Mr. Nielsen wants to help his students discover that there are often several points of view about any single situation. Using Vygotsky’s perspective, he hopes that by providing large and small group discussion opportunities, his students will internalize* the “arguing” process and therefore develop the ability to look at a situation from multiple angles on their own.
   a. internalize*
   b. construct
   c. operationalize
   d. rationalize

6. Monica’s sorority has decided to participate in a tutoring program for a local high school. Today Monica is paired with 15-year-old Chandler, who needs help conjugating verbs in Spanish. First Monica tells Chandler how she begins to tackle a regular verb ending in “er”.

   Monica: I recognize that it is a regular verb and therefore follows typical rules for most verbs that end in ‘er’. Then in my mind I recall the pronouns, yo (I), tu’ (you), él, ella, Usted (he, she, you formal), nosotros (we), and ellos, ellas, Ustedes (they). And I match the corresponding endings to the root of the verb, aprender (to learn), which in this case is what?
   Chandler: Aprend
   Monica: Right so what would I learn be?
   Chandler: Aprendo
   Monica: Good. And we learn?
   Chandler: Aprendemos

   The situation just described best illustrates:
   a. decentration
   b. separation and control of variables
   c. a cognitive apprenticeship*
   d. formal operational egocentrism
7. Art teacher Ms. O’Keefe instructed her students to produce a piece of art that would be displayed during a mock debut in an art gallery. They were then instructed to write a two-page paper about how the following may have played a role in influencing their creation: a) available resources (i.e. type and cost of materials), b) historical influences, c) family’s heritage, etc. Which educational implication of Vygotsky’s ideas does Ms. O’Keefe’s instructional strategy best exemplify?

a. Help students acquire the basic conceptual tools of various academic disciplines.
b. Present challenging tasks, perhaps within the context of cooperative activities.
c. Scaffold students’ efforts.
d. Provide opportunities to engage in authentic activities.*

Short Answer and Essay Questions

1. Describe two ways in which your understanding of Piaget’s cognitive development theory will impact your curriculum development (i.e. lesson planning, classroom activities). Be sure to identify the grade level you are planning to teach.

Response: Students’ responses will obviously vary considerably. A response should include implications derived from any of the following chapter sections: key ideas in Piaget’s theory, Piaget’s stages of cognitive development, and/or educational implications of Piaget’s theory and post-Piagetian research. Each implication identified should be connected to a specific classroom teaching strategy appropriate for the grade level identified. (pp. XX)

2. Referring to Piaget’s stages of cognitive development, explain to a parent why it would be a mistake to serve juice in different size cups (despite measuring the juice so that each child receives the same amount of juice) at a four-year-old’s birthday party.

Response: Should include a description of Piaget’s Preoperational stage and related process, conservation. Most four-year-olds will think it “unfair” that other children have “more” juice than they do. (pp. XX)

3. Discuss some of the cross-cultural research findings that erode support for the invariant sequence of stages that Piaget developed.

Response: Piaget proposed that his stages were universal, yet research indicates that the course of cognitive development differs somewhat from one culture to another. Possible examples are:

- Mexican children whose families make pottery for a living acquire conservation skills much earlier than Piaget indicated
- In other cultures, especially in those where children don’t attend school, conservation appears several years later than it does in Western cultures, and formal operational reasoning may never appear at all. (pp. XX)
4. Piaget and Vygotsky differed in their perspectives on the following four issues:
   • How essential is language in cognitive development?
   • What kinds of experiences promote development? Those that are self-guided or those that are socially guided?
   • What kinds of interactions are most critical? Peer interactions or adult-child interactions?
   • How influential is culture?

Choose two perspectives and elaborate on the issues in which Piaget and Vygotsky differed.

Response: Responses should include information from the section “Comparing Piaget and Vygotsky: Theoretical differences”. Responses may also include information from the rest of the chapter. (pp. XX)