For this assignment, I have chosen fluid and crystallized intelligence, Piaget, and psychometrics. I have already completed the fluid and crystallized intelligence. I need some thoughts on Piaget and psychometrics. I have cut and pasted links to powerpoints that I have chosen for each topic and based on the instructions. The info on Piaget needs to be concise and taken from the info I cut and pasted from the textbook for the class (Cavanaugh and Blanchard-Fields, 2011).

**Instructions…**

The goal of this discussion is to become familiar with and use academic presentations that address aging and intelligence. Many of these are produced by book publishers and universities. Review several of these presentations, and identify at least **three**, including at least one that you believe to be from a reliable source.

In your initial post, explain what is meant by three of these concepts:

* Creativity, intelligence, and aging.
* Fluid and crystallized intelligence.
* Peak learning.
* Psychometrics.
* Wisdom, intelligence, and aging.
* Measurement and performance.
* **Piaget**, Denney, Schaie, or Baltes' theoretical perspective.

For each concept you choose, find one academic presentation (many of these will be PowerPoint files) that appears to support what is said in the chapter reading. Point out anything that appears to conflict with the chapter reading. For each topic, describe how the presentation you chose might be used to begin a conversation on the topic identified.

Attach the URL for each presentation resource in your discussion post. Check your APA manual, Section 7.04 on pages 206–207, to cite and reference these presentations properly in your post.

***This one is completed already***

**Fluid and Crystallized Intelligence.**

Higgins, P. (2011). *Week Three: Intelligence.* Power point presentation. <http://www.pathiggins.net/psychweb/w4intelligencehig.ppt>.

According to Cavanaugh and Blanchard-Fields (2011), fluid and crystallized intelligence include, “many of the basic abilities that we associate with intelligence, such as verbal comprehension, reasoning, integration, and concept formation” (p. 243). Both fluid and crystallized intelligence are impacted with age in different ways, with different underlying variables, and are measured differently (Cavanaugh & Blanchard-Fields, 2011).

Fluid intelligence, according to Cavanaugh and Blanchard-Fields (2011), taps into one’s ability to be an adaptive and flexible thinker (e.g., inductive reasoning, integration, abstract thinking), while crystallized intelligence encompasses one’s overall knowledge (e.g., trivia or historical knowledge). The presentation this student chose as a reference adds that people utilize crystallized intelligence when they strategize while drawing from life experiences (Higgins, 2011).

Like the presentation chosen for this subject states, Cavanaugh and Blanchard-Fields (2011) also state that fluid and crystallized intelligence is measured in different ways. For example, fluid intelligence is measured with the use of “mazes, puzzles, and relations among shapes”, while crystallized intelligence is measured through the use of intelligence test like the Wechsler’s Adult Intelligence Scale (WAIS) (Cavanaugh, Blanchard-Fields, 2011, p. 243).

Since the references slide on the presentation chosen lists academic resources (e.g., textbooks on the subject), this student would utilize the information contained in the presentation as a viable source appropriate for further research (Higgins, 2011).

I could introduce the topic of fluid or crystallized intelligence while watching Jeopardy with my family.

**Psychometrics**

Wattles, W. (2012). *Psychometrics.*  A power point presentation used at Francis Marion University. <http://fpweb.fmarion.edu/wWattles/psy631/slides/Psychometrics.ppt>.

Need this one.

**Piaget’s Theoretical Perspective (and this one)**

Anderson, M., Belgrave, P., Lane, P., & Michalek, R. (n.d.). *Piaget’s theory of cognitive development in children.* Power point presentation.

<http://www.tarleton.edu/Faculty/krynearson/Piaget.ppt>

**I need a brief overview of Piaget’s theoretical perspective and if there are any differences between the information presented below and the power point.**

According to Piaget (1970, 1980), intellectual development is adaptation through activity. We create the very ways in which our knowledge is organized and, ultimately, how we think. Piaget believed that the development of intelligence stems from the emergence of increasingly complex cognitive structures. He organized his ideas into a theory of cognitive development that changed the way psychologists conceptualize intellectual development.

Basic Concepts. For Piaget, thought is governed by the principles of adaptation and organization. Adaptation is the process of adjusting thinking to the environment. Just as animals living in a forest feed differently from the way animals living in a desert feed, how we think changes from one developmental context to another. Adaptation occurs through organization, which is how the organism is put together. Each component part has its own specialized function, which is coordinated into the whole. In Piaget’s theory, the organization of thought is reflected in cognitive structures that change over the life span. Cognitive structures determine how we think. It is the change in cognitive structures, the change in the fundamental ways in which we think, that Piaget tried to describe.

What processes underlie intellectual adaptation? Piaget defi ned two: assimilation and accommodation. Assimilation is the use of currently 256 CHAPTER 7 available knowledge to make sense out of incoming information. It is the application of cognitive structures to the world of experience that makes the world understandable. For example, a child who only knows the word dog may use it for every animal she encounters. So, when the child sees a cat and calls it a dog, she is using available knowledge, the word dog, to make sense out of the world—in this case the cat that is walking across the living room. Th e process of assimilation sometimes leads to considerable distortion of incoming information, because we may have to force-fi t it into our knowledge base. Th is is apparent in our tendency to forget information about a person that violates a stereotype.

Accommodation involves changing one’s thought to make it a better approximation of the world of experience. The child in our example who thought that cats were dogs eventually learns that cats are cats. When this happens, she has accommodated her knowledge to incorporate a new category of animal. The processes of assimilation and accommodation serve to link the structure of thought to observable behavior. Piaget believed that most changes during development involved cognitive structures. His research led him to conclude that there were four structures (i.e., four stages) in the development of mature thought: sensrimotor, preoperational, concrete operational, and formal operational. We will consider the major characteristics of each stage briefly. Because we are most interested in Piaget’s description of adult thought, we will emphasize it.

Sensorimotor Period. In this first stage of cognitive development, intelligence is seen in infants’ actions. Babies and infants gain knowledge by using their sensory and motor skills, beginning with basic reflexes (sucking and grasping) and eventually moving to purposeful, planned sequences of behavior (such as looking for a hidden toy). The most important thing that infants learn during the sensorimotor period is that objects continue to exist even when they are out of sight; this ability is called object permanence.

Preoperational Period. Young children’s thinking is best described as egocentric. This means that young children believe all people and all inanimate objects experience the world just as they do. For example, young children believe dolls feel pain. Although young children can sometimes reason through situations, their thinking is not based on logic. For example, a young child may believe his father’s shaving causes the tap water to be turned on, because the two events always happen together.

Concrete Operational Period. Logical reasoning emerges in the concrete operational period. Children become capable of classifying objects into groups, such as fruits or vegetables, based on a logical principle; mentally reversing a series of events; realizing that when changes occur in one perceptual dimension and they are compensated for in another, no net change occurs (termed conservation); and understanding the concept of transitivity (for instance, if A > B and B > C, then A > C). However, children are still unable to deal with abstract concepts such as love; for example, to children love is a set of concrete actions and not an ill-defi ned abstract concept.

Formal Operational Period. For Piaget, the acquisition of formal operational thought during adolescence marks the end of cognitive development. Because he argues that formal operational thinking characterizes adult thought, we will consider this level in some detail. Several theorists have commented on the characteristics of formal operational thought (Basseches, 1984; Kramer, 1989; Labouvie-Vief, 1980, 1981, 1984; Sinnott, 1984). We will use these commentaries to focus on four aspects of formal operational thought: (1) It takes a hypothesis- testing approach (termed hypotheticodeductive) to problem solving; (2) thinking is done in one framework at a time; (3) the goal is to arrive at one correct solution; and (4) it is unconstrained by reality.

Piaget describes the essence of formal operational thought as a way of conceiving abstract concepts and thinking about them in a very systematic, step-by-step way. Formal operational thought is governed by a generalized logical structure that provides solutions to problems that people have never seen and may never encounter. Hypotheticodeductive thought is similar to using the scientific method, in that it involves forming a hypothesis and testing it until it is either confirmed or rejected. Just as scientists are very systematic in testing experimental hypotheses, formal operational thinking allows people to approach problem solving in a logical, methodical way.

Consider the situation when your car breaks down. When you take it for repairs, the mechanic forms hypotheses about what may be wrong, based on a description of the trouble. The mechanic then begins to test each hypothesis systematically. For example, the compression of each cylinder may be checked, one cylinder at a time. This ability to hold other factors constant while testing a particular component is one of the hallmarks of formal operational thought. By isolating potential causes of the problem, the mechanic very efficiently arrives at a correct solution.

When we use hypothetico-deductive thought, we do so to arrive at one unambiguous solution to the problem (Kramer & Woodruff , 1986; Labouvie-Vief, 1980, 1984, 1992). Formal operational thought is aimed at resolving ambiguity; one and only one answer is the goal. When more than one solution occurs, there is a feeling of uneasiness, and people begin a search for clarification. This situation can be observed in high school classes when students press their teacher to identify the right theory (from among several equally good ones) or the right way to view a social issue (such as abortion). Moreover, when people arrive at an answer, they are quite certain about it, because it was arrived at through the use of logic. When answers are checked, the same logic and assumptions are typically used, which sometimes means that the same mistake is made several times in a row. For example, a person may repeat a simple subtraction error time after time when trying to figure out why his or her checkbook failed to balance. Formal operational thinking knows no constraints (Labouvie-Vief, 1984; Piaget, 1970, 1980). It can be applied just as easily to real or to imaginary situations. It is not bound by the limits of reality (Labouvie-Vief, 1980). Whether one can implement a solution is irrelevant; what matters is that one can think about it. This is how people arrive at solutions to disarmament, for example, such as getting rid of all nuclear warheads tomorrow. To the formal operational thinker, that this solution is logistically impossible is no excuse. The lack of reality constraints is not all bad, however. Reasoning from a “Why not?” perspective may lead to the discovery of completely new ways to approach a problem or even to the invention of new solutions.

One serious problem for Piaget’s theory is that many adults apparently do not attain formal operations. Several studies report that only 60 to 75% of American adolescents can solve any formal operational problems (Neimark, 1975), and some researchers estimate that no more than 30% of adults ever complete the transition to the highest levels of formal operational thought (Kuhn, 1992). Piaget (1972) himself admitted that formal operations were probably not universal but, rather, tended to appear only in those areas in which individuals were highly trained or specialized. This has inspired a number of researchers to look beyond formal operations in determining pathways of adult cognitive development.

References

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<http://www.tarleton.edu/Faculty/krynearson/Piaget.ppt>

Cavanaugh, J., & Blanchard-Fields, F. (2011). *Adult development and aging* (6th ed.). Belmont, CA: Wadsworth Publishing.

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