

Intellectual Development (Piaget)

Summary

This is an overview of intellectual development and Piaget's theories.

Main Core Tie

Child Development

[Strand 2](#)

Time Frame

1 class periods of 90 minutes each

Materials

Two glasses (one that is tall and slim; the other short and wide)

Jelly Bellies or maybe marbles

Small things like kazoo's to hide.

A PowerPoint presentation

The children's book, "The King Who Reigned," by Fred Gwynne

Background for Teachers

Piaget's Stages

-- There is a general age range for each stage; however, each child is an individual and develops at his/her own rate. Piaget shows that children learn in their own ways--not as adults do.

1. Sensorimotor--Birth to 1½ to 2 years- Infant Scientist: In stage 1 children learn about the world through their senses and body movements.

Step One -- Birth: Infants are aware only of themselves; they cannot understand self as a separate person.

Step Two -- 1 to 4 months: Children learn to perform 2 separate actions, combining two reflexes; i.e. they wave their fists and then bring them to their mouths.

Step Three -- 4 to 8 months: They learn to turn away from movements centered on themselves. They respond to other stimuli. Hand-to-eye coordination improves. If a baby bumps a rattle and it makes a noise, he/she may try to bump it again.

Step Four -- 8 to 12 months - Intentional behavior: Babies learn that certain actions lead to certain results. They learn to follow objects with their eyes and love playing Peek-A-Boo. At about ten months, they learn object permanence--that objects continue to exist even when out of sight. They imitate others and can find partially hidden objects.

Step Five -- 12 to 18 months - Trial and Error, i.e. pushing a cracker off a high chair and watching it fall to the floor. A child can find hidden objects and understands that objects exist independently.

Step Six -- 18 to 24 months: Children begin to experiment mentally as well as physically. They think about what they are going to do before they do it.

2. Pre-operational -- Ages 2 to 7: Basic mental operations start replacing sensorimotor activities as the primary way to learn.

There are 2 kinds of reasoning:

Syncretic -- a break in logic, changing a set of criteria.

Intuitive -- guessing, i.e. longer means more.

Children learn mostly by language and mental images. Make-believe play is used to create and express all kinds of mental images. Children are still egocentric, i.e. the sun follows them from place to place, and goes to bed when they do. They have problems with reversibility; they can't see things

from other people's perspectives. They cannot arrange themselves by height. They are beginning to learn multiple classification which is the ability to understand that an object may fit into more than one category. They also begin to learn seriation which is the ability to order groups of things by size, weight, age, or any common property as in arranging beads on a bracelet from the smallest to largest. They do not understand conservation. They think the same amount of liquid becomes more when poured into a tall, thin glass. Since the water is higher in the second glass, the child concludes there is more of it. Children may not even be aware of what is real and what is make believe.

3. Concrete Operational Stage -- 6 or 7 to 11 years of age:

Children learn to solve more complex problems and use basic logic. They cannot think in abstract ways. They understand conservation--a given amount of anything remains the same even if its shape changes. They now perfect their understanding of reversibility (things can return to their original condition after they have been changed), multiple classification, and seriation. Their humor is also very concrete and linear.

4. Formal Operational -- 11 or 12 years of age to adulthood:

Children can think in abstract ways about things like loyalty and freedom. They can think about what might have been the cause of an event without really experiencing the cause. They can think through very complex problems, find several solutions, and choose the most logical one.

Intended Learning Outcomes

After today's lecture the students will be able to identify Piaget's stages, the age ranges for each stage, and the major accomplishments in each stage (i.e. conservation, object permanence)

Instructional Procedures

Before class hide two small objects in the room.

Give the students a quarter sheet of paper and tell them that class will start with a quiz. On the front table place the cups and marbles. They are to come up, one row at a time, and look at the front table and then write down the answers to the quiz. Question number one has to do with Conservation. Have two cups, labeled A and B. One should be tall and skinny the second should be short and wide. Fill both cups with the same amount of water. Ask the students to write down which cup has more water. Question number two--Arrange the marbles into two rows. In one row the marbles are close together. In the second row the marbles are spread out. The shorter row should have more marbles in it. Have them write down which row has more marbles.

Show the first twenty or so slides of the PowerPoint presentation.

Give the class a chance to get up and move around and also talk about Piaget by doing these two activities:

Have the class arrange themselves according to height. When they are finished explain that they are obviously out of preschool because preschool children cannot arrange themselves according to height.

Object Permanence--Have the students find the objects hidden in the room.

Talk about the experiments they did at the beginning of class. These experiments may have been easy for them, but not for a child who does not have the intellectual development required for those tasks.

Go through the rest of the PowerPoint.

Read "The King Who Reigned". Discuss and define homophones as used in the book.

(Homophones are two words that sound the same but are spelled differently and have different meanings.) Also, as a class, come up with different phrases that a child might misunderstand.

Examples: She has a green thumb, Butterflies in my stomach, etc.

Have them come up with 5 of their own sayings that a child might misunderstand. Have the

students create their own "King Who Reigned". They must illustrate and color their book.

Bibliography

Parents and their children; Verdene Ryder, copyright 2000.

The Developing Child; Holly E. Brisbane, copyright 2000

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