Cognitive Development In Children.

This investigation will examine children's cognitive development. Piaget's theory of cognitive development shows four stages. He described them as "Universal" – everyone goes through them, and "Invariant"- The order in which people go through them does not vary. Piaget's four stages include;

The Sensori –motor stage, which Piaget said occurred between birth and two years. At this stage the child's understanding is based on sensory impressions and motor activities. This time is used to explore their own body and senses, and imitate behaviour.

During the Pre-operational stage, (2-7 years of age) children are able to carry out actions through logical thinking. The child is egocentric and unable to conserve new ideas.

The Concrete-operational stage occurs between the ages of 7 and 11 years. During this stage children are able to solve "hands on" problems logically, but understanding of conservation is apparent.

The Formal-operational stage occurs between 11 and 15 years. Children develop social issues and identity and thinking is more scientific. (Cardwell 1996)

Piaget constructed ways of assessing children's thinking, which left a detailed and comprehensive account of cognitive development. One of his most famous ways was to present children with conservation tasks. To succeed in a conservation task, the children must realize that although aspects of the display may change, some other important attribute (or critical attribute) remains the same. For example, a child must realize that the number of counters in a row does not change even when they are more spaced out, or that the amount of water in a beaker does not change when poured into a different shaped beaker. Characteristic features of Pre-operational thinking are demonstrated by failures in conservation tasks. Pre-operational children may fail on conservation tasks because they centre on the row of counters but do not allow for the increased space between the counters. However, some may fail to notice that the increased length can be reversed, by pushing the counters together.

There have been criticisms of Piaget's studies. Critics state that his methods caused him to "seriously underestimate children's competence" and his theory is "oversimplistic" and "ignores social and simplistic influences"

Influential studies by McGarrigle and Donaldson (1974) challenge Piaget's views about Pre-operational deficiencies. They tested pre-school children in number conservation tasks similar to Piaget's, except