Piagets theory underestimated childrens cognitive abilities

Piaget believed in cognitive development and that there are three principles involved. Accommodation, which is the process of adapting cognitive schemes (a structured or organized way of understanding experiences, this changes as you get older) for viewing the world. The second assimilation, is the process of interpreting experiences when we use current schemes to create new ones. The last is equilibration. This is when you go through assimilation and accommodation to achieve cognitive stability Hummel (1998)

Piaget found four stages of development from infant to adolescence

The first stage of Piaget's cognitive development is the sensorimotor stage. This occurs between the age of 0-2 years. At this stage learning is based on: (Sensori) senses, (motor) and doing things. According to Piaget infants know a little about the world but cannot explore it how they want to. Piaget believes babies were born with the potential to know everything about the world and that the sensory system is functioning from birth. Even though they cannot do much with their head they have many motor responses, they think with their eyes, ears, and they are able to suck and gasp. Piaget then measured object permanence. Understanding the object is still there when covered, out of sight using searching behavior. I. e. hiding toy with cloth. He found they first lose interest, then in the later sub stage are capable of looking for it, doing this means they have memory of object.

According to Piaget young children start developing object permanence. Bower (1982) found evidence to disprove Piaget's theory, and stated that they are able to do this at an early age than stated. An experiment was done

with children a few months old. They were shown objects, and then the screen was moved across in front of the object and then moved back to its original position. Two conditions were then formed. The first was when the screen was moved back and the object was still in the same place. The second condition being that the object had moved when the screen moved back. According to Piaget, young children don’t retain information about objects that are not there; therefore the children should not be surprised in the second condition. The child did the opposite. Bower said this was due to the fact they expected it to reappear. Another study which agrees with Bowers finding was done by Ballargeon and DeVos on three month old children. In this they found that the children were aware of continues existence of object even when out of site.

Piaget stated only towards the end of sensorie motor (twenty months) that children show their planned actions to help form presentation of the planned event. Willates (1989) then evaluated this by conducting the same experiment but with younger children (nine months). It was found that many children carried out their actions on the first try and was correct. They did not need to go through ‘ trial and error’, meaning they are able to operate on a mental representation of the word. Piaget also claimed that deferred imitation was evidence of memory representation of what they had seen at an earlier time. Meltzoff & Moore (1983) stated that infants can imitate facial expression from birth. This was proved in studies done with six week old children and they were found to be able to make the same facial expression they had seen the day before. They suggested they had memory

representation of the gesture in order to succeed. This proves Piaget wrong that mental representation occurs at an earlier age than he suggested.

The second stage is the pre-operational stage which takes place at ages 2-7. This is then divided into two sub stages; the pre-conceptual period age 2-4 years and intuitive period 4-7 years. The pre-conceptual period involves the increase in a child's language and thinking due to the development of symbolic thoughts. There are two limitations of the child's abilities at this stage; animistic and egocentric. Piaget noted that egocentrism thinking happens because the child believes the world is centered on them and they only focus on their own view and think and feeling the same way as them. An example of this is shown as an experiment done by Piaget and Inhelder (1956), who found egocentrism responsible for children thinking that inanimate objects have feelings, intention and life like qualities. I. e. teddy had sore head. This is an example of animistic thinking example by Borke (1971). Studies done by Broke and Mossler (1976) proved Piaget to be wrong in the age these all develop. This could be due to the fact that studies did not relate to anything that happened in everyday life.

Piaget suggested that at the intuitive period (age 4-7), the child thinks differently, the child is able to do more things in a systematic way, ordering, classifying and quantifying, The problem is that even though the child is able to all of these things it is unable to explain why they have done them. Piaget also found that at this stage children find it hard to class inclusion task. He later found this could be due to cultural background.

One aspect of the preoperational child was investigated by Piaget and was called conservation. This is the idea that physical characteristics of something may stay the same even when outward appearance changes, i. e. two identical glasses of water, both of the same shape, and volume would be perceived as the same whereas two different glasses in shape but identical in volume would be taken as adapted. Just because the shape of the glass has changed it doesn't mean there is less or more water which the children found this hard to grasp. They tended to focus on the situation and forgetting about all the other important features. Another important process is reversibility. At this stage the children think about reversing the stage which just occurred to the beginning. Piaget said that pre operational children are unable to apply the thought process needed: compensation and reversibility. This is why they are in able to conserve tasks.

To sum up, Piaget claimed that pre-operational children cannot cope with certain tasks due to lack of logical thought processes. Other research goes against this, and thinks there may be other reasons than the ones associated with logical processes.

According to Piaget's findings regarding the experiments with rods, pre-operational children found it hard to arrange the sticks in order. Bryant and Trabasso found Piaget's findings were wrong due to the fact children found the task difficult because they were unable to remember the information needed. When the study was redone it was found that as long as the information was sorted into their memory then they completed without difficulties. Piaget also stated pre-operational children are unable to understand between whole and part in class inclusion task. Some

researchers pointed out that the questions that were asked were unusual, i. e. ‘ are there more brown beads or more wooden beads?’ This is not an everyday question. McGarngle and Doncudson revisited Piaget’s interpretation on conservation and found the reason why they did badly was due to the form of questioning which then influenced their answer. i. e. ‘ are there more counters or are they both the same?’ This could confuse the child because as nothing has been changed. The children interpret the question in terms of expected context and not focus on the precise wording of the question.

The next stage is concrete operational children whose ages range from 7-11. Their thought process has changed and they develop new strategies. At this stage their thinking is more flexible as they are able to focus on more than one thing at a time. Children can perform well in perspective taking tasks due to this, a limitation is that the child is reliant on the object being present when solving problems. Tomlison Keasey (1978) noted conservation of numbers, weight and volume gained in the order that Piaget stated, but he noted that relative concept may develop at different times, which he failed to give explanation for.

At age 11 and older, children are now in the formal operational stage having gone through previous stages. Now they can reason hypothetically, so when they are faced with a problem they are able to break down all the aspects that may affect the outcome. They don’t need to depend on concrete thinking in order to solve problems. They are also better at solving problems, systematically. Shayer et al (1976) Piaget claims at this stage thinking is gradual, that not everyone goes through the same stages. They do this at

different times and speed depending on their cognitive stimuli they received, the culture. School also promotes this stage. Some have the opportunities to learn at school. Researchers found that it is not in fact used in all the time.

To conclude