

Cognitivism

Assignment no. 1

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Introduction.

This is my first research assignment of psycholinguistics that was assigned by Ma'am Madiha shakir in this research assignment will be explained all the related phenomenon of cognition ,how it works/ helps to learning a language will also describe the internal function parts of Brian that assists us for acquiring a language

Cognitivism:

The principle goal of education in the schools should be creating men and women who are Capable of doing new things, not simply repeating what other generations have done.

- Cognitivism tries to study how cognition happens
- How cognition develops over time .
- How we learn to think and reason

Famous psychologists of Cognitivism

- 1) Jean Piaget
- 2) Lev vygotsky
- 3) Bruner
- 4) Alfred Binet (1857~1911)

Brain and Language

The main thing we have to discuss brain and Language by the help of brain we can acquire a language brain is the most complex part of human body ,it controls all the function of human body it has the capacity to do every functions in neno seconds ,there are few main parts of Brian that helps for learning language,

Brain has two main hemispheres

1. Left hemisphere
2. Right hemisphere

Four Lobes of Brian

Frontal lobe is related to thinking, planning, problem solving, emotions ,and decision making.

Parietal lobe speeding , perception, knowledge of number

Occipital lobe vision, visual processing, colors, cerebellum, balance and condition

Temporal lobe , memory, understanding, language speech , facial reorganization hearing etc .

Language disorder

What is aphasia?

Aphasia is a language disorder caused by damage in a specific area of the brain that controls language expression and comprehension. Aphasia leaves a person unable to communicate effectively with others.

Many people have aphasia as a result of stroke. Both men and women are affected equally, and most people with aphasia are in middle to old age.

There are many types of aphasia. These are usually diagnosed based on which area of the language-dominant side of the brain is affected and the extent of the damage. For example:

People with Boca aphasia have damage to the front portion of the language-dominant side of the brain.

Those with Wernicke aphasia have damage to the side portion of the language-dominant part of the brain.

Global aphasia is the result of damage to a large portion of the language-dominant side of the brain.

- Dyslexia it is also known as reading disorder.

Jean Piaget (1896-1980)

Cognition, The intellectual processes through which information is obtained, transformed, stored, retrieved, and otherwise used.

3 processes of Cognition

1 cognition processes information

2 cognition is active

3 cognition is useful

4 stages of Cognitive development by Jean Piaget

- **Sensorimotor stage 0_2** Babies start to build an understanding of the world through their senses by touching, grasping, watching, and listening. They also begin to develop a sense of object permanence, which means they understand that objects exist even when they cannot see them
- **Pre-operational stage 2_7** Children develop language and abstract thought. This means they can think about concepts and ideas that are not physical. They also begin symbolic play (“playing pretend”), drawing pictures, and talking about things that happened in the past
- **Concrete operational 7_11** Children learn logical, concrete (physical) rules about objects, such as height, weight, and volume. They also learn that an object’s properties stay the same, even if the appearance changes (e.g., modeling clay)
- **Formal operational 11_12** Adolescents learn logical rules to understand abstract concepts and solve problems. For example, they may understand the concept of justice

Schemas: A basic unit of thinking. Categorization of knowledge store house of knowledge.

Schemas are described as patterns of repeated behaviour which allow

Children to explore and express developing ideas and thoughts through
Their play and exploration.

- **Accommodation** refers to the part of the adaptation process. It is changing/modifying existing schemas to fit the new the new information.
- **Adaptation** is the ability to adjust to new information and experiences

Assimilation is the cognitive process of making new information fit in with your existing understanding of the world.

- **Equilibration** according to the theory, equilibrium is what motivates children to continue through the stages of cognitive development. When a child assimilates new knowledge, their worldview is inaccurate, so they are in a state of disequilibrium. This state motivates the child to accommodate new information and reach a state of equilibrium.

Vygotsky(1896_1934)

ZPD stands for zone of proximal development it is a learning process of every children.4.

Zone of Proximal Development

There is a potential gap between the child's actual developmental stage, as measured by standard tests on individual children, and the stage they are at when measured by tasks involving cooperation with other people.

Vygotsky defined it as: “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers.” In this zone come things that the child cannot do by himself, but needs the assistance of others; in time these will become part of the child's internal knowledge.

The distinctive aspect of Vygotsky's ZPD is that the gap between the learner's current state and their future knowledge is bridged by assistance from others; learning demands social interaction so that the learner can internalize knowledge out of external action.

It means that learning results from interpersonal activity; it is interpersonal activity that forms the basis for individual functioning. This clearly embodies the social nature of learning and underscores the importance of collaborative learning as it shapes what is learned.

. **Scaffolding**

The concept of scaffolding has been taken from Jerome Bruner (1915-2016), American psychologist, who believes that child's language acquisition is scaffolded by the helpful adult who provides a continual supporting aid to the child's internalization of language. In other words, scaffolding is the role of teachers and others in supporting the learner's development and providing support structures to get to that next stage or level.

Piaget vs. Vygotsky

Piaget's theory differs in important ways from those of Lev Vygotsky, another influential figure in the field of child development. Vygotsky acknowledged the roles that curiosity and active involvement play in learning, but placed greater emphasis on society and culture.

Piaget felt that development is largely fueled from within, while Vygotsky believed that external factors (such as culture) and people (such as parents, caregivers, and peers) play a more significant role.

Much of Piaget's interest in the cognitive development of children was inspired by his observations of his own nephew and daughter. These observations reinforced his budding hypothesis that children's minds were not merely smaller versions of adult minds.

Until this point in history, children were largely treated simply as smaller versions of adults. Piaget was one of the first to identify that the way that children think is different from the way adults think.

Piaget proposed that intelligence grows and develops through a series of stages. Older children do not just think more quickly than younger children. Instead, there are both qualitative and quantitative differences between the thinking of young children versus older children.

Bruner(1915 ~2016)

An American psychologist to study the cognition development of children after looking at problem _solving abilities.

Bruner An American psychologist to study of children after looking at problem _solving abilities.

Modes of processing information.

Jerome Bruner identified three stages of cognitive representation.

1. **Enactive**, which is the representation of knowledge through actions.
2. **Iconic**, which is the visual summarization of images.
3. **Symbolic** representation, which is the use of words and other symbols to describe experiences.

The enactive stage appears first. This stage involves the encoding and storage of information. There is a direct manipulation of objects without any internal representation of the objects.

For example, a baby shakes a rattle and hears a noise. The baby has directly manipulated the rattle and the outcome was a pleasurable sound. In the future, the baby may shake his hand, even if there is no rattle, expecting his hand to produce the rattling sounds. The baby does not have an internal representation of the rattle and, therefore, does not understand that it needs the rattle in order to produce the sound.

The iconic stage appears from one to six years old. This stage involves an internal representation of external objects visually in the form of a mental image or icon. For example, a child drawing an image of a tree or thinking of an image of a tree would be representative of this stage.

The symbolic stage, from seven years and up, is when information is stored in the form of a code or symbol such as language. Each symbol has a fixed relation to something it represents. For example, the word 'dog' is a symbolic representation for a single class of animal. Symbols, unlike mental images or memorized actions, can be classified and organized. In this stage, most information is stored as words, mathematical symbols, or in other symbol systems.

Bruner believed that all learning occurs through the stages we just discussed. Bruner also believed that learning should begin with direct manipulation of objects. For example, in math education, Bruner promoted the use of algebra tiles, coins, and other items that could be manipulated.

After a learner has the opportunity to directly manipulate the objects, they should be encouraged to construct visual representations, such as drawing a shape or a diagram.

Finally, a learner understands the symbols associated with what they represent. For example, a student in math understands that the plus sign (+) means to add two numbers together and the minus sign (-) means to subtract.

Analysis

According to those psychologists, children learn language in different phases, their cognition affect to acquire languages, Piaget said that in 4 stages they learn in proper sequence by the help of their environment .

Conclusion

In a nutshell we can say that Cognitivism has a major role to learning languages. The cognitivist approach to learning assumes that the learner uses cognitive processes as an active participant in

the learning process. The variety in the learning objectives and student capacities in any given situation require an instructional designer to have a breadth and depth of knowledge of instructional theories in order to meet the needs of each situation. There is no one theory to rule them all. (Apologies to J.R.R. Tolkien.) However, the principles of Cognitivism provide useful paradigms for instructional designers as they create effective learning environments to meet the needs of a wide range of learners

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