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## ENHANCING COGNITIVE SCHEMA STRATEGIES FOR LEARNING PROCESS

N. MUTHAMMAL , M. PARIMALA FATHIMA AND S.MOHAN

Research scholar, Center for Research in Education, Thava Thiru Kundrakudi Adigalar College Campus,  
Kundrakudi, Sivagangai District 6. Tamil Nadu, South India.

Research co-ordinator, Center for Research in Education, Thava Thiru Kundrakudi Adigalar College Campus,  
Kundrakudi, Sivagangai District . Tamil Nadu, South India.

Director, Center for Research in Education, Thava Thiru Kundrakudi Adigalar College Campus,  
Kundrakudi, Sivagangai District . Tamil Nadu, South India.

### Abstract:

*This study is an attempt to discuss the cognitive schema and learning process. Effective teachers never stop exploring different ways to improve student achievement. As there is no single, perfect solution, educators look to research to guide their practice. Recent innovations in cognitive neuroscience have allowed an unprecedented look into the way the brain works. The exciting learning's about brain function and its effects on learning have the potential to revolutionize teaching and learning. Brain research has provided new knowledge about the many ways that humans learn. (Tammy Cave, 2005) Schema was first introduced by Sir Frederic Bartlett by the neurologist in the behavior era. Schema was developed by Anderson a respected educational psychologist. This learning theory views organized knowledge as an elaborate network of abstract one's understanding of the world. Schemata grow and change as new information is acquired. Learner feel internal conflict if they are trying to assimilate suppositions. Teachers need to understand and be sympathetic to this tension. Then only cognitive scheme strategies help for the learners to learn effectively.*

### KEYWORDS:

Cognition, Schema, Cognitive Schema and Strategy.

### INTRODUCTION

This study is an attempt to discuss the cognitive schema and learning process .The destiny of a nation is being shaped in her classroom then the real destiny maker is a teacher Dr.Kothari. Education is an integral part of every human being. It makes him to be a good citizen. The wealth of the nation depends on the education of its citizen. Effective teachers never stop exploring different ways to improve student achievement. As there is no single, perfect solution, educators look to research to guide their practice. Recent innovations in cognitive neuroscience have allowed an unprecedented look into the way the brain works. The exciting learning's about brain function and its effects on learning have the potential to revolutionize teaching and learning. Brain research has provided new knowledge about the many ways that humans learn. Schema was first introduced by Sir Frederic Bartlett by the neurologist in the behavior era. Schema was developed by Anderson a respected educational psychologist. This learning theory views organized knowledge as an elaborate network of abstract one's understanding of the world. Schemata grow and change as new information is acquired. Learner feel internal conflict if they are trying to assimilate suppositions. Teachers need to understand and be sympathetic to this tension. Then only cognitive scheme strategies help for the learners to learn effectively.

## ENHANCING COGNITIVE SCHEMA STRATEGIES FOR LEARNING PROCESS

### DISCUSSION

Cognition is a term referring to mental process involved in gaining knowledge and comprehension including thinking, knowing, remembering, judging and problem solving.

According to Chomsky, the cognitive processes of all types of human activity language model include two types of structures namely surface abstract structures and deep structures.

Jamesmill : He believed that the human mind was totally passive. He felt that the mind was a machine functioning in the same way as a clock acting upon external stimuli. David Hume: Treatise of human nature the emphasized Lock's notion of the compounding of simple ideas into complex ideas ideas developing and making more explicit the notion of association. The mind is observable contents only through perception.

Schema is a mental structure that represents some aspects of the world. It is a frame, sense, mental representation. Schema is a structured cluster of pre-conceived ideas. It is an organized pattern of thought or behavior, a specific knowledge structure or cognitive representation of the self. It is a mental frame work centering on a specific theme that helps us to organize social information. Structures that organize our knowledge and assumptions about something are used for interpreting and processing information. Schema is used to organize current knowledge and provide a framework for future understanding. A large proportion of learner difficulties can be traced to sufficient general knowledge especially in cross understanding. Theory was developed by RC Anderson a respected educational psychologist this learning theory views organized knowledge as an elaborate network abstract mental structure which represents one's understanding of the world.

According to Anderson, cognitive psychology first emerged in the two decades between 1950-1970. The modern development of cognitive psychology was due to focus on research on human performance and attention developments in computer science. Those artificial intelligence and the renewal of interest in the field of linguistics. AllenMcowell: He is a mathematician who applied cognitive psychology to the design of computer system. He educating cognitive psychologist on the implication of artificial intelligence Mcwell saw cognitive activities as problem solving activities. LCwandowski and Strometric review a collection of innovative use of behavioral measurement in psychology including behavioral observations and behavioral choice. Reaction time is the time between the presentation of a stimulus and appropriate response can indicate difference between two cognitive process.

### COGNITIVE SCHEMAAND LEARNING PROCESS

The scope of biological psychology ranges from the level of the individual interacting with others to the level of molecule. The students level check, organ level- brain, spinal cord, peripheral nerves and eyes, neural system level- eyes and visual brain region, molecular level, synaptic level, cellular level, single neuron, circuit level, local neural circuit ,brain visual cortex. These play a vital role in schema thinking. The brain can manage to change during learning, learning words, hearing words, seeing words, reading words and generating words.

Learners feel internal conflict if they are trying to assimilate schemata which contradict their previous suppositions. Teachers need to understand and be sympathetic to this tension.

Teachers must help learners build schemata and make connections between ideas, discussion, songs, role play, visual aids and explanation of how a piece of knowledge applies some of the techniques and used to strengthen connections.

### STAGES OF COGNITIVE SCHEMA DEVELOPMENT

Organization: Ongoing process of arranging information and experience into mental system or categories

Adaptation: Adjustment to environment

Schemes: Mental system or categories of perception and experience

Accommodation: Altering existing schemas or creating new ones in response to new information

Equilibration: Search for mental balance cognitive schemes and information from the environment.

Disequilibrium: The out of balance state occurs when a person realizes that his or her current ways of thinking are not working to solve a problem or understand a situation.

Operations: Actions a person carries out by thinking them through instead of literally perform the actions.

## ENHANCING COGNITIVE SCHEMA STRATEGIES FOR LEARNING PROCESS

### THOUGHT USING COGNITIVE SCHEMA

Schemata are an effective tool for understanding the world. Through the use of schemata most everyday situations do not require effortful processing is all that is required. People's mind can quickly organize new perceptions into schemata and act effectively without effort. For example, most people have a stair way schema and can apply it to climb staircases which they never seen before. Schemata can influence and hamper the uptake of new information such as when existing stereo types giving rise to limited or biased discourses and expectations may lead an individual to see or remember something that has not happened because it is more believable in terms of schema.

#### Cognitive Schema Strategies

1. Anticipate student errors and difficult areas.
2. Gradually increase complexity and difficulty of material.
3. Developing procedural and substantive plane.
4. Searching existing schemata.
5. Reviewing
6. Seeking validation for interpretations
7. Evaluating assessing quality

### CONCLUSION

The cognitive schema strategies improve the ability to enhance the learning process. The expected outcomes of cognitive schema strategies are to from the known to unknown, from simple to complex, from definite to indefinite, from concrete to abstract and from empirical to rational. These strategies should help the learner to understand the lessons in this manner. Pupils are gradually made to learn difficult facts in a very easy manner.

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