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Relevance of Cognitive Field Theory

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ABSTRACT

Cognitive Field Theory is one of the important epochs of history of psychology which has largely influenced the education and learning approaches. Kurt Lewin the father of cognitive field theory has explained field on the line of fields like gravitational, and magnetic. He finds psychological environment different from biological environment and identify it individualistic and dynamic in nature. His group dynamics is ever relevant. According to him learning is due to formation of cognitive structure. E.C Tolman talks of sign learning and latent learning. Brunswik explains perceptual constancy and probability learning in terms of field theory. Other field theorists are R.G. Barker, R.H. Wheeler, J.R. Kantor. Due to the comprehensive nature of field theory, it is still important in education and socialisation. It has its root in Cognitive Approach and has its bearing on the development of Constructivist Approach.

Keywords: ***Cognitive, Field, Lewin, Tolman, Cognitive Structure, Sign Learning.***

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Introduction:

The Concept of Field Psychology has been borrowed from physics where there are several concepts of field as gravitational field, electromagnetic field, etc. Some Psychologists have tried to adopt these related concepts of different fields in understanding the human behaviour by inventing the concept Field Psychology or Cognitive Field Psychology. These Psychologists have tried to prove that the human behaviour is determined by the psychological field consisting of an organized system of various stresses or strains like that of magnetic field or gravitational field. Chauhan, SS (1998) represents cognitive field psychology as "Cognitive -field theory of learning lays emphasis on cognitive structure and on perception of the total field by the individual. According to this theory, patterns of human behaviour are regulated and directed by cognitive structure which the individual develops in course of his experiences."

Field theory represents an outgrowth of Gestalt Psychology. Field theorists, in general, point out that an organism is influenced by all those factors in the field that surrounds him. There are many famous field theorists, like Kurt Lewin, E.C. Tolman, E. Brunswik, R.G. Barker, R.H. Wheeler, J.R. Kantor, etc. Singh, AK (2002) concludes, "Field theory owes its origin in natural sciences like Physics, Chemistry and Mathematics and has been applied in psychology to explain various aspects of behaviour. Important field theorists are Kurt Lewin, E.C Tolman and E. Brunswik. Field theories, in general, argue that an organism is influenced by all these factors in the field that surrounds him."

Key Concepts of Cognitive Field Theory

The essential idea of field Psychology is that the meaning of its constructs (ideas) is mutually interdependent. The five pivotal concept of cognitive field psychology are (1) Life Space, (2) Topology, (3) Vector, (4) Person, and (5) Psychological Environment. The principal construct of cognitive field psychology is Life Space which is an individual's psychological world where there is the Person and his/her Psychological Environment.

1. Life Space: Life space is the total psychological world of an individual person in which the person lives in. It includes person's percepts, knowledge, beliefs, attitudes, and his/her time perspectives. It does not represent the physical objects, but functional and symbolic relationships. It does not include only presently perceived objects, but also includes memories, language, myth, art, religion, etc. In the concept of life space there are two principal aspects of a life space as person and his/her psychological environment.

In fact, there is no one life space, but a continuously overlapping series of life spaces. It is the total psychological world, in which a person lives. It is ever changing due to foreign hull becoming part of psychological world, and ever-changing nature of perception. We cannot think of the psychological person as biological organism or a psychological environment as the physical environment.

2. Topology: Topology of life space is its psychological structure. In mathematics topology is non-metrical geometry. Non-metrical geometry encompasses concepts like inside, outside, and boundary, but it does not deal with length, breadth, and thickness. Topology is about relative position of the geometric figures being considered. Topologically there is no difference between a circle, an ellipse, a regular or an irregular polygon with any number of sides. A drop of water and the earth topologically are fully equivalent. Size or shape has no significance in a topological figure. Two figures are topologically equivalent, if (and only if) one figure can be made to coincide with the other by an elastic motion. Topological ideas or terms when applied to psychology represents the position of a person in reference to one's functional goals and the barriers to their achievement.

3. Vector: Topological concepts are used to show what is structurally possible, the vectorial concepts describe the dynamics of a situation. The concept of vector has been borrowed from physics. Vector or dynamics of situation represent the direction and strength of a force. In psychology a vector represents a force that influences psychological movement towards or away from the goal. A vector is a concept equivalent to and descriptive of a psychological force. A force is a tendency to act in a certain way or in a certain direction. If there is a single vector force, the movement will be in the direction pointed by the vector points. When there are two or more vectors (or vector forces) acting simultaneously in different directions the movement will be in the direction and strength of the resultant force. A vector may represent either a driving force or a restraining force. The driving force may be the tendency of the individual to move towards or away from the goal. The restraining force represents barrier or obstacle to the psychological locomotion. It opposes the driving force. Both the driving and restraining forces arise from the needs abilities of the person studied, from the actions of other persons, and from impersonal aspects of the situation. Vectors are forces which may act in different directions, within the topological space. These vectors are described to have valences of the different environmental regions or functional parts of the life space. The vectors represent the attracting or the repelling powers of regions. They may be either positive or negative depending on their attracting or repelling properties respectively.

4. Psychological Person: The Psychological person cannot be identified with the biological person in any circumstances. The Psychological person occupies the person at the center of the psychological field. A person is a purposive behaving self. It is synonymous with self, with all the needs, aspirations, goals expectations, abilities, traits, or attainments that one has at a given time. Every individual at a given time is, in this sense, a distinctly different psychological person than any other. In the widest possible sense, a person or self is the total configuration of all that he/she possesses. This includes one's body, speech, clothes, parents, siblings, home, reputation, attainment, etc. Psychologically a person is composed of a motor perceptual stratum, and an instrument to realize the inner personal stratum. The inner personal stratum represents the needs, interest, goals, expectations, and the preference of the person. The Inner Personal Stratum is located at the center (inner most part) of the psychological person whereas motor- perceptual stratum lies between the inner-personal stratum and the psychological environment. The motor perceptual stratum represents the cognitive and manipulative abilities of the person. Inner Personal Stratum and Motor-perceptual Stratum together compose the psychological person.

5. Psychological Environment: Environment as a Concept is not same to Behaviourists and Cognitive Field Theorists. According to Behaviourist environment consists of all physical and social surroundings of a person which can be objectively observed in physical terms. The cognitive field psychologists assume environment as psychological. The psychological environment, according to Field

Theorist, consists of everything, function, and relationship, that at a given time, surrounds the person and has a meaning for oneself. The psychological environment is the part of the physical and social environment to which one is psychologically related. Anything that might be present physically in the environment, but of which the individual is not cognizant remains in the "Foreign Hull" of the life space. Once the individual interacts with it, either negatively or positively, it no longer remains in the foreign hull of the individual's life space and becomes a part of the psychological environment. Unless anything is perceived by the individual it is not a part of the life space or psychological environment even though it is physically existent in the environment. The psychological environments of different individual are different, even though they live in the same socio-physical environments. Two equally intelligent persons as and when confronted with the same objective facts differ drastically as they have different purposes and experiential background.

Learning as Per Cognitive Field Psychologist

Field theorists explains the process of learning as differentiating and restructuring oneself and one's psychological environment. According to them learning is a dynamic process in which, through interactive experience, cognitive structures undergo transformation, and new insights are gained. Cognitive Field Psychologists do not believe that an individual in a learning situation is not unfolding according to nature. They do not believe that learners are passively conditioned or shaped to respond in a desired manner. As we know cognitive field psychologists are closed to gestalt approach, not to the conditioning of learning. A person's behaviour, a great extent, depends upon the cognitive structure of his/her life spaces. According to the cognitive field psychologists one's learning consists of: (i) One's Change in Cognitive Structure, (ii) Changes in One's Motivation Level; and (iii) Gain in One's Muscular Control and Dexterity.

Change in cognitive structure is learning and change in cognitive structure means development of perceptual knowledge. Change in motivation is concerned with the vectorial or dynamic aspects of a situation. It is associated with like or dislike of learning certain related regions or aspects of the life space. Changes in motivation can be brought about by changes in cognitive structure as well. The process of change in the cognitive structure of one's life spaces occurs through differentiation, generalization and restructuration of the respective regions or aspects.

Gestalt Field Psychology is cognitive Psychology of learning. It emerged as reaction to both the mentalistic traditional psychology and the automistic psychology of Thorndike and Watson, i.e., Behaviourism. Gestalt school of thought through perception and insight believes in insightful learning which is distinctively different from associative or conditioned learning. Influenced by Gestalt Psychology, Kurt Lewin further cognitive psychology by employing different borrowed terminology from science subjects, more particularly from physics and mathematics. Lewin theory came to be called Topological or Vector Psychology. This theory gave a special cognitive orientation. In fact, cognitive field psychology deals with the problem of how people gain an understanding of themselves and their environment. The basic of cognitive field psychology is the concept of Life Space which includes everything one needs to know about a person's Psychological Environment. The cognitive field psychology has construct like Topology, Vector, Psychological Person, Psychological Environment, and the Centre Construct- Life Space.

Key Characteristics, Merits and Limitations of Cognitive Field Psychology

Cognitive Field Psychology bridges Cognitive Psychology and Social Psychology viewing individuals as interacting with their life space which includes their perceptions, goals, and environment. It emphasizes the role of mental processes like perception, memory, thinking, and decision making in shaping how individuals interact with their environment.

It recognizes that individuals are not isolated entities, but are constantly interacting with others and their environment, making it a form of interpersonal social psychology (Interpersonal Nature). It acknowledges that individuals perceive and interpret the world based on their own subjective experiences, rather than simply reacting to objective stimuli (Subject Reality). It has the concept of Life Space that refers to an individual's psychological reality. Unlike

behaviourism, which puts emphasis on observable behaviour, cognitive field psychology talks about internal mental processes that mediate between stimulus and response. It does not put emphasis on the structure of perception like Gestalt, rather emphasizes the dynamic interaction between the individual and their environment.

Cognitive field psychology offers a way of understanding human behavior by considering how individuals actively construct their understanding of the world around him/her and how those constructions influence their actions.

Merits of Cognitive Field Psychology:

Following are the merits of cognitive field psychology as:

It Improves Cognitive Function and Learning.

- It helps to improve memory, address memory disorder, and enhance learning.
- It helps in problem-solving by understanding cognitive processes like attention, perception, and reasoning.
- It fastens learning to make learning effective.
- It allows for personalized learning keeping in view students learning.

It Helps Mental Health Learning and Investigation

- CBT, a therapeutic approach is rooted in cognitive psychology which helps to manage mental health conditions like anxiety and depression.
- It is helpful in the treatment of cognitive disorders.
- It helps the individual for greater resilience to life's challenges.

It has Practical Applications in Various Fields

- It is helpful in enhanced decision making.
- It is helpful in improving workplace performance.
- It helps individual to become intuitive and user-friendly.
- It helps in understanding human behaviour.

It is Useful for Personal Development.

- It helps to get increased self-awareness.
- It helps in improved communication skills and relationships.
- It helps to enhance critical thinking.

Limitations of Cognitive Field Psychology: Cognitive Field Psychology has following limitations:

- It presents oversimplification of Human Behaviour. It does not fully capture the nuances of individual differences and the richness of human experience.
- It undermines the importance of difficulty measuring internal processes. Some fields of psychology consider these mental processes to be hypothetical.
- It is neglecting biological and genetic influences.
- It undermines the importance of difficulty of explaining emotions and irrationality.
- It has limited ecological validity.
- The artificiality of laboratory setting can limit the generalizability of findings to everyday life.
- Replicating findings in cognitive psychology can be challenging.
- It oversimplifies social and cultural influences.

Despite these limitations, cognitive field psychology is helpful in providing the insights that how the human mind works.

Educational Implications of Cognitive Field Psychology

Cognitive Field Psychology offers valuable insights into how students learn and construct knowledge, impacting educational practices significantly.

- It Focuses on Active Learning.
- It Puts Emphasis on Meaningful Connections.
- It Highlights the Importance of Problem-Solving and Critical Thinking.
- It Helps in Understanding Memory and its Working (Encoding, Storage, Retrieval)
- It Emphasizes Individual Differences.
- It Advocates for Technology Application.

Application Aspects: It has following dimensions of application in enriching education system and facilitating learning :

- Constructivist Teaching.
- Inquiry-Based Learning.
- Collaborative Learning.
- Formative Assessment.
- Inter leaving and Spacing .

NCFSE (2000) expresses the application of

school objectives by reflecting the basics of cognitive field theory. While elaborating the objectives of school curriculum NCFSE (2000) states, "understanding of the environment in its totality both natural and social and their interactive processes, the environmental problems and the ways and means to preserve the environment."

Relevance Of Cognitive Field Theory

The relevance of the cognitive field theory lies in the fact that it provides a comprehensive framework that helps to understand how individual perceives, learns, and interacts with the environment he/she lives in. NEP (2020) under the head principles of this policy states, "Emphasis on conceptual understanding rather than rote learning and learning for-exams." The theory puts emphasis on the fact that cognitive processes are inter-connected where individual experiences and environment influencing learning plays vital role. This theory helps to understand how individuals construct knowledge and how they make sense of the world around them.

The basics of field theory as a concept has been propounded by Kurt Lewin and that is why he is being regarded as the father of cognitive field theory. His concept of life space and ever-changing nature of psychological environment has its bearing on the understanding of individual and his/her learning environment understanding. He categorically states that the behaviour of the individual is the function of his/herself and that of his psychological environment which is quite different from his/her biological environment. Lewin has particularly focused on motivational concepts like energy, tension, need, valence, and vector those are very relevant in the process of understanding the person and his/her learning process. Tolman through his Sign Learning stresses that organism learns a cognitive map of the whole situation which is relevant for ever to understand human learning and its pattern. Probabilistic functionalism of Brunswik is another contribution of field theory which is still relevant. His notable contribution in the field of perceptual constancy and probability learning is helpful in human understanding.His Lens Model, Representative Design, Ecological Validity etc.

Conclusion:

Cognitive field theory stresses upon the importance of holistic learning and this fact makes it ever relevant. It suggests working on the principle to relate different elements of a situation to complete the comprehensive look of the problem. Field Theory emphasizes upon insightful learning, past experiences, purposeful behaviour, and these concepts justify its relevance. NCF (2005) supports this approach in other words, "Learners actively construct their own knowledge by connecting new ideas to existing ideas on the basis of materials/activities presented to them." Many therapeutic approaches like Cognitive Behavioural Therapy are rooted in cognitive field theory. It also considers social influence on learning and helps to understand group dynamics. It makes the individual aware about his/her life space and his/her personal characteristics. The holistic perspective of cognitive field theory has its practical applications in education, group understanding, social change, conflict management, counselling, life forces and its resultant, etc. to understand and mange behaviour in different settings. In Education the theory helps to understand student behaviour, to create effective learning environment, to facilitate insight and change, and to balance rewards and challenges.

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