



Enhancing Biocognitive Strategies for Learning Process

* M. Sanmuga Revathi ** Dr M. Parimala Fathima
*** Dr S. Mohan

* Research scholar, Center for Research in Education, Thava Thiru Kundrakudi Adigalar College Campus, Kundrakudi, Sivagangai District - 630 206. Tamil Nadu, South India

** Research co-ordinator, Center for Research in Education, Thava Thiru Kundrakudi Adigalar College Campus, Kundrakudi, Sivagangai District - 630 206. Tamil Nadu, South India

*** Director, Center for Research in Education, Thava Thiru Kundrakudi Adigalar College Campus, Kundrakudi, Sivagangai District - 630 206. Tamil Nadu, South India

ABSTRACT

Dr. Mario Martinez has coined the word 'biocognition' where he proposes that cognition and biology coemerge within a cultural history to find maximum contextual relevance. Biocognition brings together mind and body, within a culture. Biocognitive strategy instruction develops the thinking skills that will make students strategic, flexible learners. People use such strategies all the time, like writing a note to remember an important fact.

Keywords : Cognition, biocognition, strategy, biocognitive strategies

Introduction

Cognition typically relates to the mental process of acquiring information, reasoning that leads to knowledge or beliefs. Let's expand this to include all processes that shape awareness and knowing, not just mental. This brings to bear imagination, dreaming, psychic functioning, intuition and other modes of perception. While bioenergetics provides a foundation for the biological basis of perception, biocognition offers of useful model for how to better understand and apply bioenergetics in that we gain more and purpose from body-mind interactions.

Cognition is essential to understand each cognitive skill. Cognitive skills are the basic mental abilities. We use to think, study and learn. They include a wide variety of mental processes used to analyze sound and images, recall information from memory, make associations, between different pieces of information and maintain concentration on particular tasks. Cognition is a product of biology itself, but its not really possible to separate the two effectively they refer to the same thing from different perspectives. Concentration, perception, memory and logical thinking are four cognitive skills for successful learning.

In effective strategy instruction, the teacher serves as a mediator by helping to activate prior knowledge, represent information, select learning strategies, construct meaning, monitor understanding, asses the use of a strategy organize and relate ideas, summarize and extend leaning a review of the literature regarding strategy instruction suggests that the most successful programs are those that 1. Stimulate the learners to be active 2. Provide clear feed-back regarding the effectiveness of that learner activity and 3. Provide instruction in the questions of when, why and where such activities are likely to be effective. Factors that influence the generalizability of thinking skills include these the degree to which the learner has attained automatic mastery of the skill, understanding when the skill may be useful, knowing how to modify the skill to fit different setting and content, having the

opportunity to practice with new material and in new settings, believing that the skill will be useful with new content or in a new setting.

Biocognition is a new, integrated approach to understanding the biological basis of cognition in organisms. The cognitive processes are perception, memory and navigation. It generally describes the local and distributed activity and elaboration of cellular and protocellular organisms, in unity and in comparative isolation. It is an active and relational momentum exhibited at any scale of perspective we may explore. Biology is elementally cognitive and thus biocognition is the 'knowing – relation' that is the ceaseless activity of any organismal assembly (or) entity. Biocognitive strategies promote the cognitive processes such as perception, memory and navigation, from many levels of analysis from genes to the behaviour of whole organisms. The biocognitive strategies are the self-aware thinking strategies.

Biocognition is the most general and inclusive of our modeling terms and it the source and inspiration of its children. It generally describes the local and distributed activity and elaboration of cellular and protocellular organisms, in unity and in comparative isolation. It is an active and relational momentum exhibited at any scale of perspective we may explore. Biology is elementally cognitive and thus biocognition is the 'knowing relation' that is the ceaseless activity of any organismal assembly or entity.

Though it may at first appear that the addition of bio- to the term cognition is merely spurious complexification, the emergence of mechanical metaphors in our human cultures requires that we strongly differentiate between 'the knowing that machines do' and that of organisms. This term refers to organismal activity which assembles itself into knowing, whether at the scale of human metaphoric cognition, or the chemico – energetic sentience of cellular organelles. It as the purposeful and organized behaviour of organisms active in problem solving, relational restructuring or otherwise identifi-

able progress or defence, beyond what we might expect from simple evolutionarily inspired behavioral paradigms.

The model supposes that human cognition is not as significantly different from biocognition and is a peculiar outgrowth of it involving exceptional focus on representation. Biocognition has little in common with our models and metaphors, which are in general too flat (antiscalar) and unipolar in their perspectives. It is not locally 'housed' so much as it is locally assembled, expressed and enacted thus any organism has transports and organs which are not local in time or place and is a living reflection of the activity of these transports as well as those of localized, formal or semi permanent character.

Environment is an organ of Biocognition and is consistently optioned by all participants as a form of extrinsic 'memory', such that catastrophic changes in environments (which always occur at multiple simultaneous scales) are akin to 'inheriting a stroke' in the sense of a severe and often irreversible loss of conserved memorium – stratas, Human beings are amongst the most sensitive creatures in terms of their inner relationships to environmental change, for our own cognitive basis is assembled in both the real and the metaphied world of our experience and reflections on it.

The term lays precedence on a vast spectrum of scalability and should generally be understood to refer to multiple simultaneous histories, scales, locations and participants emerging in synchrony as and with(in) any instance or assembly of organismal experience. We speak of the body as comprised of cells, but the actual symmetries in question have many scales and extend beyond the individual deeply into history, the environment and the future.

It is a perspective that leads into the possibility of modeling atemporal hyperstructures of living beings, rather than being forced to focus on individuals and as far as animals are concerned, assemblies of impossible complexity are most often what individuals are. Biocognition is a new, integrated approach to understanding the biological basis of cognition in organisms. The cognitive processes are perception, memory and navigation. It generally describes the local and distributed activity and elaboration of cellular and protocellular organisms, in unity and in comparative isolation. In attempting to describe biocognition, a good place to start is to recognize that it is an amalgam of two words. Bio means life or life

energy. Cognition is the 'mental process of knowing' which includes aspects such as awareness, perception, reasoning and judgement. Cognition is knowledge which comes to be known through awareness, perception and intuition. So, Biocognition is knowledge of life and its processes within our physical and subtle bodies. Biocognition is a "Science of consciousness" which acknowledges that the nature of the human being is a divine soul incarnated into a physical body to experience energy in motion, gain wisdom and realize that it is simultaneously a tiny fractal of "All that is" the great central sun, an instrument within the whole and yet also a powerful, radiant, luminous being, that we are one with the God that made us and yet different from.

Cognition typically relates to the mental process of acquiring information, reasoning that leads to knowledge or beliefs. Let's expand this to include all processes that shape awareness and knowing, not just mental. This brings to bear imagination, dreaming, psychic functioning, intuition, and other modes of perception. While bioenergetics provides a foundation for the biological basis of perception, biocognition offers of useful model for how to better understand and apply bioenergetics in that we gain more utility and purpose from body-mind interactions.

Biocognitive strategies

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

Conclusion

The expected outcomes of biocognitive strategies are to 1. Monitor their cognitive process effectively 2. Avoid the use of simplistic, primitive routines when better strategies are available. 3. Develop and adequate knowledge base of general and specific information and of the strategies available in various subject areas. 4. Develop a pattern of attributing both success and failure to the effectiveness of their own effort and 5. Help them transfer effective strategies to new situations , cognitive strategy instruction should help learners develop these skills.

REFERENCES

1. Nicole fiori (2010) Cognitive Neuroscience. | 2. Michael T.Ullman, The Biocognition of the Mental lexion. | 3. Dr. Mario E. Martinez (2004) , The Man from Autumn (A pshycological novel). | 4. Dr. Mario E.Martinez , The Mind body code (2002) . | 5. S.S.Stevens ,John wiley and sons , inc.newyork ,Handbook of experimental psychology. | 6. Desmond J.E. ,and fiez .J.A. (1998) Neuroimaging studies of the cerebellum: language , learning, and memory. |