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## How metaphorical thinking influences brain chemistry and learning? A study using EEG

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Brain chemistry is closely associated with learning as it sets a systematic co-ordination between millions of neurons to form complex web-like signalling systems that represent a state which is a combination of emotional, cognitive and physical interactions helping an individual to make decisions. If the learner is conditioned to this state of mind he/she would be able to orchestrate the mind signalling that would optimize their learning. Achieving this state of mind could be possible by utilizing one of the natural characters of the brain is by relating two different universes in their meaning often referred as metaphorical thinking. Establishment of this state of mind at conscious and sub conscious level promotes continuity and flexibility in the signalling system, otherwise considered as hard-wired brain being a seat for primary emotions such as joy, fear, anger, disgust, surprise and sadness. Several research studies have proved that brain is naturally designed to allow most of the learning disappears from memory, it is necessary to ensure explicit learning and memory state governed by the hippocampus of the brain. Hippocampus has a small capacity which could be easily overloaded but by creating a systematic signalling system combining emotional, cognitive and physical interactions promoting the capacity of the hippocampus. Practice of metaphorical thinking in understanding given information promotes the communication of the two hemispheres by a bundle of connecting fibers, the corpus callosum at neo cortex level and through hippocampus at the level of limbic system. Hence, metaphorical thinking helps learners to make connections and develop patterns and relationships in parallel to the language as well as symbols relevant to the given information. The present research work explores the link between brain chemistry and learning through metaphorical thinking.

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