Research Paper

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Brain Based Learning: a New Instructional Approach

Education

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ABSTRACT

The Brain Based Learning has emerged as a new paradigm in learning teaching process. This approach is based on the notion of the role of brain is fundamental for learning teaching process. The functions of brain make the learning easy and rapid. Most innovative and modern techniques in imaging brain structure like MRI helped the neuroscientists to study how the brain learns'. Educators worldwide have taken notice of these research findings and taken them to impart education. Brain based learning strategy, a new instruction teaching approach that is discussed in this paper is the purposeful engagement of various strategies that apply to how our brain work in the context of education. In adopting this strategy, motivation and learning, emotional states, physical environment, motivation and engagement, and critical thinking skills were taken into account in the classroom for effective learning. The inclusion of this new method of curriculum will solve many issues in education.

Introduction

A plethora of research studies carried out for finding effective instructional methods and approaches and reshaping the methods offered large numbers of innovative, versatile and effective approaches. Of them, Brain Based Learning Strategy has emerged as a new approach in learning teaching process. This approach is based on the notion of the role of brain is fundamental for teaching learning process. The brain is highly susceptible to environmental influences like social, physical, cognitive and emotional aspects. Thus, as a teacher, it is necessary to create *the best* for our children. In this context, every teacher should know how the brain learns and pay attention to how we ask students to spend time with u...

Brain Based Learning: A New Instructional Approach

Brain Based learning has its original roots from neuroscience. Most innovative and modern techniques in imaging brain structure like MRI helped the neuroscientists to study 'how the brain learns'. Although each side of the brain processes things differently, some earlier assumptions about the "left" and "right" brain - that the left brain is logical and right brain is creative – are outdated. Caine and Caine (1995) cites that brain based teaching and learning uses a holistic approach stressing the importance of how the brain learns in order to produce meaningful learning.

Brain Based teaching is based on the connections in the mind. Its aim is to know "how the brain learns". Wolfe (1999) says; in order to make meaning out of new information, our brain must have previous information to reactivate connections that were made before. When the first time a neuron makes a connection in our brain, a certain amount of energy is needed. As further connections are made less and less energy is needed .Eventually the connection is automatic and this produces a strong memory (Jazeel and Saravanakumar, 2015).

Brain Based Learning Strategy:

The Biology of Learning According to Jensen (2000), is "learning in accordance with the way the brain is naturally designed to learn". Research about how the brain learns is being conducted across several disciplines, including psychology, neuro anatomy, genetics, biology, chemistry, sociology and neurobiology (Jensen, 2000). Brain-based learning is biologically driven and the conclusions developed to date have not been definitive. Research continues, and our understanding of brain-based learning will be subject to future changes. The brain-based learning approach is not a recipe for all learning, but it can be used to develop strategies that are based on the current available research .Brain based teaching strategy is based mainly on the aspects of connections to previous knowledge. This strategy gives due importance for movement & learning, emotional states, physical environments, motivation & engagement, critical thinking skills and memory & recall (Saravanakumar. AR,2015)..As teachers we never give keen interest in giving due importance to any of these above mentioned areas. Jensen (2000) describes about the major factors that teachers should be aware of while handling the class.

Movement and Learning

There are strong connections between physical education, movement, breaks, recess, energizing activities and improved cognition. It demonstrates that movement can be an effective cognitive strategy to

- Strengthen learning
- Improve memory and retrieval and
- Enhance learner motivation and morale

Exercise may increase brain chemicals such as nor epinephrine and dopamine which typically serve to energize and elevated.,(Chaouloff,1989).

Emotional States

Mind and emotions are not separate; emotions, thinking, and learning

are all linked. Emotions organize and create our reality. A child goes through many emotional states mainly

- Fear/ threat
- Joy/pleasure
- Sadness/disappointment
- Anticipation/curiosity

These emotions are integral and invaluable part of every child's education. Teachers should consider these emotions before going directly into the class.

Physical Environment

Many schools are now building classrooms with several funds from government. But some schools struggle to have a good school environment. Studies show that physical environment has capacity to influence our brain(Whitelaw, 2003). Educators should consider at least on some variables in physical environment that have the greatest effect on academic success like seating, temperature, lighting, noise and building design.

Motivation and Engagement

As educators many of us know that motivating a student is a

critical issue Firstly we need to find the reason behind de motivation. Main reasons for de motivation are:

- Lack of positive relationship
- Learned helplessness
- Awareness of disrespect
- Perception of threats
- Brain anomalies
- Drugs

Critical Thinking Skills

All cognition is built from lower-order brain systems including sensory motor systems, auditory & language systems, attention and executive functions, social & emotional systems, memory systems and behavioural &reward systems. We are not born with a fully-fledged system but, acquired through our environment and experience. Some major brain based aspects that promote critical thinking of our intelligent brain include

The unique brain, The problem solving brain, The maturing brain, The adaptive brain and The emotional brain. All the students whether identified as 'gifted' or 'struggling' need education about thinking skills.

Memory and Recall

Memory and recall are critical elements in the learning process. The only

way a teacher can assess a student's learning is through their memory or

Conclusion.

Brain Based learning Strategy can be adopted by teachers, because the new research findings help us to understand curriculum, discipline policies, assessment challenges, special education students, retention policies and countless other aspects of teaching. Many studies like Awolola(2011), Duman(2010), Dicki & Gozuyesil (2014) showed that brain based instruction strategy enhanced students' achievement and they recommend into the teachers. So teachers must go through the theories and analyze Learning strategies and choose the best suitable strategy for teaching. As Palmer (1998) says, "The courage to teach is built on the premise that good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher".

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