



BRAIN BASED LEARNING ENVIRONMENT: REVOLUTIONIZING FUTURE READY INDIAN CLASS ROOM

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Abstract:

The Brain is enormously complex. The Brain has about 100 billion neurons, each of which can produce up to 20000 connections in the form of Dendrites. This profusion of connection gives the Brain its amazing powers to Think, Learn and Create. The paradigm Brain based Education has emerged with strong application for teachers and learners worldwide. When students are provided with a learning environment that is optimal for learning, learning difficulties and discipline problems decrease, a love of learning flourishes. For students, creating a classroom environment around the way the brain naturally learns best, may be the simplest and most critical educational reform ever initiated.

In present paper History of Brain Based Learning, Concept of brain based learning, Foundational Element of Brain Based Learning, Strategies for Achieving a Brain-Based Environment in Future ready Classrooms has been explained.

Keywords: *Brain Based Learning, Relaxed Alertness, Orchestrated Immersion in Complex Experience, Active Processing of Experience.*

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Introduction:

History of Brain Based Learning:

1974 : Author - Tony Buzan, Book - Use Both Sides of Your Brain

1978 : Author - Betty Edwards, Book - Drawing on the Right Side Of the Brain

1980 ; Brain Based Education finally emerged as a whole new field based on what we were learning about the brain and how it might interface with Education.

1983 : Leslie Hart - Human Brain and Human Learning argued that cognitive processes were significantly impaired by classroom threat.

Definitions By Eric Jensen:

Brain Based Education : Brain Based Education is the purposeful engagement of strategies based on principles derived from solid scientific research.

Brain based Learning : Brain based Learning is also the application of a meaningful group of principles that represent our understanding of how our brain

works in the context of education.

By Caine & Caine (2002)

Brain based Learning : Recognition of the brain codes for a meaningful learning and adjusting the teaching process in relation of these codes is called brain based learning.

Brain Based Learning is simply the engagement of strategies based on body /mind /brain research.

Theoretical Background:

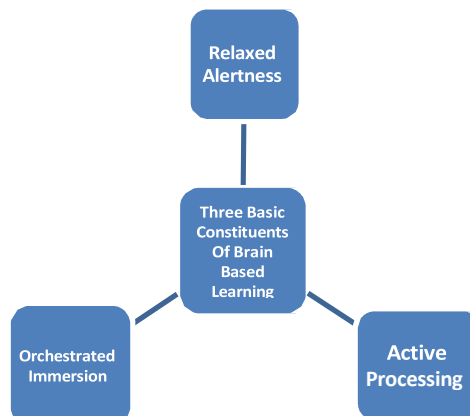
The objective of Brain Based Learning is to move from memorizing information to meaningful learning.

➤ Three Basic Constituents of Brain Based Learning

The Three Critical Elements of Instruction:

There are three fundamental elements of great teaching. They are the foundation for professional development and must be grasped by teachers and understood by all educators. Each of these elements has a insightful effect on the other two and is in fact never separate.

The Three Critical Elements of Instruction



1. Relaxed Alertness: Creating the Optimal emotional climate for Learning

Relaxed Alertness: Numerous problems with learning and students' behavior can be stressed by to this element because the principles there is an optimal emotional state for learning. It is affected and moderated by the fear and pleasure centers in the brain (Panksepp,1998,2004)which is called as Relaxed Alertness .

It consists of **low threat and high challenge**. This state exists in a learner who feels capable and confident and is interested or intrinsically motivated.

Relaxed Alertness is also a state that is present in classrooms and learning environments in which emotional and social competence is the goal.

2. Orchestrated Immersion In Complex Experience: Creating Optimal Opportunities for learning

The human brain learns through experience.

The brain's first contact, with the world is through the senses. So learning must engage our senses of sight, hearing, smell, touch and movement .These are naturally stimulated by physical experiences the learner has with the world.

At one level then, orchestration means that teachers provide experiences that have learners interact with knowledge in ways that are concrete and physical. Teachers can help students identify physical

attributes of something by having students generate descriptions,(what size, color, dimensions),create diagrams (draw something out to represent a physical or sensory experience),and create models (what examples are there that use the same basic attributes)of something they need to master.

3. Active Processing of Experience : Creating optimal ways to Consolidate Learning

The brain is better at remembering things that are of meaning to the learner.

Active Processing of Experience means to fully capitalize on experience. There should be instant ongoing prompt feedback including practice and practice as well as continuous reflection and discussion that freezes and expand knowledge. This requires teacher and peer questioning and feedback in the process of designing, interpreting, or applying knowledge.

Students continually are required to think more intensely, identify specific characteristics and see relationships, analyze situations, think on their feet, apply specific and basic skills, develop goals and time lines, make critical decisions, and communicate their understanding.

How schools influence the brain is to address these five issues:

- ✓ Curriculum (what we teach)
- ✓ Instruction (how we teach it)
- ✓ **Environment (where we teach it)**

- ✓ Assessment (how we measure what we teach)
- ✓ Staff development (the change process)

In this paper, we are focusing on one factor
i.e., Environment

When a more responsive environment supports students, their behaviors change quickly.

Strategies for Achieving a Brain-Based Environment in Future ready Classrooms



Strategies for Achieving a Brain-Based Environment in Future ready Classrooms

➤ Ensure Relaxed Alertness

Teacher should create a Learning atmosphere where every student feel emotionally safe and Intellectually Encouraged. Students should be involved thoroughly in Classroom Activities.

e.g.

To Solve Problem of mathematics by using various formulae (i.e., Accepting Challenge)

Students should not have fear to get less score while solving this mathematics problem by using different method (which is apart from Mathematics Textbook.

➤ Ensure Orchestrated Immersion in Complex Experience

Teacher should make sure that every student get completely involved i.e., immersed in real world

experiences that complex and meaningful.

e.g. Project Based Learning – Bank transactions

➤ Ensure Active Processing of Experience

Teacher should make sure that every student should reflect on and make sense of their learning experiences through Analysis, Synthesis, and Evaluation.

e.g. Preparation of Reflective Journals Facilitate Group Discussion and Debates

➤ Acknowledgement of Value

Teacher should make sure that every student feels a sense of communal involvement. This can help everyone feel acceptable and rewarded.

e.g. Daily greetings, Notes of appreciation, and Occasional Celebrations go a long way in acknowledging the efforts of everyone in the Learning Community.

➤ Everyone feels cared for Teacher should make sure

that every student should be involved in a peer group, committee, or support team.

e.g. Involve students in appropriate activities as per their interests

➤ **Freedom of Expression**

Teacher should make sure that every student has a creative voice in the classroom. e.g.

Volunteering for a local non-profit, affecting change as a community activist, playing in a marching band, or being on a chess team.

Simply raising their hand in class and sharing their feelings without fear of criticism.

➤ **Encourage belonging**

Teacher should encourage a healthy level of belonging among students, parents, teachers, and committee members.

e.g. Providing many group learning experiences, team efforts, a variety of bonding activities.

➤ **Accountability**

When large groups' rules, policies, and norms are consistently enforced by common regulation, we feel accountable.

Teacher should make sure that every student should feel accountable by common regulations

e.g. Clear rules regarding Library use

➤ **Hope for success**

Teacher should make sure that every student should feel that there is hope in his or her endeavors. Hope is best achieved by progressing toward a goal.

e.g. An opportunity to make up for a missed exam due to illness Progress toward a high test score.

➤ **Organized Common Experiences**

Teacher should encourage to find ways to develop common ground at the school and community levels.

e.g. Assemblies, Sports competitions Celebration of festivals.

Physically Safe Environment

Teacher should make sure that physical safety is uppermost priority. Do not accept harassment, threats, or fighting. Teacher should encourage students to “use their words” and communicate verbally rather than physically.

School Management should create a safe environment to address social and emotional distress in which students can make mistakes without awkwardness.

e.g. CCTV Cameras should be available in School's Classrooms,
near Washrooms and everywhere in School Premises.

➤ **Trust in Others**

Teacher should make sure that every students feels safe to express themselves without any fear. e.g.

Student's Complaint Box should be available in School.

➤ **Consistency of Structure**

Teacher should make sure that have a set of rules, guidelines, and values. It should have predictable rituals & traditions that everyone participates in.

e.g. Birthdays, Inaugurations, and open houses are all opportunities to strengthen community support.

➤ **Provide think time and wait time**

Teacher should make sure that every student should get think time in Classroom. e.g.

Teacher should pause after asking question to student. This pause helps student to think before respond.

➤ **Offer Constructive Feedback**

Teacher should make sure that every student should get constructive feedback for their response./activity.

e.g. In Subject Science/Mathematics/Geography students are making mistakes while labelling the figures. Teacher should highlight the point where student did mistake.

Conclusion:

To achieve Brain-Based Environment in Future ready Classrooms seek assistance from the Government and Large Community.

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