



Brain Compatible Learning Strategies for Children with Attention Deficit Hyperactive Disorder and Learning Disabilities

KEYWORDS

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ABSTRACT

This thematic paper focuses its attention on the brain compatible learning strategies for children with attention deficit hyperactive disorder and learning disabilities. Attention Deficit Hyperactivity Disorder (ADHD) is a condition affecting children and adults that is characterized by problems with attention, impulsivity and over activity. Language is the base for communication. Reading, writing and spelling are is vital for effective communication. In early years, some children experience learning problems. If their learning problems are left unidentified it leads to learning disabilities. The children with ADHD behaviours like inattention, impulsivity and hyperactivity too have learning disabilities, particularly in language acquisition i.e., reading, writing and spelling. Identification of such children at the early years and implementation of effective interventional strategies will facilitate children to overcome their ADHD behaviours as well as their Learning disabilities. Brain compatible learning strategies plays an important role in the intervention programme of children with attention deficit hyperactive disorder and learning disabilities.

Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is a condition affecting children and adults that is characterized by problems with attention, impulsivity and over activity. According to DSM-IV (1994) classification, there are three sub types of ADHD – predominantly inattentive, predominantly hyperactive / impulsive and a combined type. The children with ADHD exhibit the characteristics such as inattentiveness, distraction, lack of sustained attention, hyperactivity and impulsivity. Other associated characteristics of ADHD are such as intellectual impairment, academic problems, deficit in cognitive and executive functioning, social and conducts problems.

Language is the base for communication. Reading, writing and spelling are is vital for effective communication. In early years, some children experience learning problems. If their learning problems are left unidentified it leads to learning disabilities. The children with ADHD behaviours like inattention, impulsivity and hyperactivity too have learning disabilities, particularly in language acquisition i.e., reading, writing and spelling. Identification of such children at the early years through effective interventional strategies can facilitate to overcome ADHD behaviours as well as their learning disability. Brain compatible learning strategies for children with attention deficit hyperactive disorder and learning disabilities are effective.

Brain Compatible Learning Strategies

An expansion of "brain-compatible," a term used by Leslie Hart to refer to education that fits well with the nature and function of the human brain as currently understood. The word "bodybrain" reminds one that the whole body is involved in the learning process. Hart (1983) called the brain "the organ of learning." He advocated learning more about the brain in order to design effective learning environments. Caine and Caine (1991) developed twelve principles that apply what we know about the function of the brain to teaching and learning. These principles were derived from an exploration of many disciplines and are viewed as a framework for thinking about teaching methodology. The principles are:

1. The brain is a complex adaptive system.
2. The brain is a social brain.
3. The search for meaning is innate.
4. The search for meaning occurs through patterning.
5. Emotions are critical to patterning.
6. Every brain simultaneously perceives and creates parts and wholes.
7. Learning involves both focused attention and peripheral attention.
8. Learning always involves conscious and unconscious processes.
9. We have at least two ways of organizing memory.
10. Learning is developmental.
11. Complex learning is enhanced by challenge and inhibited by threat.
12. Every brain is uniquely organized.

For complex learning to occur, Caine and Caine have identified three conditions:

1. Relaxed alertness - a low threat, high challenge state of mind
2. Orchestrated immersion - an multiple, complex, authentic experience
3. Active processing - making meaning through experience processing

These principles and the ideas generated are from a wide range of additional disciplines, including cognitive psychology, sociology, philosophy, education, technology, sports psychology, creativity research, and physics. As Caine and Caine explain, all of the principles are "the result of a cross-disciplinary search." The above principles are intended to provide a framework for "selecting the methodologies that will maximize learning and make teaching more effective and fulfilling." They may open doors for educators, increase teaching options, or serve as a guidepost to educators already working to implement brain-compatible teaching practices. But the body brain compatible linguistic programming is a technique which stemmed out from neuro linguistic programming. This technique has a greater impact in the education of children with disabilities. When one sense is impaired it should be compensated by other sense. Thus body brain compatible linguistic programming

integrates body and brain with language and brings behavioural changes and academic achievement. At this juncture, it is a need of an hour to undertake in depth research in the field body brain compatible strategies to overcome their disabilities. In teaching learning process this type of research gives a new outlook in our teaching learning process of children with attention deficit hyperactive disorder associated with specific learning disabilities.

The ten brain based learning suggestions for children with ADHD are given below. They are:

1. Stop eating sugar including drinking fruit juice. Cut down on bread and pasta, esp that is made with white processed flour.
2. Limit TV and video games which has lot of flashing lights
3. Keep a schedule and be consistent
4. Don't allow them to sit still. Their ability to do so is limited. Movement is essential for learning. It's a major brain based learning strategy.
5. Practice deep breathing. Simple form of meditation helps you a lot. Getting more oxygen to the brain is a brain based learning technique.
6. Exercise, play , run, skip helps them to be active
7. Stress reducing techniques such as cross right ankle over left and then give yourself a hug by crossing your arms across the body, left over right. It reduces the stress in the central nervous system.
8. Plenty of sleep to the kids with ADHD
9. Doing brain Gym activities
10. Eat more foods with Omega – 3 fatty acids like wild salmon etc. Take fish oil supplements. Omega fatty acids increase the production of dopamine just as Ritalin and other stimulant drugs do. Brain based learning includes what we feed our brains and how that food affects the brain's neurotransmitters. (MaryJo Wagner, 2008).

An important principle of brain compatible instruction is to get students involved and having them assume personal responsibility for their learning. One of the first requirements, in order for students to learn, is that they feel safe and supported. Recent research uses brain imaging technologies such as functional Magnetic Resonance Imaging (fMRI) to watch the living brain perform a variety of learning tasks (Shaywitz, 2003). As a result of this research, we know more about the learning process. These understandings about the brain and learning have resulted in many recommendations for educators to help students learn better (Shaywitz, 2003; Sousa, 2001). Instructional intervention for learning disabled includes direct instruction and cognitive instructional methods. The role of the cognitive system is to process, receive, retrieve and store information.

Classrooms should be thought of as learning communities. In a democratic learning community, individuals interact with each other in a variety of formats and for a variety of purposes. Currently, the largest percentage of instructional time in many classrooms is spent in total or whole group instruction. There are many exciting learning opportunities when students have an opportunity to work in pairs or small groups (Gregory & Chapman, 2002; Tomlinson, 1999). The acronym TAPS (Total group, Alone, Pairs, Small group) may be used as a reminder to include a variety of instructional groupings when planning instruction (Gregory & Chapman, 2002).

When children experience specific learning disabilities the ultimate result of this kind of disability or difficulty will bring dropouts, stagnation and wastage in our educational system. The remedial tasks may lead to Universalisation of Primary Education and Secondary Education, which is the target of the Ministry of Human Resource Development by 2010 A.D. Number of researches have been made on different aspects of specific learning disabilities abroad. In India, an in depth research in the field of specific learning disabilities is very scant. Though some of the Education Departments at University level focus on this most exciting term, a standard and proper action plan has to be taken to address this disability at primary stage itself. More researches, more publications and more public interests should be generated in this sub-area of education. The theoretical knowledge will not yield fruitful result. It is indispensable to have practical knowledge through in depth research in handling the specific learning disabled children. Hence, attempts are needed to take care of specific learning disabilities among children.

Conclusion

There are some children who experience attention deficit hyperactive disorder at primary stage. Attention deficit hyperactive disorder children also exhibit specific learning disabilities. It is essential to find out the possible ways and means of developing appropriate instructional strategies (cognitive, metacognitive, behavioural approaches) to overcome learning disabilities among children with attention deficit hyperactive disorder. As the field of specific learning difficulties / disabilities is in embryonic stage in India, the research conducted on different aspect of learning disabilities is very meagre and may not give clear cut ideas about this concept. Cognitive and metacognitive strategies effectiveness was studied by some researcher in India. Cognitive strategies and metacognitive strategies were also adopted to develop teaching competencies among inservice and preservice teachers. Few other studies also focused at the school level in learning different subjects. But research in the field of body brain compatible strategies is not explored at school level. That too the effectiveness of the body brain compatible learning strategies for children with multiple disabilities such as children with attention deficit hyperactive disorder with learning disabilities is a need of an hour.

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