The left brain vs the right brain how does it impact learning research paper exam...

Technology, Development



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#### Introduction

A human brain is typically divided into two halves, the left hemisphere and the right hemisphere. It is debated that the two hemispheres are responsible for different ways of thinking and cognitive processing. Hence, the dominance of either part of the brain, left or right, can distinctly affect the personality of a person. The aim of this paper is to understand the impact of left or right brain guided behaviour on learning abilities of a person. The paper is divided into three sections. The first section discusses some of the relevant researches in this field. The second section studies the impact of right- and left-brain on learning. The third section concludes the paper.

# Difference between Right-brain and Left-brain

A number of studies have been conducted in the direction and researchers differ in their approach and analysis of the subject. Researchers studying differences in left- and right-handers found that the two categories differ in brain organisation pattern and susceptibility to specific diseases (Goleman,

1985). Right-handers have speech controls in the left side of the brain, but left-handers display unusual randomness in location of their speech control. Also, occurrence of certain diseases like migraines and allergies are more in left-handers than right-handers. Goleman (1985) mentions a similar study conducted by Geschwind that proposes unusual brain organisation in left-handers is the result of alterations in developing brain of a foetus. The variation in testosterone hormone during pregnancy gives rise to brain cell migration and cause alternations in brain organisation. This effect or anomaly is more prominent in boys than in girls. Learning disorders like dyslexia are also common in left-handers due to atypical nature of brain dominance (Goelman 1985). But, left-handers can have some parts of the brain that are highly developed and produce geniuses in children.

In terms of learning ability, researchers have researchers have found that left-handers face higher rate of learning problems than right-handers (Goleman, 1985). In an attempt to understand the competencies of each hemisphere, it has been found that left hemisphere is more responsive, has high activity levels, is superior for spatial tasks and is more positive. Thus, right-handed people with better developed left brain possess better cognitive and learning abilities. However, it is also important to note that most of the mental processes require coordination of both the hemispheres of the brain. This finding was also supported by Wallis (2007) who proposed that concept of a split brain concept is entirely wrong and brain splits tasks but integrates them functionally. He also argued that neither hemisphere of the brain is all powerful to operate the thought processes autonomously. However, brain

disorders may cause split brain characteristics and the two hemispheres may function without coordination in such cases.

According to Bowers (2008), people use both the hemispheres, but display a distinctive preference for one over the other. He emphasises that right-brained people have more creative and aesthetic orientation than left-brained people, who are logical thinkers and analysers. Thus, the former has a propensity to begin with the larger picture before getting into the details of it and the latter tend to analyse available information first, put them in order and then make inferences.

Decosterd (2010) applied the concept of left and right brain in a leadership model that identifies ten qualities of an effective leader, four of right-brain ability, four of left-brain ability and two support behaviours. Thus, a leader's approach to handling difficult situations is guided by his left-or right-brain dominance. The four abilities that are associated with the left-brain are methodical, expressive, grounded and assertive (Decosterd, 2010). The four abilities associated with right-brain are strategic, innovative, transformational and engaging (Decosterd, 2010). Resilience and savvy are auxiliary traits that may support either hemisphere of the brain. Thus, the right-brain helps a leader in having a vision for the future, while the left-brain assists with learning, executing the vision and tending to day-to-day affairs.

## Impact of Right-brain and Left-brain on Learning

The study finds that the left-brain is more associated with learning process than right-brain. This inference is based on two premises. First, left-brain

positively influences the cognitive abilities of a person. This is because left-brain is associated with assertiveness, responsiveness, high activity levels, logical thinking and analytical skills. The speech centre is also located in the left side of the brain. Thus, left-brain facilitates cognitive and learning skills in a person. Second, left-brain people display lesser incidences of mental disorders. Right-brain is associated with higher levels of allergies, migraines and mental disorders like dyslexia. Not only this, right-brain is more responsible for depression in human beings. Left-brain is more positive displaying less chance of physical and mental illness.

Learning style of a person is also determined by the dominance of left- or right-brain. Left-brain people prefer gathering information, sequencing them, finding the logical order and abstracting lessons from them. It would enable a person to be methodical and base his opinions on well-analysed facts. On the other hand, learning style of a right-brain person is not as sequential as the left-brain people. They prefer qualitative analysis over quantitative analysis. They are visionaries and look at larger aspects of anything. They do not believe in joining smaller pieces to look at the broader picture. They work in just the opposite way. Thus, while left-brain can create intellectuals, right-brain dominance can create genius. The latter has the capability to create masterminds and architects. Both have significance in the real world.

The difference in learning style requires adopting different learning tools.

While a classroom training session can suffice for a left-brain person, it will not facilitate learning for a right-brain person. The latter would require a different approach to learning like storytelling and interactive learning.

However, it is important to highlight that people are not completely left-brained or right-brained, but partly both. The dominant hemisphere is displayed in their personality. Thus, collaborative left- and right-brain learning techniques can be utilised to achieve maximum effectiveness.

#### **Conclusion**

It is widely debated that the two hemispheres are responsible for different ways of thinking and behaving. The right-brain displays unusual brain organisation that is the result of alterations in developing brain of a foetus. In terms of learning ability, researchers have researchers have found that left-handers face higher rate of learning problems than right-handers. Thus, the studies conclude that the left-brain is more associated with learning process than right-brain for two reasons. First, left-brain positively influences the cognitive abilities of a person. Second, left-brain people display lesser incidences of mental disorders. Learning style of a person is also determined by the dominance of left- or right-brain. Hence, collaborative learning techniques targeting both the right-brain and the left-brain can be administered for better learning.

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