

# A STUDY ON BRAIN DOMINANCE OF SLOW LEARNERS STUDYING IN NORMAL SCHOOLS

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## ABSTRACT

Many researchers identify that each individual differ in their brain dominance. The present study investigated the brain dominance of slow learners studying in normal schools. The brain dominance tool constructed and validated by Mahendiran, P. (2018) has been used to collect data from the students. 1384 students were selected randomly in which 248 students were identified as slow learners by adapting the IQ test constructed and validated by Gnanadevan, R. (2018). The results of the analysis of data indicate that the hemispheric preference of slow learners is found to be right brain dominance. It further indicates that the hemispheric preference of average learners and high average learners is found to be left brain dominance.

**Keywords:** Brain Dominance, Slow Learners, Normal School Students

## INTRODUCTION

Education is a field of diversity. In a classroom, teacher is to facilitate successful learning opportunities for all learners; he or she must know the learner. The learner, of any age is a product of nature and nurture. Each child belonging to different culture, socio economic status, gender and age deserves to have an equal opportunity to be successful in school. Knowing each students' talents is essential for providing successful learning opportunities. Understanding learning differences will help educators facilitate structure and validate successful learning of every student.

By the turn of the 19<sup>th</sup> century many new theories emerged about how people learn. All the theories presented new way of thinking about the most important human neurological organ-the Brain. Human brain functions in many ways and acts as two brains which are right and left hemispheres. Hemisphericity refers to the concept that an individual processes information primarily through the left hemisphere or the right hemisphere or a combination of both (Saleh, 2001). In many cases an individual relies on one hemisphere of the brain more than the other. The idea that a person has a more dominant hemisphere has many further implications. Individual, occupational, cultural and educational preferences are all possible areas that are affected by brain hemisphericity (Iaccino, 1993).

Left side of the brain is the dominant hemisphere where language and speech are produced. The left hemisphere is concerned with logical and analytic skills. Left brain functions in a linear way. It likes clear logic presented without confusion of ambiguity or paradox.

Right and left brain function reveals that the two halves of the brain process information differently, and that both hemispheres are equally important. When a person develops dominance towards one side of their brain, they tend to have certain characteristic and areas of interest in common.

## SIGNIFICANCE OF THE STUDY

Brain dominance is considered as an important variable in the past few decades. A person's cognitive style influences a person's achievement in learning situations. Maharishi

et al. (2014) brain dominance is a psychological phenomenon which can explain how each hemisphere is contributing to the thinking and learning pattern of individuals. Regis X. and Annaraja, P. (2013) investigated a study on “Brain Dominance of Higher Secondary students”. The results of the study showed that majority of the higher secondary students have middle brain dominant users. The slow learners are the students with low cognitive ability compared with average students. Hence, it is very essential to know about the brain dominance of slow learner. A teacher or and educational researcher can predict the student’s interest and to some extent the achievement level if they have an idea of the brain’s preferences. Based on the above discussion the investigator intended to study on brain dominance of slow learners studying in normal schools.

### OBJECTIVES

- To find out the brain dominance of high school students studying in normal schools.
- To find out the brain dominance of slow learners with respect to different sub-samples of the study.

### METHODOLOGY

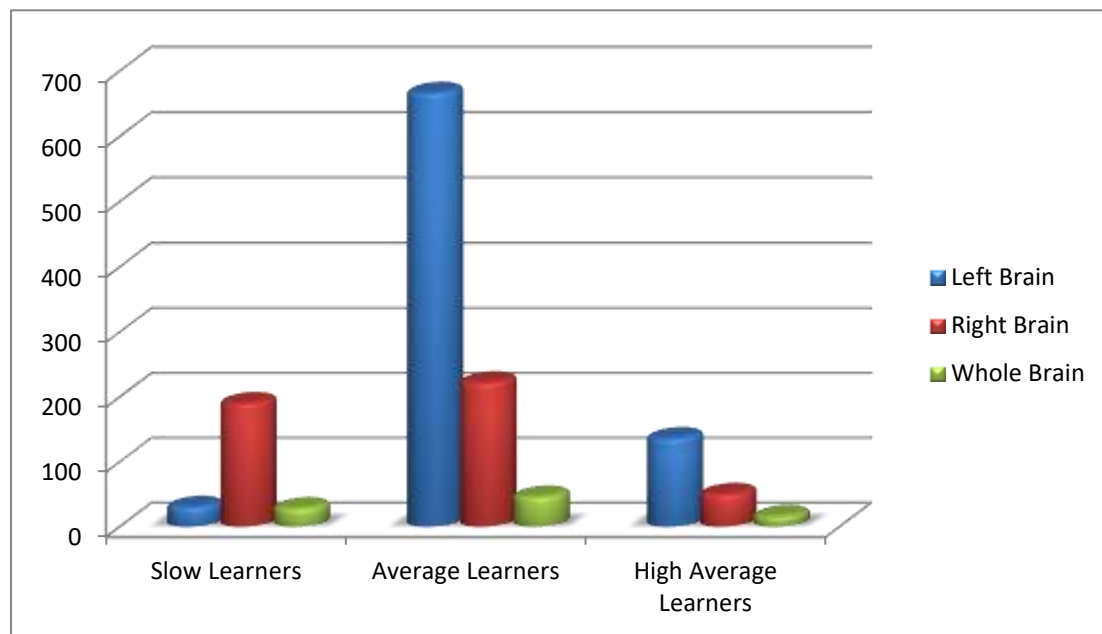
Survey method has been adopted for the present study. A personal data sheet and a brain dominance tool constructed and validated by Mahendiran, P. (2018) has been used for data collection. Data were collected from 1384 high school students studying in various schools of Cuddalore District of TamilNadu. Out of 1384 students 248 students were identified as slow learners based on the IQ test constructed and validated by Gnanadevan, R. (2018).

### RESULT and Discussion

The number and percentage has been calculated to find out the brain dominance of slow learners studying in different schools situated in Cuddalore District of TamilNadu. The result of the analysis is presented in table 1 and figure 1.

**TABLE 1**  
**NUMBER AND PERCENTAGE OF BRAIN DOMINANCE SCORES**

Category of Samples	Measures	Brain Dominance		
		Left Brain	Right Brain	Whole Brain
<b>Slow Learners</b> (N=248)	N	30	190	28
	%	12.1	76.6	11.3
<b>Average Learners</b> (N=934)	N	666	222	46
	%	71.3	23.8	4.9
<b>High Average Learners</b> (N=202)	N	136	50	16
	%	67.3	24.8	7.9



**FIGURE 1 SHOWING THE BRAIN DOMINANCE OF STUDENTS**

The table 1 shows the number and percentage value of hemispheric preference scores of slow learners. It indicate that the majorities of (76.6%) slow learners belongs to category of right brain dominance and only 12.1% and 11.3% of slow learners belongs to the category of left brain and whole brain dominance respectively. Hence, it is inferred that the most preferred hemispheric preference of slow learners is found to be right brain dominance.

To compare the brain dominance of slow learners with average and high average learners the number and percentage of average and high average learners also has been calculated it is also presented in table 1 and figure 1.

The table 1 shows the number and percentage value of hemispheric preference scores of average learners. It indicate that the majorities of (71.3%) average learners belongs to category of left brain dominance and only 23.8% and 4.9% of average learners belongs to the category of right brain and whole brain dominance respectively. Hence, it is inferred that the most preferred hemispheric preference of average learners is found to be left brain dominance.

The table 1 shows the number and percentage value of hemispheric preference scores of high average learners. It indicate that the majorities of (67.3%) high average learners belongs to category of left brain dominance and only 24.8% and 7.9% of high average learners belongs to the category of right brain and whole brain dominance respectively. Hence, it is inferred that the most preferred hemispheric preference of high average learners is found to be left brain dominance.

A more detailed analysis has been made by calculating the mean and standard deviation of the brain dominance scores of the slow learners with respect to different sub samples of the study. The result of the analysis is presented in table 2.

**TABLE 2**  
**MEAN AND STANDARD DEVIATION OF BRAIN DOMINANCE SCORES OF SLOW LEARNERS STUDENTS**

Sub samples	Measures	Brain Dominance		
		Left Brain	Right Brain	Whole Brain
<b>Gender</b>				
Male (N= 120)	Mean	15.40	19.00	17.60
	SD	4.59	6.36	7.47
	N	20	90	10
Female (N= 128)	Mean	17.80	18.78	15.33
	SD	4.34	4.74	9.40
	N	10	100	18
<b>School Management</b>				
Government (N= 76)	Mean	16.00	19.29	15.00
	SD	4.61	4.63	1.15
	N	4	68	4
Govt. Aided (N= 172)	Mean	16.23	18.65	16.33
	SD	4.66	6.01	9.39
	N	26	122	24
<b>Student Locality</b>				
Rural (N= 142)	Mean	15.33	19.48	12.57
	SD	4.36	5.06	8.85
	N	24	104	14
Urban (N= 106)	Mean	19.66	18.16	19.71
	SD	4.03	6.04	7.14
	N	6	86	14
<b>School Locality</b>				
Rural (N= 94)	Mean	16.66	18.35	12.28
	SD	4.95	5.58	9.10
	N	24	56	14
Urban (N= 154)	Mean	14.33	19.10	20.00
	SD	1.86	5.54	6.46
	N	6	134	14
<b>Type of Family</b>				
Nuclear Family (N= 142)	Mean	16.77	19.05	16.75
	SD	5.44	6.03	8.63
	N	18	108	16
Joint Family (N= 106)	Mean	15.33	18.65	15.33
	SD	2.87	4.87	9.07
	N	12	82	12
<b>Socio Economic Status</b>				
Upper (N=40)	Mean	17.00	19.90	18.50
	SD	2.21	6.11	9.24
	N	10	22	8
Middle (N=112)	Mean	18.00	17.68	15.00
	SD	4.78	5.61	8.61
	N	8	96	8
Lower (N=96)	Mean	14.33	20.16	15.33
	SD	5.48	4.99	8.83
	N	12	72	12

The mean value of above table indicates that the hemispheric preference of slow learners with respect to all the sub-samples of the study is found to be right brain dominance except the students residing at urban area and also studied urban school.

### FINDINGS

1. The hemispheric preference of slow learners is found to be right brain dominance. But the hemispheric preference of average and high average learners is found to be left brain dominance.
2. The hemispheric preference of slow learners with respect to different sub-samples of the study is found to be right brain dominance except the students residing at urban and school located at urban area and it is found to be whole brain dominance.

### CONCLUSION

The right hemisphere is the centre for visual, rhythm, artistic and creative abilities. When a person is right brain dominant they are thought of as the dreamers, the artist and the musicians of the worlds. They do have similar characteristics and they tend to hold similar occupations. The left hemisphere is concerned with logical and analytical skills and it function in a linear way. The present study indicate that the hemisphere preference of slow learners is found to be right brain dominance but the average and high average learners is found to be left brain dominance. It reveals that when compared with the slow learners, high average learners are having clear logic presentation without any confusion of ambiguity or paradox in their learning and academic performance. Hence the following steps should be taken to make students left brained which helps in the logical and analytical. The teachers should arrange the practices in processing speed, think logically, as well as diligence and memory related activities which may help to improve left brain dominance. Our Indian curriculum is focusing on left brain dominance and as well as the result we failed to incorporate both right and the left brain at once in our curriculum to establish the quality educational system.

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