



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Hemisphere Dominance Among B.Ed. Teacher Trainees

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Abstract

The present study aimed at exploring the Hemisphere Dominance among B.Ed. Teacher Trainees. It is to understand what hemisphere B.Ed. teacher trainees prefer to use while learning and thinking. It is important to understand the brain preferences among teacher trainees to develop ability to use whole brain for information processing in them. It was found that majority of teacher trainees had dominance of integrated hemisphericity, average number of teacher trainees showed right hemisphere dominance where as a fewer teacher trainees showed dominance of left hemisphere. It was identified that B.Ed. teacher trainees do not differ significantly in their preference of hemisphere dominance on the basis of gender. Both boys and girls were found to demonstrate an average level of right hemisphericity, a low level of left hemisphericity and a high level of integrated hemisphericity. It is concluded that B.Ed. teacher trainees irrespective of their gender had wider exploration to content and skills. They had creativity and innovation in their learning and thinking.

Keywords: Hemisphere Dominance, Left Hemisphericity, Right Hemisphericity, Integrated Hemisphericity, Learning and Thinking.

Introduction

Every learner is unique. They differ in their perceptions, thoughts, skills, abilities, attitudes towards certain things, aptitudes, etc. They use different techniques to approach information and also process it differently. It determines their learning and thinking styles. How a learner grasps and process information depends on what part of brain he is using. The human brain is divided into two halves- right brain and left brain. These two halves are known as left hemisphere and right hemisphere. Both the hemisphere differs in its cognitive functioning. This specialization of brain hemispheres to perform specific cognitive functions is known as lateralization of hemisphere. Generally, people rely more on one hemisphere. It means that they prefer to use either one hemisphere than other or both the hemispheres to process the information.

There is need to train teachers who can identify and understand learners' style of brain processing. It is important to meet the need of diverse learners. It also helps in promoting learners to use maximum of their brain to process information.

In many studies, it was observed that the hemisphere dominance has role in learners' academic achievement. As both the hemispheres are specified in their functioning. So it becomes important that instead of using only one hemisphere more than that of the other, it is better to use both the hemisphere i.e. whole brain. It will help learners in approaching the information with the whole brain and improve their academics. It is also important to make learners more skilled, competent and to develop their abilities to the fullest. That's why it becomes crucial for a teacher to know brain preferences and abilities of their students. It necessitates preparing teachers who uses their whole brain and able to develop adequate learning and thinking abilities in learners. Therefore, present study aims at exploring brain preferences among B.Ed. teacher trainees.

Sahni & Magan (2022), Suresh, et al. (2020), Alghraibeh & Alshalawi (2019) and Keat, et al. (2016) found that majority of students had dominance of left hemisphere. Nithyananthm & Regis (2021), Taifur, et al. (2021) and Abirami (2018) observed middle brain dominance in students. Nithyananthm & Regis (2021) analyzed that majority of students had either left or middle brain dominance but a few number of students had given preferences to right hemisphere. Singh, P. (2015) identified domination of right brain among students.

Objectives

- To assess the hemisphere dominance among B.Ed. teacher trainees.
- To find out the level of hemisphere dominance among B.Ed. teacher trainees.
- To compare boys and girls of B.Ed. in relation to their hemisphere dominance.

Hypothesis

- There is no significant difference between boys and girls of B.Ed. in relation to their hemisphere dominance.

Sample

The present study consisted of 64 B.Ed. teacher trainees as a sample. The sample was selected randomly from the M.J.P. Rohilkhand University, Bareilly. Researcher employed simple random sampling technique to select the sample.

Tool

Scale of Learning and Thinking (SOLAT) developed by Dr. D. Venkataraman (2011) was used to assess the Hemisphere Dominance of B.Ed. teacher trainees.

Discussion and Findings

To assess the hemisphere dominance of B.Ed. teacher trainees, researcher employed percentage analysis.

Table 1: Type of Hemisphere Dominance of B.Ed. Teacher Trainees

S.No.	Type of Hemisphere Dominance	Number	Percentage
1.	Right Hemisphericity	22	34.38
2.	Left Hemisphericity	05	7.81
3.	Integrated Hemisphericity	37	57.81
Total		64	100%

Table 1 depicts that the majority of the B.Ed. teacher trainees possesses integrated hemisphericity while a least number of trainees were having left hemisphericity. It means that most of the B.Ed. teacher trainees make use of both left and right hemisphere to process information. They prefer to think creatively and intellectually. Similar finding was obtained by Nithyananthm & Regis (2021), Taifur, et al. (2021) and Abirami (2018), they observed middle brain dominance in students. Contradictory results were obtained by Sahni & Magan (2022), Suresh, et al. (2020), Alghraibeh & Alshalawi (2019), Keat, et al. (2016) and Singh (2015). Sahni & Magan (2022), Suresh, et al. (2020), Alghraibeh & Alshalawi (2019), and Keat, et al. (2016) found dominance of left brain while Singh (2015) found right brain dominance among students.

To know the level of hemisphere dominance of B.Ed. teacher trainees percentage analysis was performed.

Table 2: Level of Hemisphere dominance of B.Ed. Teacher Trainees

Dimension of Hemisphere	Low level		Average level		High Level	
	Number	Percentage	Number	Percentage	Number	Percentage
Right Hemisphere	27	42.19	35	54.69	2	3.13
Left Hemisphere	38	59.38	26	40.63	0	0
Integrated Hemisphere	0	0	23	35.94	41	64.06

Table 2 shows distribution of B.Ed. teacher trainees on different levels of hemisphere dominance. From the table it was analyzed that the majority of B.Ed. students possesses average level of right hemisphere dominance whereas least number of students were having high level of right hemisphericity. In case of left hemisphere, majority of students showed a low level of left hemisphere while none of the students had high level of left hemisphericity. It was observed that a higher percentage of B.Ed. students i.e. 64.06% had high level of integrated hemisphere. It means that B.Ed. teacher trainees had high level of learning and thinking. They are more aware of their style of information processing. They are well known of when and how to use

their brain according to the problem. They are using both deductive and inductive approach to learn and think.

To compare boys and girls of B.Ed. with respect to their hemisphere dominance, researcher employed mean analysis and t-test.

Table 3: Comparison of hemisphere dominance of B.Ed. Teacher Trainees with respect to Gender

Hemisphere Dominance	Boys (N = 15)		Girls (N = 49)		t
	Mean	S.D.	Mean	S.D.	
Right Hemisphere	14.6	8.77	13.39	6.44	0.58
Left Hemisphere	8.13	5.29	7.88	4.83	0.18
Integrated Hemisphere	21.4	9.43	23.76	7.88	0.97

Table 3 demonstrates the comparison between hemisphere dominance of boys and girls of B.Ed. It was revealed that there is no significant difference in the level of hemisphere dominance of boys and girls of B.Ed. It suggests that both boys and girls were giving similar preferences in using hemisphere to process information. On interpreting mean it was identified that both boys and girls were showing average level of right hemisphericity. In case of left hemisphere both boys and girls shared low level of left hemisphericity. In relation to integrated hemisphere, both boys and girls were showing a high level of hemisphericity. It might be because nowadays both girls and boys have similar opportunity to explore skills and express. They are possessing feelings of self-confidence and creativity.

Conclusion

The present study aimed at exploring the type and level of hemisphere dominance among B.Ed. teacher trainees. It was observed that majority of the B.Ed. teacher trainees possess a high level of integrated hemisphere. It is concluded by the researcher that B.Ed. teacher trainees prefer to use whole brain instead of giving preference to one hemisphere over the other to approach and process the information. An average number of B.Ed. trainees showed dominance of right hemisphericity, most of them were showing average level of right hemisphericity. A least number of B.Ed. teacher trainees were giving preference to left hemisphere. In case left hemisphere, majority of students showed low level of left hemisphericity while none of student had given preference to high level of left hemisphere. It is concluded that B.Ed. teacher trainees give less preference to verbal expression and memory. They tend to prefer creative thinking and representation over analytical thinking.

Educational Implication

Learning and thinking styles of an individual depends on preferences they given to the use of left or right or both the hemispheres of the brain in doing their learning and other work. It is important to develop appropriate learning and thinking styles in the students at appropriate age. Therefore it is necessary to train teachers who have proper learning and thinking styles. There is need of teachers who are able to understand and encourage learners to have appropriate styles of learning and thinking. In the study majority of B.Ed. teacher trainees were found to approach integrated hemisphere to process information and a least number had left hemisphere dominance. It is very important develop analytical thinking skills along with creativity among B.Ed. teacher trainees. They should be given with the training in analysis and logical reasoning. Discussion can be arranged to encourage use of rational thinking and language expression in them.

References

- Abirami, M.A. (2018). Brain dominance, emotional intelligence and leadership traits of college students in Tirunelveli, Madurai and Virudhunagar districts.[Doctoral thesis, ManonmaniamSundaranar University].Shodhganga : a reservoir of Indian theses @ INFLIBNET. <http://hdl.handle.net/10603/248619>
- Alghraibeh, A. M., & Alshalawi, B. N. (2019). Brian Dominance: Whole Brain Theory Based Brain Quadrants among King Saud University Students. Open Access Library Journal, 6(3), 1-10. <https://doi.org/10.4236/oalib.1105293>.
- Belecina, R. R. & Ocampo, J. M. (2019). Brain Dominance, Learning Styles, and Mathematics Performance of Pre-Service Mathematics Teachers. ATIKAN: JurnalKajianPendidikan, 9(1), 1-14. https://www.researchgate.net/publication/340543970_Brain_Dominance_Learning_Styles_and_Mathematics_Performance_of_Pre-Service_Mathematics_Teachers
- Keat, T., Kumor, V., Shaki, M., Akmal, N. & Xuan, L. (2016). The relationship between brain dominance and academic performance- Across-sectional study. British Journal of medicine and medical research, 13(6), 1-9. <https://doi.org/10.9734/BJMMR/2016/22881>
- Kiruba, J. (2016). Leadership behaviour of B.Ed. Trainees. International Journal of Research – Granthaalayah, 4(12) 68-72. <https://doi.org/10.5281/zenodo.231106>
- Nithyananthm, V. & Regis, X.V. (2021).A Study on left-brain dominance of the higher secondary students.The Eurasia Proceedings of Educational & Social Sciences, 21, 48-54. <http://www.epess.net/en/download/article-file/2147545>
- Sahni, H. &Magan, A. (2022).A comparative study on brain dominance and achievement motivation in homosexual and heterosexual young adults.The International Journal of Indian Psychology, 10(1), 253-272. <https://doi.org/10.25215/1001.023>

- Singh, P. (2015). Interaction effect of brain hemispheric dominance and study on academic achievement in mathematics. *International journal of applied research*, 1(11), 746-750. <https://doi.org/10.21275/v4i11.20111502>
- Suresh, V. C., Poornima, C., Anjana, K. K. & Debata, I. (2020). Assessment of brain dominance and its correlation with academic achievement among medical students: A cross-sectional study. *Archives of Mental Health*, 21(1) 25-29. https://doi.org/10.4103/AMH.AMH_3_20
- Taifour, A. M., Khasawneh, A. S., Al-Kazaleh, W. M., Alshorman, S. A., Eisa, H. M. B., Khasawneh, G. M., & Khasawneh, M. S. (2021). The common patterns of brain dominance and its effects on the emotional intelligence among the faculty of Physical Education and Sport Science students at the Hashemite University. *International Journal of Human Movement and Sports Sciences*, 9(3), 503 – 512. <https://doi.org/10.13189/saj.2021.090316>
- Venkataraman, D. (2011). *Style of Learning and Thinking (SOLAT)*. Psy-Com Services, New Delhi.

