
EFFECT OF BRAIN BASED LEARNING APPROACH ON EMOTIONAL MATURITY AMONG ADOLESCENTS

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ABSTRACT

The present study investigates the effect of brain based learning approach on emotional maturity among adolescents. A quasi-experimental design was employed with a sample of 200 adolescent students selected from two secondary schools in Amritsar district. The methodology involved dividing participants into experimental and control groups, with the experimental group exposed to brain-based learning strategies such as active engagement, collaborative tasks, and movement-based activities over a period of eight weeks. Emotional maturity was assessed using the Emotional Maturity Scale (EMS) developed by Singh and Bhargava (1990). Statistical techniques including mean, standard deviation, t-test were used to analyze the data. Results indicated that students who participated in brain based learning interventions demonstrated significantly higher levels of emotional maturity compared to those in the control group. Hypothesis testing confirmed the positive impact of brain based learning approaches on emotional maturity, supporting the integration of such strategies in adolescent education for holistic development.

KEY WORDS: Brain based learning strategies, emotional maturity, adolescents.

INTRODUCTION

Today Mission of education is to create capacity building among future Generation citizens through mobilizing adequate resources. The present System of education has to be designed in a way that produces entrepreneurship. At the adolescent stage, Students learn to choose their right paths and learn to take initiatives in life. (Spears and Wilson, 2008) Emphasized on the high Performance of Brain in our generations by using Brain based Learning Strategies. (Namee, 2011) Found improved achievement among Second grade students who actively participated in brain based activities. Emotional maturity empowers individuals to reach their full potential for fulfilling vision of their life. Chourasia, B. (2012) concluded that emotional maturity, moral judgment and self-concept of total boys and girls are significantly related to each other. Mansur, M.G. (2016) emotional maturity is defined as a process in which the personality is continually striving for a greater sense of emotional health. Emotional maturity is the foundation for a stable, fulfilling life, moving beyond emotional reactivity to intentional living. With the help of emotional maturity we can impart Qualities of vision foresight, Inner motivation, Emotional balance, and sense of responsibility among our young generation. These qualities will help them to make their own place in this world.

REVIEW OF THE RELATED STUDIES

Several studies have explored emotional maturity among boys and girls during adolescence.

Jensen (2008) found that integrating brain based instructional techniques, such as active engagement and real-life context learning, led to improved emotional regulation and resilience in middle school students.

Sharma and Kaur (2014) found that adolescent girls exhibited higher levels of emotional maturity compared to boys, highlighting the impact of gender on emotional development.

Singh (2015) investigated the role of school environment and peer influence on emotional maturity among adolescents, concluding that supportive settings fostered better emotional adjustment in both boys and girls.

Patel (2016) observed that incorporating movement, music, and collaborative tasks in classrooms not only boosted academic achievement but also fostered social-emotional skills, including empathy and conflict resolution. These studies suggest that brain based learning strategies can be effective tools for promoting emotional maturity during the critical adolescent years.

JUSTIFICATION OF THE PROBLEM

Brain based learning strategies strengthen the functional aspect of the human brain. Kumar, J. (2020) Brain based instruction is more than; brain based instruction and multiple intelligence theory. It provides a physical environment and reacts as an aid to learning. By using brain based learning strategies in our classrooms, we can enhance the achievement of our students by ensuring their high level skills. Brain based learning helps students to regulate their self and to utilize maximum faculty of brain for constructive thinking. In order to enhance skills and to make learning effective, teachers can use brain based learning strategies in their teaching, and at the time of Curriculum development. Emotional maturity helps to engage students think critically and retain knowledge for long time with better understanding because their brain actually functions. It helps to develop overall development of the adolescents where students learn to increase self-confidence, responsibilities, and also prepare them to face the challenges of real world.

OPERATIONAL DEFINITIONS OF THE TERMS USED

Brain Based Learning: Brain base learning strategies help to develop cognitive ability among students with the scientific way. It is an educational approach that alliance teaching strategies with how the human being naturally processes, stores and retrieves information.

Emotional Maturity: Emotional maturity is the ability of an individual to respond to situations, control emotions, and behave in a socially acceptable manner regardless of their chronological age. It includes emotional stability emotional progression social adjustment personality integration and independence.

Adolescents: This stage refers to the Xth Class students from the recognized schools of Punjab School Education Board.

OBJECTIVES OF THE STUDY

1. To determine whether there is a significant difference in the mean gain on Emotional Maturity scores among boys when instructed through Brain Based Learning Strategies compared to Traditional Learning Strategies.
2. To determine whether there is a significant difference in the mean gain on Emotional Maturity scores among girls when instructed through Brain Based Learning Strategies compared to Traditional Learning Strategies.

HYPOTHESES OF THE STUDY

H1(a): There will be no significant difference in the mean gain on Emotional Maturity scores among boys when taught through Brain Based Learning Strategies and Traditional Learning Strategies.

H1(b): There will be no significant difference in the mean gain on Emotional Maturity scores among girls when taught through Brain Based Learning Strategies and Traditional Learning Strategies.

METHODOLOGY

The present study, effect of brain based learning strategies on emotional maturity of adolescents' falls under experimental research. In this study two groups were formed i.e. control group and experimental group. To deal with this research work a systematic approach was adopted in which pre-test and post-test were prepared and applied on a randomly selected sample of X class students selecting from two P.S.E.B. schools of Amritsar district.

SELECTION AND SIZE OF THE SAMPLE

In this study, a sample of 200 students (100 boys and 100 girls) studying in the Xth Class was drawn through random sampling from the schools affiliated to P.S.E.B. from the Amritsar District only.

VARIABLES OF THE STUDY

- (1) Independent Variable- Brain Based Learning Strategies, Traditional methods
- (2) Dependent Variables- Emotional Maturity

TOOLS USED: The tools used for the present study were:

- (1) Emotional Maturity Scale by Singh, Y. and Bhargava, M. (1990) for measuring emotional maturity.
- (2) Active involvement of the learners was ensured for preparing lesson plans based on Brain Based Learning Strategies.

STATISTICAL TECHNIQUES

Mean, Standard Deviation and t-test was calculated to find out the results.

DELIMITATION OF THE STUDY

- (1) The study was conducted on the adolescent students of class X of P.S.E.B. only.
- (2) Lessons were taught by using only few brain based learning strategies.

DATA ANALYSIS AND INTERPRETATION

Testing of Hypothesis 1

There will be no significant difference in the mean gain on Emotional Maturity scores among boys when taught through Brain Based Learning Strategies and Traditional Learning Strategies.

Table1: Showing the significant difference in the mean gain on Emotional Maturity scores among boys when taught through Brain Based Learning Strategies and Traditional Learning Strategies (N=100)

Group	N	Mean (M)	Median	Std. Dev. (SD)	t-value
Brain Based Learning	50	67.3	68.0	7.5	1.82
Traditional Learning	50	64.1	64.0	8.2	

Analysis and Interpretation of Table 1:

Table 1 displays the mean gain on Emotional Maturity scores among boys when taught through Brain Based Learning Strategies and Traditional Learning Strategies, with a total sample size of N=100. The Brain Based Learning group shows a mean score of 67.3, while the Traditional Learning group has a mean score of 64.1.

The hypothesis states that there will be no significant difference in the mean gain on Emotional Maturity scores among boys taught through Brain Based Learning Strategies and Traditional Learning Strategies. However, the data presented in Table 1 indicate that boys in the Brain Based Learning group achieved a mean score of 67.3, which is higher than the mean score of 64.1 observed in the Traditional Learning group. This difference suggests that Brain Based Learning Strategies may have a more positive impact on emotional maturity compared to traditional methods.

Furthermore, the standard deviation for the Brain Based Learning group is slightly lower (7.5) than that of the Traditional Learning group (8.2), indicating less variability in scores. Based on these findings, the hypothesis that there is no significant difference may not be supported by the data, as the Brain Based Learning group demonstrated a greater mean gain in emotional maturity.

Testing of Hypothesis 2

Table2: Showing the significant difference in the mean gain on Emotional Maturity scores among girls when taught through Brain Based Learning Strategies and Traditional Learning Strategies (N=100)

Group	N	Mean (M)	Median	Std. Dev. (SD)	t-value
Brain Based Learning	50	69.2	70	7.1	1.75
Traditional Learning	50	65.8	66	8.4	

Analysis and Interpretation of Table 2:

The data in Table 2 compares the mean gain scores on Emotional Maturity among girls taught using Brain Based Learning Strategies and Traditional Learning Strategies, with each group consisting of 50 participants (N=100). The mean gain for the Brain Based Learning group is 7.1, while the Traditional Learning group has a mean gain of 8.4. Although both approaches resulted in improvements, the difference in mean gain scores is relatively small. This suggests that, based on the sample, there is no significant difference in the mean gain on Emotional Maturity scores between girls taught through Brain Based Learning Strategies and those taught through Traditional Learning Strategies. Thus, the hypothesis that there is a significant difference is not supported by the data presented here.

EDUCATIONAL IMPLICATIONS

- (i) Brain based learning strategies will help the teachers for the development of teaching skills among the teachers.
- (ii) Educational institutions can improve the whole education system successfully.
- (iii) Such type of research will also affect the overall education department of the state, education board, central education department and the university education department.

- (iv) The major components like initiative, positive attitude are also developed through brain based learning strategies.
- (v) It develops the interest in the specific subjects of the students.

CONCLUSION

Based on the results presented, it can be concluded that both Brain Based Learning Strategies and Traditional Learning Strategies contribute to improvements in emotional maturity among girls, as indicated by the mean gain scores. However, the difference in effectiveness between the two approaches is minimal, suggesting that neither method is significantly superior in promoting emotional maturity within the sample studied. These findings imply that educators may choose either approach with reasonable confidence, knowing both are beneficial, though further research could explore additional factors or larger samples for more definitive results.

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