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INTRODUCTION

REVIEW OF LITERATURE

NEED/IMPORTANCE OF THE STUDY

STATEMENT OF THE PROBLEM

OBJECTIVES

HYPOTHESES

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

FINDINGS

RECOMMENDATIONS/SUGGESTIONS

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ACKNOWLEDGMENTS

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CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

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- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

IMPACT OF BRAIN-COMPATIBLE LEARNING APPROACH ON ACADEMIC ACHIEVEMENT IN BUSINESS STUDIES IN RELATION TO THEIR LEVEL OF ASPIRATION

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ABSTRACT

Brain-Compatible learning approach holds the idea that learning activities are more effective when they occur in an environment that is compatible with the learning process of brain. Brain based education centers around the principle that learning is more effective if the learner is in a natural, challenging, yet non-threatening environment. Brain based learning is not a method rather it is an approach which provides us to think the structure of brain before planning the teaching strategies for the students. Brain compatible learning is a meta concept that includes an eclectic mix of various techniques like Cooperative group learning, Experiential learning, Role playing, Gaming, Project assignments & Brain storming etc.. The present study attempts to investigate the effect of brain-compatible learning on academic achievement in business studies. It is an experimental study designed as a pre-test post-test control group model. The sample consists of XII class students with two intact class divisions one as experimental group and other as control group. During the research process experimental group was taught through brain-compatible learning approach and control group was administered traditional teaching approach. Analysis of post test revealed a significant impact on achievement of the students taught through brain-compatible learning approach.

KEYWORDS

brain-compatible learing approach, academic achievement.

INTRODUCTION

Education is a dynamic process, which always changes in response to the requirements of the society. The basic idea behind education was confined to 3R's i.e. reading, writing and arithmetic. No doubt this idea will always continue to be just that but now the situations demand learning to be more flexible, experiential and collaborative. According to HRD ministry's survey students spend nearly 45% - 55% of their total time in passive activity like listening to teacher or taking dictation or notes whereas 20% – 32% time is spent in active learning that includes studying on their own, peer learning, answering, seeking clarifications and preparing assignments. But due to increasing complexities of the system and increasing pressure of changing global environment we need such an education system in which the students can learn in a better way with their active involvement and interest and at the same time they are in a position to apply that knowledge. Education and society are symbiotic to each other. With the changes in society the model of schooling is also changing. This transformation creates chaos and confusion on one hand and offers immense opportunities and new possibilities on the other. Tapping the potential of an individual to the maximum has been one of the basic aims of education. Efforts are being made to make the teaching-learning process most effective.

In the information era information is available everywhere and in multiple forms; but traditional schooling is not giving ample opportunities to the students to fully exploit the available sources of information. To maximize learning opportunities for each student, it would be highly desirable for all schools and teachers to make the teaching-learning environment compatible with the way the brain learns.

Learning is the process of building neural networks (Wolfe,2000). Neuron is the learning unit of the brain. Each neuron is composed of a cell body, axon, axon-terminal and dendrites. The axon terminals of one neuron are connected to the dendrites of the other. The axon terminals pass the message through the cell body to the dendrites of the other neuron. The message is transmitted from one neuron to the other through an electric chemical process by crossing the synaptic gap and thus a connection is formed. The dendrite receives the message if information is stimulating enough. If the connection so formed is used repeatedly it became stronger and if they are not used or practiced neuron pruning takes place. The more the number of neural connections more is the learning. Connections are formed if the information reaches the brain logically and related to real life and past experiences or previous knowledge of the learner. So for information to be learnt well it must be presented logically with active involvement of the brain.

Brain compatible learning approach suggests the application of the learning system of brain to the field of education. It is a multi disciplinary approach which not only includes education and neuroscience but it includes the theory of knowledge from different disciplines like psychology, sociology, neuroscience, biology and education etc. It is a concept which tells how fusion of the common sense, human experiences and brain researches produce useful tools and principles for classroom environment. Acc. to **Jensen(2000)** "Brain-based education is best understood in three words: engagement, strategies, and principles. Brain-based education is the engagement of strategies based on principles derived from an understanding of the brain." He further adds that brain-based education is about the professionalism of knowing why one strategy is used for the other. It is probably the collected, refined wisdom. But it should not be promoted as exclusive discipline for schools to consider. It does not give us a map to follow. But it provides us to think the structure of our brain at the stage of making decision.

The idea for brain based learning is that if the environment is conducive to natural learning then learning will not only take place, but flourish.

Caine & Caine(2000), have explained three phases of teaching-learning process: orchestrated immersion, relaxed alertness and active processing. It signifies the importance of learning environment which can provide non-threatening yet challenging experiences to the students so that they can be involved and form appropriate connections by allowing them to consolidate and internalize information.

Caine & Caine (1990), have given twelve principles of brain-compatible learning. These principles provide a general theoretical foundation for brain-compatible learning. These principles when applied to education, help the teachers and administrators to reconceptualize teaching by taking them out of traditional frames of reference and guiding them in defining and selecting appropriate programmes and methodologies.

The principles also suggest that the physical health of the child – the amount of sleep, the nutrition-affects the brain. An adolescent who does not get enough sleep one night will not absorb much new information the next day. Fatigue will affect the brain's memory. Moods and emotional level is also equally important.

Brain compatible learning approach includes a logical mix of different strategies like Cooperative group learning, Experiential learning, Role playing, Gaming, Project assignments, Creative and Critical thinking etc.

The present study focused on the Effectiveness of brain-compatible learning on achievement in Business-Studies. So the study was designed in the form of a controlled experiment.

VARIABLES OF THE STUDY

The study used various types of variables. It used brain-compatible learning and traditional method of teaching as two levels of independent variable, Level of Aspiration as another independent variable and achievement in business studies as dependent variable. In the study, the researchers controlled the following variables:

- Initial status of pupils with reference to achievement in business studies measured by a pre-test.
- Styles of learning and thinking

- Study habits
- Verbal intelligence and
- Socio-economic status of the pupils

The investigator reviewed the related studies by different researchers like Sini,S. &Kumar P.K. (2008), Dilek ERDURAN AVCI and Rahmi YAGBASAN (2006), Ozden and Gultekin (2008) and many more which studied the effectiveness of Brain-Compatible learning and some other studies for creating ideal class room environment. These studies found Brain-Compatible Learning to be effective in improving students' academic achievement. Considering the results of various studies the researchers set the following objective and hypothesis for the study under consideration.

OBJECTIVES OF THE STUDY

Keeping in view the Statement of the Problem and by reviewing the related literature the researcher has framed the following objectives:

To compare adjusted mean scores of achievement in Business Studies of senior secondary school students taught through Brain-Compatible Learning approach and Conventional approach in relation to their level of aspiration.

- To compare the main effect of instructional approach (Brain-Compatible Learning approach and Conventional approach) on adjusted mean scores of achievement in Business Studies of senior secondary school students in relation to their level of aspiration.
- To compare the main effect of level of aspiration on adjusted mean scores of achievement in Business Studies of senior secondary school students in relation to instructional approach (Brain-Compatible Learning approach and Conventional approach).
- To compare the interactive effect of instructional approach (Brain-Compatible Learning approach and Conventional approach) and level of aspiration on adjusted mean scores of achievement in Business Studies of senior secondary school students.

HYPOTHESES OF THE STUDY

The null hypotheses formulated for the experiment were:

1. There is no significant difference in the adjusted mean scores of achievement in Business Studies of senior secondary school students taught through Brain-Compatible Learning approach and Conventional approach in relation to their level of aspiration.
2. There is no significant difference in the main effect of instructional approach (Brain-Compatible Learning approach and Conventional approach) on adjusted mean scores of achievement in Business Studies of senior secondary school students in relation to their level of aspiration.
3. There is no significant difference in the main effect of level of aspiration on adjusted mean scores of achievement in Business Studies of senior secondary school students in relation to instructional approach (Brain-Compatible Learning approach and Conventional approach).
4. There is no significant difference in the interactive effect of instructional approach (Brain-Compatible Learning approach and Conventional approach) and level of aspiration on adjusted mean scores of achievement in Business Studies of senior secondary school students.

METHODOLOGY

The present study was an experimental study which was conducted in order to determine the effectiveness of brain-compatible learning on academic achievement in a XII grade Business Studies course. It was designed as pre test post test control group model.

SAMPLE

The investigators selected two intact class divisions of XII class students from four schools of Rohtak city. First group was experimental group which comprised of 60 students and the other group was controlled group which also comprised of 60 students. Experimental group was taught through brain-compatible learning approach whereas controlled group was taught using traditional method of teaching.

TOOLS USED

Data was gathered using the following tools:

- Achievement Test in Business Studies constructed and standardized by the investigator. The reliability of the test was found to be .86 using Richardson-Kuder method and validity was established by inviting expert's opinion.
- Group Test of General Mental Ability by S. Jalota.
- Test of Study Habit & Attitudes by C.P. Mathur.
- Styles of learning and thinking test by D. Venkatraman.
- Socio-economic status test by Prof. A.K. Kalia & Sudhir Sahu.
- Level of Aspiration Measure by Dr. M. A. Shah and Dr. Mahesh Bhargava.

STATISTICAL TECHNIQUES

In order to analyse the data single factor ANCOVA with 5 covariates in combination were used. ANCOVA was confirmed by Sidak Test of post-hoc comparison.

RESULT AND DISCUSSION

Two way ANCOVA was employed to find the statistical significance of the difference in mean scores of experimental and controlled groups.

TABLE 1: TABLE SHOWING COMPARISON BETWEEN ADJUSTED MEANS OF ACHIEVEMENT IN BUSINESS STUDIES FOR EXPERIMENTAL AND CONTROL GROUP IN RELATION TO THEIR LEVEL OF ASPIRATION

Sample	N	Dependent Variable	Groups Compared	Adjusted Mean		Difference	Standard error		Sig
				M_1	M_2		SE1	SE2	
Total	120	Achievement	Experimental and Control	49.32	34.89	14.423	.906	.908	0.00*

*significant as p<.01

The results pertaining to comparison between adjusted means of achievement in Business Studies for experimental and control groups in relation to their level of aspiration controlling for the effect of five covariates using Bonferroni adjustment are given in Table 1. It can be inferred from the results shown in Table 1 that the adjusted mean scores of the experimental (M_1= 49.32) and control group (M_2=34.89) differ significantly at α= .01 as p<.01. So the hypotheses *"There is no significant difference in the adjusted mean scores of achievement in Business Studies of senior secondary school students taught through Brain-Compatible Learning approach and Conventional approach in relation to their level of aspiration",* stands rejected

TABLE 2: TABLE SHOWING SUMMARY OF ANCOVA FOR THE MAIN EFFECT OF INSTRUCTIONAL APPROACH ON ADJUSTED MEAN SCORES OF ACHIEVEMENT IN BUSINESS STUDIES IN RELATION TO THEIR LEVEL OF ASPIRATION

Sl. No.	Source of Variation	Sum of Squares	Df	Mean squared variance	F-value	Sig.	Remarks
1	Group	5342.694	1	5342.694	117.94	.00*	Significant at .01 level
2	Within Cells	4937.660	109	45.300			

*Significant as p <.01.

Results pertaining to two factor ANCOVA for the main effect of instructional approach on adjusted mean scores of achievement in Business Studies in relation to their level of aspiration have been given in Table 2 which clearly indicates that there is a significant main effect of Instructional Approach on post-test achievement scores in Business Studies of senior secondary school students in relation to their level of aspiration after controlling for the effect of their

intelligence quotient, socio-economic status, study habits, styles of learning and pre-test scores as measured by achievement test, F(1,109) = 117.94, p<.01. Hence the null hypothesis stating that *there is no significant difference in the main effect of instructional approach (Brain-Compatible Learning approach and Conventional approach) on adjusted mean scores of achievement in Business Studies of senior secondary school students in relation to their level of aspiration* stands rejected. It indicates that the adjusted mean score of the group of students taught through Brain-Compatible Learning approach is higher than the adjusted mean score of the group of students taught through Conventional approach as related to their level of aspiration. The results make it clear that the instructional approach i.e. Brain Compatible Learning leaves a significantly positive main effect on the achievement of students in Business Studies in relation to their level of aspiration.

TABLE 3: TABLE SHOWING COMPARISON BETWEEN ADJUSTED MEANS OF ACHIEVEMENT IN BUSINESS STUDIES BETWEEN THE STUDENTS WITH LOW, AVERAGE AND HIGH LEVEL OF ASPIRATION IN RELATION TO THE INSTRUCTIONAL APPROACH

Dependent Variable	Groups Compared	N	Adjusted Mean	Standard error
Achievement	Low	36	38.06	1.186
	Average	46	42.72	1.002
	High	38	45.54	1.150

*significant as p<.01

Table 3 presents the results pertaining to comparison between adjusted means of achievement in Business Studies for the students with low, average and high level of aspiration in relation to their instructional approach controlling for the effect of five covariates using Bonferroni adjustment. The results shown in Table3 indicate that the adjusted mean scores of the students with low, average and high level of aspiration are 38.06, 42.72 and 45.54 respectively. It can be inferred from the results that students with high level of aspiration performed better as compared to the students with average and low level of aspiration.

The results pertaining to the summary of two factor ANCOVA for the main effect of level of aspiration on adjusted mean scores of achievement in Business Studies in relation to the instructional approach have been presented in Table 4.

TABLE 4: TABLE SHOWING SUMMARY OF ANCOVA FOR THE MAIN EFFECT OF LEVEL OF ASPIRATION ON ADJUSTED MEAN SCORES OF ACHIEVEMENT IN BUSINESS STUDIES IN RELATION TO THE INSTRUCTIONAL APPROACH

Sl. No.	Source of Variation	Sum of Squares	df	Mean squared variance	F-value	Sig.	Remarks
1	Group	867.81	2	433.90	9.57	.00*	Significant at .01 level
2	Within Cells	4937.66	109	45.30			

*Significant as p <.01.

A perusal of Table 4 indicates that there is a significant main effect of level of aspiration on post-test achievement scores in Business Studies of senior secondary school students in relation to the instructional approach after controlling for the effect of their intelligence quotient, socio-economic status, study habits, styles of learning and pre-test scores as measured by achievement test, F(2,109) = 9.57, p<.01. Hence the null hypothesis stating that *there is no significant difference in the main effect of level of aspiration on adjusted mean scores of achievement in Business Studies of senior secondary school students in relation to instructional approach (Brain-Compatible Learning approach and Conventional approach)* stands rejected.

TABLE 5: TABLE SHOWING PAIRWISE COMPARISON OF DIFFERENT LEVELS OF ASPIRATION USING BONFERRONI ADJUSTMENT

(I) Level of Aspiration	(J) Level of Aspiration	Mean Difference (I-J)	Standard Error	Sig.(a)
Low	Average	-4.657(*)	1.561	.011
	High	-7.475(*)	1.726	.000
Average	Low	4.657(*)	1.561	.011
	High	-2.818	1.531	.205
High	Low	7.475(*)	1.726	.000
	Average	2.818	1.531	.205

Based on estimated marginal means

* The mean difference is significant at the .05 level.

a Adjustment for multiple comparisons: Bonferroni.

The variable Level of Aspiration has three levels so a post-hoc analysis was done to evaluate pair wise differences among the adjusted means for different levels of the variable Level of Aspiration using Bonferroni adjustment. Table 5 presents the pair wise comparison of different levels of the variable level of aspiration. A perusal of Table 5 indicates that the difference in the mean scores of students with low and average level of aspiration differ significantly at α=.05 as p<.05 and the difference is not significant at α=.01 as p>.01 indicating that the students with average level performed better than the students with low level of aspiration at .05 level of significance. The difference in the mean scores of students with low and high level of aspiration differ significantly at α=.01 as p<.01 indicating that the students with high level of aspiration performed better than the students with low level of aspiration. Mean difference is not significant between the students with average and high level of significance indicating that even average level of aspiration is good enough to have a significant impact on the achievement scores.

The results shown in Table 5 makes it clear that the students with average and high level of aspiration were at an advantageous position than the students with low level of aspiration but no significant difference was found in the adjusted mean scores of the students with average and high level of aspiration.

FINDINGS OF THE STUDY

- A significant main effect of Instructional Approach was found on post-test achievement scores in Business Studies of senior secondary school students in relation to their level of aspiration indicating that the group of students taught Business Studies through Brain-Compatible Learning approach scored higher on achievement test than the group of students taught through Conventional approach as related to their level of aspiration.
- A significant main effect of level of aspiration was found on post-test achievement scores in Business Studies of senior secondary school students in relation to the instructional approach. The groups of students with average and high level of aspiration were found to be at an advantageous position in terms of post-test achievement scores than the group of students with low level of aspiration but no significant difference was found in the adjusted mean scores of the students with average and high level of aspiration.
- No significant interactive effect was found between instructional approach and Level of Aspiration on achievement in Business Studies. The post-test achievement scores were found to be independent of interaction between instructional approach and level of aspiration. Brain-Compatible Learning approach was found to be effective for all groups with different levels of aspiration.

EDUCATIONAL IMPLICATIONS

The results of the study indicate that pupils taught through Brain-Compatible Learning showed significantly higher academic achievement in Business-Studies than the Pupils taught through traditional method of teaching so the investigators have suggested the implications of present research to the field of education. It has its implications not only for teachers but also for parents, educational administrators and community at large which are as follows:

Teachers should create a delicate balance in the classroom. Teachers should involve the students in different activities with a view to provide appropriate experiences because all learning is experiential in some sense. Teachers can make their school like a 'real-world' community where the students are given responsibilities for handling some functions or ceremonies etc. Educators can integrate subjects such as languages, literature, science, social sciences and mathematics etc. Parents should understand that brain has a natural process of learning. Every individual learns according to their own style but still there is something common i.e. brain's natural capacity is most fulfilled when it gets proper nutrition and rest. So the parents should take care of the exercise, nutrition, sleep and rest of their children.

EPILOGUE

Brain-compatible learning approach does not provide a ready-made solution for all educational problems but it can help the students in achieving heights is academic pursuits. Results can be further improved when students are made to perform with sufficiently high level of aspiration. So, the role of teacher in arranging the environment and setting the stage is more important here. Brain-compatible approach maximizes learning, it limits the stress of children's ability to learn, it establishes immediate connection to the real world which will increase learning and it encourages active processing needed to keep connection and foster memory (Konecki, et al.2003). So if it is followed by all the teachers in the schools it can solve most of achievement related problems of the students. In order to have successful implementation it can be made a part of curriculum of teacher education programmes.

REFERENCES

1. Caine, R.N. & Caine, G. (1995). Reinventing schools through brain-based learning. *Educational Leadership*, 52, 43-47.
2. Caine, R.N. & Caine, G. (2001). *The brain, education, and the competitive edge*. London: The Scarecrow Press, Inc., 2001.
3. Dilek, ERDURAN AVCI and Rahmi YAGBASAN (2006). A Study on Impact of Brain Learning Approach on Students' Achievement and Retention of Knowledge about "Work-Energy" Topic Retrieved from http://proquest.umi.com.
4. Erlauer, L. (2003). *The Brain-compatible Classroom: Using What We Know about Learning to Improve Teaching*. Association for Supervision and Curriculum Development, Alexandria, Virginia USA.
5. Field, A.P. (2009).*Discovering Statistics using SPSS:and sex and drugs and rock 'n' roll* (3rd edition) London:Sage. Retrieved from www.statisticshell.com
6. Fogarty, R. (2002). *Brain compatible classrooms*. (2nd ed.). IL: Skylight Professional Development.
7. Gardner, H. (1993). *Frames of mind: the theory of multiple intelligences*. New York: Basic Books.
8. Hart, L. (1999). *Human brain and human learning*. Kent, WA: Books for Educators.
9. Hoge, P. (2002). The integration of brain-based learning and literacy acquisition. (Doctoral Dissertation, Georgia State University, 2002). *Dissertation Abstracts International*, 63, 11.
10. http://www.alternativesmagazine.com
11. http://www.ascd.org/publications/educationalleadership/nov98/vol56/num03/thebrainsbehindthebrain.aspx.
12. http://www.cainelearning.com/files/Summary.pdf
13. http://www.members.shaw.ca/priscillatheroux/brain.html
14. Jense, E. (1998). *Introduction to brain compatible learning*. CA: The Brain Store Inc.
15. Jensen, E. (1998). *Teaching with the brain in mind.* USA: The Association for Supervision and Curriculum Development.
16. Jensen, E. (2000). *Brain-based learning*. USA: The Brain Store San Diego.
17. Jensen, E. (2005). *Teaching with the brain in mind.* USA: The Association for Supervision and Curriculum Development.
18. Karlin and Berger(1971) *Experiential Learning: An effective program for elementary schools.* Parker publishing company, New York.
19. Ozden M.& Gultikin M. (2008): The Effects of Brain-Band Learning on Academic Achievement and Retention of Knowledge in Science Course. *Electronic Journal of Science Education* (Southwestern University) Retrieved from http://ejse.southwestern.edu.
20. Parry & Gregary (2003). *Designing brain compatible learning*. Corwin Press, Sage Publications India Pvt. Ltd.
21. Radin, J. (2005). *Brain research and classroom practice: Bridging the gap between theorists and practitioners*. (Doctoral Dissertation, Colorado State University, 2005).
22. Ryan, M. & Grolnick, S. (1986). Journal of Personality and Social Psychology, Vol. 50, No. 3, 550-558.
23. Sini, S. & Kumar, P.K. (2008). *Edutracks* May 2008, Vol. 7, No. 9.
24. Sousa, D. (2001). *How the brain learns*. Thousand Oaks, CA: Corwin Press.
25. Sylwester, R. (1995). *A celebration of neurons: An educator's guide to the human brain*. Alexandria, VA: Association for Supervision and Curriculum Development.
26. Wolfe, P. & Brandt, R. (1998). What do we know from brain research. *Educational Leadership*, 56(3), 8-13.
27. Wolfe, P. (2001). *Brain matters*. Alexandria, VA: Association for Supervision and Curriculum Development.

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