

The comprehensive Study of how Mind mapping Technique Helps to Understand Concepts and Ideas in Science Teaching

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Abstract- The study of science helps individuals learn better those behavior patterns and skills that will enable them to fulfill their roles as members of the society. The study of mind mapping helped them understand concepts and ideas in science teaching in ix class. The study was conducted on total 100 students from 5 urban schools, including 50 boys and 50 girls. The study revealed that the performance of mind mapping group was better than the non mind mapping group in subject science.

Index Terms- Mind Mapping, Mean, Standard deviations, t test.

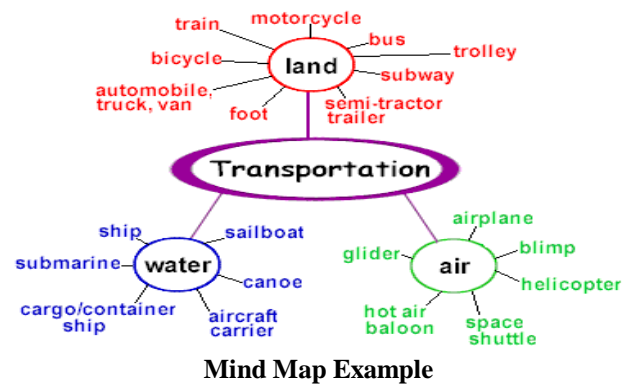
I. INTRODUCTION

Education is the process of developing the capacities and potentials of the individual so as to prepare that individual to be successful in a specific society or culture. The world is becoming more and more competitive quality of performance has become the key factor for personal progress. Parents desire that their children climb the ladder of performance to as high a level as possible. This desire for a high level of achievement puts a lot of pressure on students, teachers, schools and in general education system itself. School achievement may be affected by various factors like intelligence, study habits, and attitudes of people towards school, different aspects of their personality, socio-economic status etc. The desire of success is divided from individual's concept of himself and in terms of the meaning of various incentives as they spell success and failure in the eyes of others thus a child who sees himself as top ranking as scholars may set as his goal the attainment of the highest grade in the class.

Mind mapping is a diagram used to visual form of note taking that offers an overview of a topic and its complex information, allowing students to comprehend, create new ideas and build connections. Through the use of colors, images and words, mind mapping encourages students to begin with a central idea and expand outward to more in-depth sub-topics. Mind maps can be drawn by hand, either as "rough notes" during a lecture or meeting, for example, or as higher quality pictures when more time is available. An example of a rough mind map is illustrated. In our society academic achievement is considered as a key criterion to judge one's total potentialities and capacities. Hence, academic achievement occupies a very important place in education as well as in the learning process. So in view of this a study was conducted to see students performance in science on the basis of constructive teaching method of mind mapping.

II. DEFINITION OF A MIND MAP

A mind map is a visual representation of hierarchical information that includes a central idea surrounded by connected branches of associated topics.



III. OBJECTIVE:

To study the performance of science students in class IX using constructive mind mapping technique.

IV. HYPOTHESIS

There is no significant difference in the mean achievement of using mind mapping technique group and non mind mapping technique group of urban schools.

V. METHODOLOGY

Purposive sampling was applied in this study. The data were collected from 100 students of 5 urban schools.

VI. TOOLS

In the present study the investigator has employed a self made to assess student's achievement. The achievement test was of 50 marks and 1 hour duration.

VII. SAMPLE

The investigator has studied 100 students of class 9th from 5 H.S.schools Bhopal, includes 50 students teaching with mind mapping technique and 50 students without mind mapping technique.

VIII. DATA ANALYSIS & INTERPRETATION:

The investigator studied the performance of students of class 9th in science on the basis of Mind Mapping technique. A detailed analysis of data and its interpretation is presented below:

Table No. (1): Mean achievement of science students.

Group	No. of Students	Mean	Standard Deviation	t
Mind Mapping	50	39.7	5.01	2.34
Non Mind Mapping	50	33.3	5.7	

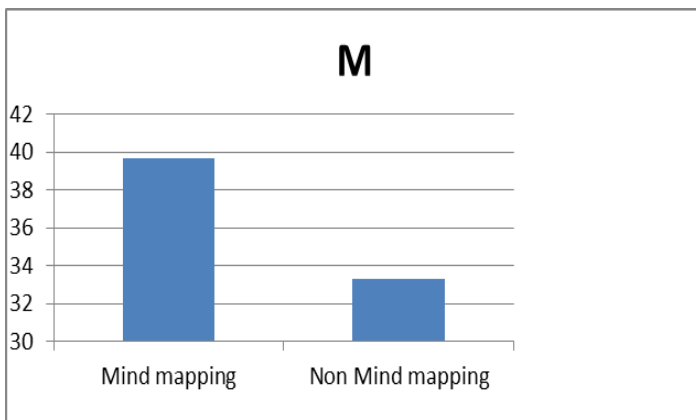


Figure: showing mean achievement of Mind mapping group and Non Mind mapping group.

In this case the obtained ‘t’ value is 2.34,df=98 is greater than the theoretical t value of 1.96 at .05 level of significant. So null hypothesis was rejected.

IX. RESULT

The above results show that the mind mapping group students show a better performance than the not using mind mapping technique group.

X. CONCLUSION

The study leads to the conclusion that the performance of mind mapping group is better than the other non mind mapping group of urban schools on the basis of achievement test. The mind mapping technique more effective and helped them to understand concepts and ideas in science. The low ability

students may benefit more from mind mapping than high ability student.

The Mind Mapping process involves a unique combination of imagery, colour and visual-spatial arrangement which is proven to significantly improve recall when compared to conventional methods of note-taking and learning by rote. Mind Mapping improved the long-term memory for better memory formation. Mind Mapping can help children recall words more effectively.

Mind Maps really come into their own for encouraging creativity and enabling you to generate new ideas in brainstorming sessions. The students can create an infinite number of thoughts, ideas, links and associations on any topic.

Mind Mapping has been shown to bring a renewed sense of enthusiasm to the classroom because it increases student confidence and sense of skill in mastering assigned materials. As a pedagogical tool, the visibility of Mind Mapping provides an effective approach for promoting better understanding in students.

Evidence shows that Mind Mapping can be used to help you plan and organize your thinking before you start writing or get stuck into a project. You can develop all your ideas and see where they relate to each other before deciding the best way to go about things.

A Mind Map can help you think with greater clarity to explore relationships between ideas and elements of an argument and to generate solutions to problems.

A Mind Map is an excellent tool for collaborating with others to develop plans or implement key projects. Mind Map includes many collaborative tools, including a screen capture function, designed to let users communicate their ideas quickly to others.

REFERENCES

- [1] Anokhin P.K. (1973), The forming of natural and artificial intelligence. Impact of Science in Society, Vol. XXIII 3.
- [2] Farrand, P., Hussain, F. and Hennessy E. (2002), The efficacy of the ‘mind map’ study technique. Medical Education, Vol. 36 (5), pp 426-431.
- [3] Toi, H (2009), Research on how Mind Map improves Memory. Paper presented at the International Conference on Thinking, Kuala Lumpur, 22nd to 26th June 2009.
- [4] Al-Jarf, R. (2009),Enhancing Freshman students’ Writing Skills with a Mind Mapping software. Paper presented at the 5th International Scientific Conference, eLearning and Software for Education, Bucharest, April 2009.
- [5] Goodnough, K. and Woods, R. (2002), Student and Teacher Perceptions of Mind Mapping: A Middle School Case Study Paper presented at the Annual Meeting of American Educational Research Association, New Orleans, 1st to 5th April 2002.
- [6] Mento, A. J., Martinelli, P. and Jones R. M. (1999), Mind Mapping in Executive Education: Applications and Outcomes. The Journal of Management Development, Vol. 18, Issue 4.
- [7] Ralston, J. and Cook, D. (2007), Collaboration, ICT and Mind Mapping. Reflecting Education, Vol. 3, No. 1, pp 61-73.

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