



MIND MAPPING– A LEARNING STRATEGY TO ACQUIRE KNOWLEDGE

Dr. Gagandeep Lamba

Reader

Department of Pedodontics

VSPM Dental College & Research Centre

“The more you know and learn, the easier it is to learn and know more” – Tony Buzan

The education system has greatly evolved from black board teaching, teacher-centered teaching to using various additional tools like charts, models etc. Rather than understanding a concept, students generally memorize the facts. Developing the student’s skill to reach information rather than transferring the present information, is the utmost goal in today’s educational system.¹ In spite of the various methods present for student learning, students face major problem in organizing and retaining knowledge regarding their subject. Studies have also shown, that lecture based learning had less than 5 percent retention of knowledge at the end of 6 months, and hence an alternative teaching method is the need of the hour – when there is abundance of knowledge in today’s era.²

Mind mapping (MM) is a new technique which was introduced by Tony Buzan in 1960. The characteristic feature of the method is that it is a graphic representation of a topic. The main topic is placed (drawn) in the center of the page and it has branches coming out from it, each branch may have sub-branches which depict a distinct piece of information related to the core concept. The branches are not straight lines and are

generally curves originating from the core topic.³ These can be taught easily and does not require any special tools and is also cost-effective. Multiple mind map sessions may be required for the students to gain proficiency and draw mind map at ease.²

The main goal of mind mapping is to make it easier for students, to manipulate and understand the complex information, which in turn facilitates analysis, memorization and understanding of the information. It further enhances the recall of this information as and when needed.²

A short term study was hence planned in the Department of Pediatric Dentistry, to evaluate the effect of mind mapping on knowledge retention. The second and third year post graduates were given a topic beforehand on origin, course and path of trigeminal nerve and its branches. A validated questionnaire consisting of 15 questions was given to them on the same topic. After 1 week, the same postgraduate students were explained application of mind mapping in their routine studies and retrieval of information was explained to them. These post-graduates were given a set of questionnaire and were allotted a time period of 30 minutes. The same questionnaire was then given after 7 days to test the knowledge gain and retention. The knowledge gain was considered the primary outcome variable. Knowledge gain was compared pre and post



exposure to mind mapping and then after 1 week. It was concluded that Mind Mapping was an effective method to attain and retain knowledge.

Feedback was obtained from these post graduates after completion of the method. It was observed that they gave an excellent rating to mind mapping method of learning. We can thus conclude that Mind mapping is a deeper learning method for the reflective thinking as well as for retaining the information.

The probable reason for better retention in Mind Maps could be that it promotes right side of brain which is more associated with visual and graphics than the left side. Thus, use of both hemispheres of brain results in performance that is 5-10 times more effective and hence better retention for the student.

Advantages:

1. As visual forms are more associated with right brain, mind map allows the student to take full advantage of left brain in combination with the right brain.
2. It helps to concentrate more as both sides of the brain are active and hence better retention for the student.
3. It helps to organize and classify information about the topic, making complex information simpler and easy to put on paper.

4. It consumes less space and hence more information in less space can be kept.
5. It improves learning ability and memorization.⁴

Disadvantages:

1. It is difficult to change from linear system of notes which is taught since childhood to this diagrammatic representation.
2. It is difficult to develop a good mind map of a new topic. A thorough reading of the topic is required before the mind map is made.
3. If mind map is not preplanned, it may be frustrating because of lack of space, lack of creative thinking etc.⁴

Applications available are: once the student are well verse with the drawing of mind maps, it is an easy transition to move from paper to apps. Mind mapping apps have made it more efficient to visualize and understand concepts. The various mind map apps recommended for students are Coggle, Mindly, Mindomo.

Conclusion: Mind mapping initially requires lots of hard work and practice. But students who master this art, find it easy, comfortable and useful. To begin with, one can start taking small topics and practice making mind maps. They also become an easy source of handout for revision during exams. Expertise can also be achieved by using various apps that are available to prepare mind map.



References:

1. Muchhal M, Patthi B, Singla A, Gupta R, Malhi R, Chaudhary D. Effectiveness of Mind Mapping as a Learning Tool among Dental Students. *J Indian Assoc Public Health Dent.* 2018;16(2):5.
2. Bhat P, Mohan NVJ, Jayachandra MY, Krishna VG, Aruna CN, Nayana. M. Mind mapping - a learning strategy!! Among dental students: A comparative study. *International Journal of Scientific Research.*2019;8(5):19-21.
3. Farrand P, Hussain F, Hennesey E. The efficacy of the mind map technique. *medical education.* 2002;36:426-31.
4. Spoorthi BR, Prashanthi C. Pandurangappa R. Mind mapping as effective learning adjunct to acquire a tsunami of information. *International Journal of Scientific and Research Publications.* 2013;3(12):1-4.