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COMPARISON OF MIND MAPPING AND LECTURE BASED TEACHING LEARNING METHOD AMONG DENTAL UNDERGRADUATES USING SOLO TAXONOMY IN BANGALORE, INDIA

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Abstract:

Aim: To compare the two educational methods Mind Mapping and lecture based methods) in teaching dental undergraduate students using the Structure of Observed Learning Outcome (SOLO) taxonomy as an assessment tool.

Materials and Methods: This cross sectional comparative study was carried out among dental undergraduates in their final year (n=45). Students were divided into lecture based learning (LBL) and mind mapping (MM) group. Three sessions were taken for both groups. The first session was followed by the MM group being taught about mind mapping, its principles, construction of mind map. LBL group after the lecture had only a group discussion. Two more sessions were taken and same procedure was repeated in both groups. At the end of 3rd lecture, all of the students had a common exam. SOLO taxonomy was used to assess the two educational methods. Scores were compared between MM and LBL groups. Student pai red and unpaired t-test was used for statistical evaluation and significance level was set at $p<0.05$.

Results: Final year students (n=45, 13 males, 32 females) participated in the study. Total score in the post test among the MM was higher than LBL group (15.57+6.51 vs 8.41 +2.62, p=0.001). Analysis between both the groups revealed significant differences between scores in MM and the LBL group in the various SOLO taxonomy categories, especially in the extended abstract category with the post test score mean of 4.66+1.87 in MM group and 3.6+1.22 in LBL group (p=0.001).

Conclusion: The results of the study showed that the students in MM group performed better as compared to LBL group. Mind mapping method was more effective in teaching the under graduate students. These findings suggest that integration of mind mapping in the curriculum maybe effective in promoting student's deep learning.

Article Critique:-

Sr. No.	Sections	Strength of the study	Weakness of the study
1.	Title	--	First mention LBL & then MP as second one is newly introduced to students.
2.	Background	Concept of study is good to for the students to study various learning methods.	--
3.	Aims & Objectives	Satisfactory which fulfilled at the end and mentioned in the conclusion of the study.	--
4.	Method	mentioned inclusion & exclusion criteria, with assessment details.	However sample size is quite less.
5.	Results	Quite good, details mentioned in tabular forms.	Graphical representation of results is expected for quick visualisation.
6.	Statistical Analysis	Good	--
7.	Discussion	Satisfactory, well written. All the sections are discussed well in comparison with published studies.	Justification for results is needed.
8.	Conclusion	Good	--
9.	Clinical usefulness	Mentioned at the end of discussion.	--
10.	Limitations	Mentioned with separate note.	--
11.	Scope of future work	*	

*Understanding and concert of undergraduate students vary from subject to subject. This concept can be evaluated with I & II BDS Students, so that they can be acquainted with different teaching & learning method from their early professional training, for better performance during examinations.