



## Study of Effective Methods of Learning and its Relation in Retaining Long Term Memory-A Questionnaire Based Study

### KEYWORDS

Learning, methodology, teaching, long term memory.

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### ABSTRACT

*Learning is the act of acquiring new, modifying and reinforcing, existing knowledge, behaviors, skills values, or preferences and may involve synthesizing different types of information. Individuals differ in the methodology of learning to retain as long term memory. This study analyses the various methods followed by the students, thereby can help to get newer ideas to improve the memory from short term to long term. Evaluation of teaching-learning methodology by the students can help in modification and construction of their academic curriculum. This study analyses the various methods followed by the students, thereby can help to get newer ideas to improve their memory from short term to long term.*

### INTRODUCTION

Education cultivates hopeful environments and relationships for learning.<sup>[1]</sup> Learning is both a process and an outcome. In order to acquire new knowledge,<sup>[2]</sup> students need to be able to make sense of new information.<sup>[3]</sup> This can be ensured by learning strategies or few technical methods<sup>[4]</sup> and teacher intervention and instruction that models the use of learning strategies and helps make new information more accessible to students. Especially concerning with the medical education, the curriculum seems to be getting more and more advanced. Many medical schools integrate clinical education with basic sciences from the beginning of the curriculum.<sup>[5]</sup> Traditionally initial medical education is divided between preclinical and clinical studies. The former consists of the basic sciences such as anatomy, physiology, biochemistry, pharmacology, pathology. Since this study was conducted in a dental college, Dental Anatomy is another subject taken into the academic curriculum. Results shows particular subjects which were being difficult to study should bring in a better way of easy teaching and learning methodology.<sup>[6]</sup> This study also analyses the effective method of teaching and its aid. Academic achievement also allows students to enter competitive fields. Studying and learning adapting to better methods can help in scoring. Newer ideas should bring in a better change in life and achieve goals.

### MATERIALS AND METHODS

This survey was carried out on 50 first year BDS students of Saveetha Dental College, Chennai. The students were in the age group of 17-20 years. The questionnaire was designed and was approved by the guide and was distributed to the first year undergraduates, were 50 students were chosen in random.

The graphs and pie chart were used in analyzing the data's which gave results about their preferences in teaching and learning methods.

### OBSERVATION AND RESULTS

Among the 50 students, 16 male students and 34 female students participated in completing the survey. The mean age was found to be 18.16 years. Almost all students seem to likely follow the same method of learning and prefer the same method of teaching.

1] The preferences in their teaching, learning methods and teaching aid preferred by the students.

In fig-[1] Teaching methods and learning methods 22 students preferred practicals, 12 preferred lecture and 16, small group discussions.

In fig-[2] 8 students prefer learning by memorizing, 32 students by understanding and 10 by writing

In fig -[3] 23 students preferred white board and marker method followed by 14 students for Smart board and 13 students-Power point presentations.

Fig - [1] Teaching methods preferred by students.

In fig-[2] Learning method preferred by the students.

Fig-[3] teaching aid preferred by the students.

2] The second set of questions in the section consisted of 3 questions where the students were asked about their easy, difficult and their wanted easy learning subject. The four main subjects include Anatomy, Biochemistry, Dental Anatomy and Physiology. It was a forced-choice selection response out of the four subjects in each of the category.

In fig-[4] i) The easy subject was found to be Biochemistry with 32 students, followed by 10 students under Physiology, 6 students under Anatomy and 2 was Dental Anatomy.

ii) The difficult learning subject was Dental Anatomy with 23 students, 15 for Anatomy, 10 Physiology and 2 under Biochemistry.

iii) 30 students wanted their easy learning subject to be Dental Anatomy followed by 16 for Anatomy, 8 for Physiology and the rest 2 for Biochemistry.

In fig-[4] Subject preferences

### 3] The student's adaptive methods

In fig -[5] The pie chart below shows the adaptive methods opted by the students. This study showed that 56% students preferred self-study and 44% chose combined study.

Fig-[5] Adaptive methods of easy learning

4] Lastly the other set of questions included the method of learning which can retain a long term memory.

Fig-[6] shows the method of learning which they think can help to retain a long term memory. This study helped in finding out the number of students who preferred Reading were 10 followed by 30 students preferred writing and the rest 10 by listening.

Fig-[6] Studying method to retain long term memory.

## DISCUSSION

Students themselves suggest that in order to improve in their academics, the teaching and learning methodologies should change. Making a difference can change the world. The questionnaire consisted of 3 sections. Each set of questions is being plotted against a graph and pie chart. Among the set of questions which included the teaching method, students preferred practicals more than lecture and small group discussions because studying theoretically gives only a basis for understanding whereas demonstrating can help keep things in better memory. Students also said that they can remember better by looking at specimens rather than learning the part only through diagrams taught during lectures.

Understanding by learning is the basic method that a student should be following rather than mugging up which does not help us in critical thinking and problem-solving. About 64% of students suggest understanding is a better method and the only method to gain knowledge followed by 20% out of 50 students who think that writing also provides a better way of learning. When asked about the teaching methods students preferred the olden school day's method, the very traditional method i.e., white board and marker or black board and chalk. Though they seem to be older generation method learning had began from such a stage. Students also say that these method do not have any complications like the smart boards were sometimes the cursor does not move and touch works twice and also the only disadvantage in using white board or black board is that markers and chalk expires and have to be bought frequently.

When asked about the preferences in their subjects it is not the subject which is difficult or easy but the teaching and learning methodologies which differ. The learning method might seem to be easier on subjects related to facts and figures whereas those subjects which are difficult learning are mostly concept based and specific knowledge is required to grasp the concepts. Students think that is where they lack in and their scoring goes down. Majority preferred self study rather than combined study since self-study requires concentration and mind and soul is clear, although some students say that they get diverted when they sit alone and study they still can be different from others. Collaborative learning might help in group discussion where views and thoughts can be shared but distractions can also occur where students might involve in gossips and chats.

Finally writing is preferred more than reading and listening because it makes you think as an individual and helps in viewing your own thoughts. This can also give self-confidence and satisfaction of outputting our understanding level.

## LIMITATION OF THE STUDY

This study only gives a small idea or a gist of how teaching and learning methodologies should be like. Since this is conducted in our college among 1<sup>st</sup> year BDS students, these methods were suggested and applied by students here. These can differ among other students in various colleges and institutes.

## CONCLUSION

In this study students are interested in learning by understanding which improves scoring and knowledge. They prefer the old method of teaching aid to be as white board and marker. This helps in a better understanding without any complications, easy writing and easily erasable. Small group discussions help students to discuss their views and thoughts and share strengths and also develop their weaker skills and opinions on subjects. Students think that unlike individual learning, people engaged in collaborative learning capitalize on one another's resources and skills.<sup>[7][8]</sup> Subject preferences were asked to analyze why students lack in their learning method. Subjects that were facts related were easy learning whereas subjects that were concept based seemed difficult learning. Comparing combined study with self study majority preferred self study as it helps in good concentration while preparing for exams. Students suggests their peer and other students of different college that writing and reading and revising the subject for more than once can help in retaining long term memory. This study therefore gave students confidence and also the capability of managing the subject by adapting to the best method of learning.

This study helps students to improve their methods of learning and adapt to a better one and also aids faculties and staffs by implementing these ideas to improve the teaching methodologies so as to help students to gain knowledge and better understanding and make students reach high levels in their academics.

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