

# Perspective of Teaching Methodologies in Dentistry: Active vs Passive Learning

S. Sujitha<sup>1</sup>, K. Sruthy<sup>1</sup> and P. Rajathi<sup>2\*</sup>

<sup>1</sup>Intern, BDS Student, <sup>2</sup>Senior Lecturer, Department of Oral Pathology, Vinayaka Mission's Sankarachariyar Dental College, NH-47, Sankari Main road, Ariyanoor, Salem - 636308, Tamil Nadu, India; docraajiarun@gmail.com

## Abstract

Education in its general sense is a form of learning, in which knowledge, skills and habits are transferred across generations through teaching. The syllabus and curriculum followed by the dental colleges in training undergraduate and postgraduate students have been set by the Dental Council of India in assuring a minimum standard of quality. The current design of curriculum emphasizes on didactic lectures with inclusion of minimum quota completion as a prerequisite for the student to appear for university examinations. This article comprises of a questionnaire study on obtaining the perspective of teaching methodology in dentistry among staffs and students.

**Keywords:** Active Learning, Group Discussions, Lectures, Teaching Methodology

Date of Receipt: March 2018

Date of Submission: April 2018

Date of Acceptance: May 2018

## 1. Introduction

Never stop learning because life never stops teaching. Education is the most powerful weapon which you can use to change the world. The quality of an education system can never exceed the quality of its teachers. The advancement seen in the contemporary world in technology, life sciences and medicine are proliferating at an exhilarating rate with the advent of the internet and its availability to everyone. Professional students everywhere are implicitly required to keep up to date to stay alert with developments in their respective fields. The same follows in dentistry, with increased awareness of dental health problems and aesthetics, students feel the pressure to be prepared with the latest innovations in dentistry. All these have driven students to a more applicative approach to learning and studying relying on information from resources such as the internet. Also the teachers are to use additional teaching methods like group discussions, case discussions, seminars etc. The students actively engage in these methods rather than the traditional lectures where they passively receive the information provided by the

teacher<sup>1</sup>. The present study was conducted to evaluate the current teaching methodology among staff and students.

## 2. Aim

- To identify the most commonly opted additional teaching method.
- The benefits of additional teaching methods.
- The benefits of current system of education.

## 3. Methodology

A total of 50 participants were included in the study. These were divided into two main study groups, one group comprising of staff and the other group of students from second year to interns. Each group comprised of 10 participants. Two sets of questionnaires were prepared for staff and students. The sample of questionnaires for students and staff are shown in Figure 1, 2. The participants were given twenty minutes to answer the questionnaire provided to them. The answers provided from the questionnaire are compiled in the tabular column are given in the Table 1.

\*Author for correspondence

**VINAYAKA MISSIONS RESEARCH FOUNDATION (DEEMED TO BE UNIVERSITY)**

**DEPARTMENT OF ORAL PATHOLOGY**

- K. Sruthy  
- S. Sujitha

1. The current curriculum methodologies in dentistry mandates more than 100-150 hrs/year/subject. Do you feel this way of teaching motivate learning among students?  
 Yes     No
2. If no, do you feel that demonstration of case should replace a lecture related to that case?  
 Yes     No
3. The current medium of teaching is English in dentistry. Do you think language can hamper learning?  
 Yes     No
4. As mentioned above theory hours extend 45min to 1 hour. How long do you think students can focus on the lectures?  
 15min     30 min     Whole lecture
5. Current teaching methodologies mostly includes chalk and board method and audio visual method. Apart from these which teaching methodology can be added to the above mentioned methods?  
 Seminars     Group discussions  
 Case discussions     Pedagogy
6. How do you feel the above option selected by you in question 5 can benefit students?  
 Gains self confidence  
 Improves communication skills  
 Improves self learning  
 Easy understanding
7. What aspect do you feel to be given importance. Choose the option accordingly.  
 Discussions > Lectures  
 Lectures > Discussions  
 Discussions > Seminar/Pedagogy  
 Seminar/Pedagogy > Discussions
8. Which of the below mentioned options you feel is required to be a good educator?  
 Approachability     Experience  
 Communication/clarity     Humor
9. Do you feel that current curriculum in under graduate program is preparative for the student's post graduate entrance examinations?  
 Yes     No
10. What type of stress do the students encounter in dentistry?  
 Workload     Financial stress  
 Exam stress     Others
11. Do you feel these stresses can reduce their concentration in learning?  
 Yes     No
12. In one hour lecture, time for interaction is very less. So how do the students clarify their doubts?  
 During leisure time     Seniors/friends  
 Through internet     Library  
 Do not clear
13. What is your choice for the students to treat an actual clinical case over ideal cases /quotas in third, final year and CRI?  
 Yes     No
14. In this present day do you feel the interactive sessions/seminars/group discussions bridges the gap between the staffs and students. Yes/no justify?  
\_\_\_\_\_
15. The current system of education motivate students to -  
 Become an Academician  
 Set up a private practice  
 Pursue higher studies  
 Become a Researcher
16. In your opinion which would you prefer for the students to study?  
 Annual/yearly exam (followed currently)  
 Credit system ( choice of subject for yearly examination – followed abroad)

Figure 1. Questionnaire for staffs.

**VINAYAKA MISSIONS RESEARCH FOUNDATION ( DEEMED TO BE UNIVERSITY)**

**DEPARTMENT OF ORAL PATHOLOGY**                      - K.Sruthy

**S.Sujitha**

1.The current curriculum methodologies in dentistry mandates more than 100-150 hrs/year/subject. Do you feel this way of teaching motivates learning?

Yes       No

2. If no, do you feel that demonstration of case should replace a lecture related to that case?

Yes       No

3. The current medium of teaching is English in dentistry. Do you think language can hamper learning?

Yes       No

4. As mentioned above theory hours extend 45min to 1 hour. How long do you think you can focus on the lectures?

15min       30 min       Whole lecture

5. Current teaching methodologies mostly includes chalk and board method and audio visual method. Apart from these which teaching methodology can be added to the above mentioned methods?

Seminars               Group discussions  
 Case discussions       Pedagogy

6. How do you feel the above option selected by you in question 5 can benefit you?

Gains self confidence  
 Improves communication skills  
 Improves self learning  
 Easy understanding

7. What aspect do you feel to be given importance. Choose the options accordingly

Discussions > Lectures  
 Lectures > Discussions  
 Discussions > Seminar/Pedagogy  
 Seminar/Pedagogy > Discussions

8. Which of the below mentioned options you feel is required to be a good educator?

Approachability               Experience  
 Communication/clarity       Humor

9. Do you feel that the current curriculum in under graduate program is preparative for your post graduate entrance examinations?

Yes               No

10. What type of stress do you encounter in dentistry?

Workload               Financial stress  
 Exam stress               Others

11. Do you feel these stresses can reduce your concentration in learning?

Yes               No

12. In one hour lecture, time for interaction is very less. So how will you clarify your doubts?

During leisure time       Seniors/friends  
 Through internet               Library  
 Do not clear

13. Do you prefer treating an actual clinical case over ideal cases /quotas in third, final year and CRI?

Yes               No

14. In this present day do you feel the interactive sessions/seminars/group discussions bridges the gap between the staffs and students. Yes/no justify?

---

15.The current system of education motivate you to

Become an Academician  
 Set up a private practice  
 Pursue higher studies  
 Become a Researcher

16. In your opinion which would you prefer to study?

Annual/yearly exam (followed currently)  
 Credit system ( choice of subject for yearly examination – followed abroad)

**Figure 2.** Questionnaire for students.



**Table 1.** Inference

Q.No	Nature Of Question	Options	Percentage (%)
1.	Teaching hours for motivated learning (100-150 hrs/ subject)	Yes - 23 No - 27	46 54
2.	Preference for demonstration to lectures	Yes - 30 No - 5	60 10
3.	English medium is satisfactory	Yes - 16 No - 34	32 68
4.	Attention span in an one hour lecture	15 min - 9 30 min - 38 Whole lecture - 3	18 76 6
5.	Additional teaching methods to traditional methods	Seminars - 9 Group discussions - 27 Case discussions - 27 Pedagogy - 5	18 54 54 10
6.	Benefits acquired by teaching methodologies in option 5	Gains self confidence - 11 Improves communication skills - 11 Improves self learning - 15 Easy understanding - 20	22 22 30 40
7.	Preference among teaching methods	Discussions > lectures - 32 Lectures > Discussions - 3 Discussions > seminars/ Pedagogy - 10 Seminars > discussions - 7	64 6 20 14
8.	Preferred quality of a educator	Approachability - 15 Experience - 7 Communication/ clarity - 34 Humor - 4	30 14 68 8
9.	PG entrance exam preparations in UG curriculum	Yes - 25 No - 25	50 50
10.	Stress in dentistry	Workload - 28 Financial stress - 8 Exam stress - 7 Others - 12	56 16 14 24
11.	Influence of stress in concentration	Yes - 39 No - 11	78 22
12.	Clarification of doubts	During leisure time - 3 Seniors/friends - 21 Internet - 20 Library - 7 Do not clear - 5	6 42 40 14 10

13.	Treating an actual clinical case	Yes - 45 No - 1 Not answered - 4	90 2 8
14.	Communication gap reduced by options in question 5	Yes - 42 No - 8	84 16
15.	Motivation in current education system	Academician - 12 Set up a private practice - 12 Higher studies - 25 Researcher - 6	24 24 50 12
16.	Preferred system of education	Exam pattern - 34 Credit system - 16	68 32

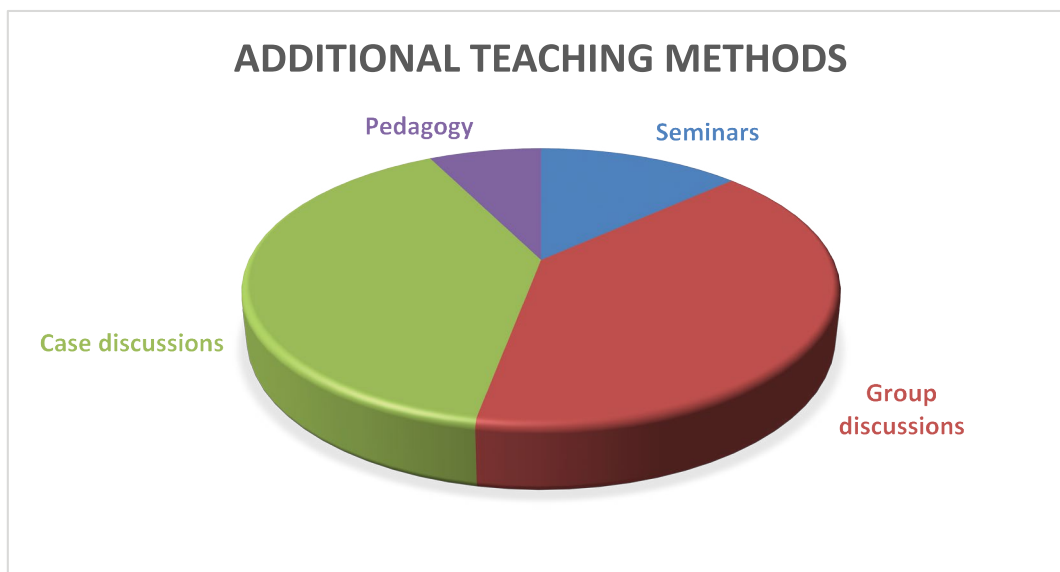
## 4. Discussion

The present study was done to obtain the perspective of present day teaching methodologies and also the opinion of staffs regarding the teaching methodologies and its effectiveness in sharing knowledge and harnessing skills in dentistry based on our questionnaire.

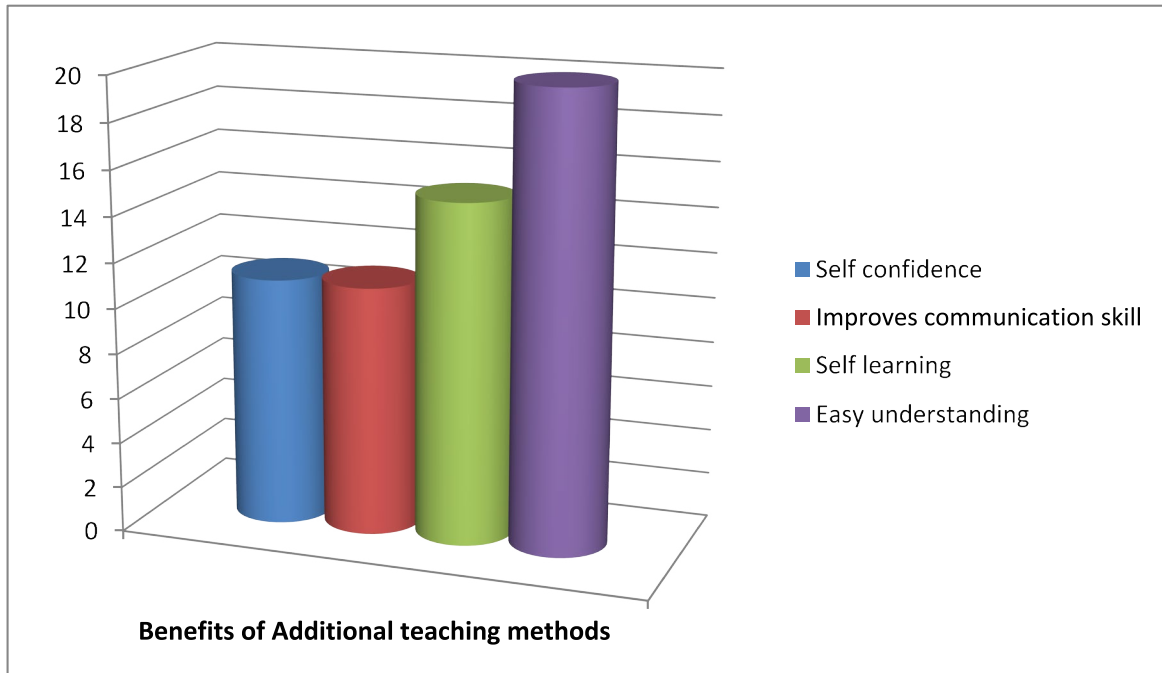
According to DCI norms, each subject has approximately 100-150 hours per year. About half of the participants agree that this way of teaching do motivate students to learn and further refer textbooks. Most students felt that their concentration span for theory lectures is around 30 minutes.

Majority of staffs and students opted additional teaching methods like group discussions and case discussions (Figure 3) and the reasons given were that they felt they would attain a better understanding of the subjects and also boost their self confidence (Figure 4) in dealing with patients. Most of the participant's opted interactive sessions bridge the gap between staffs and students but still half among them prefer to clarify their doubts with seniors/friends<sup>1-4</sup>.

The fact that English is the medium of study did not hamper the learning in any aspect shows that with increased exposure to internet students are able to quickly adapt to the language<sup>5</sup>.



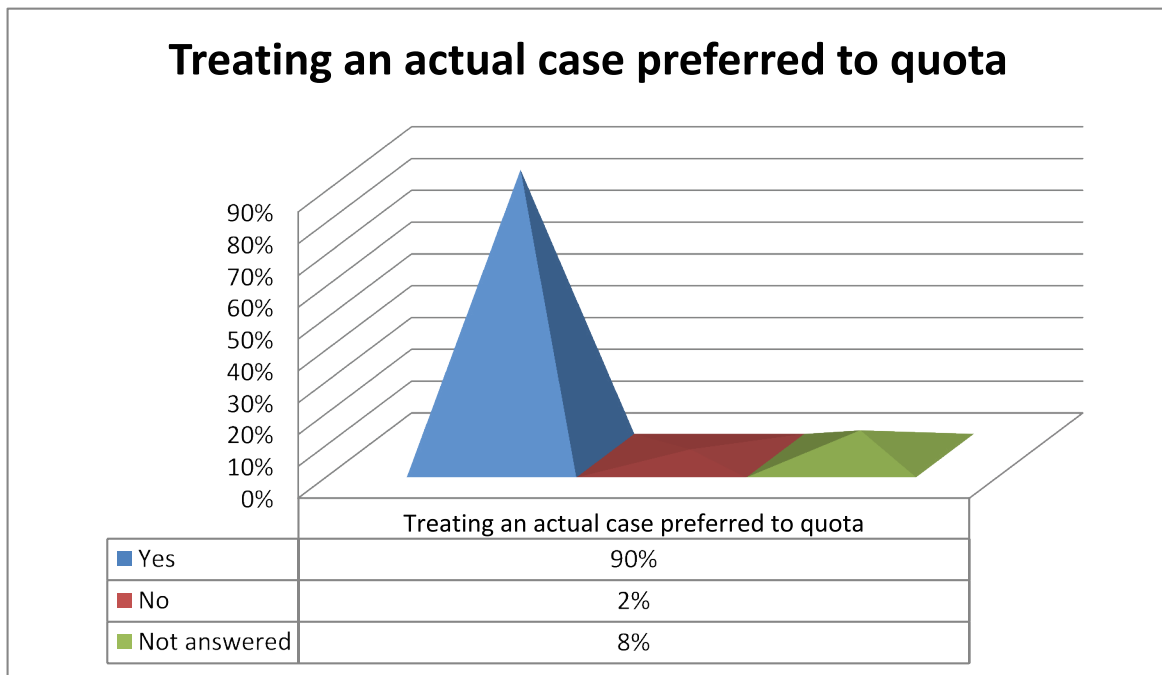
**Figure 3.** Additional teaching methods.



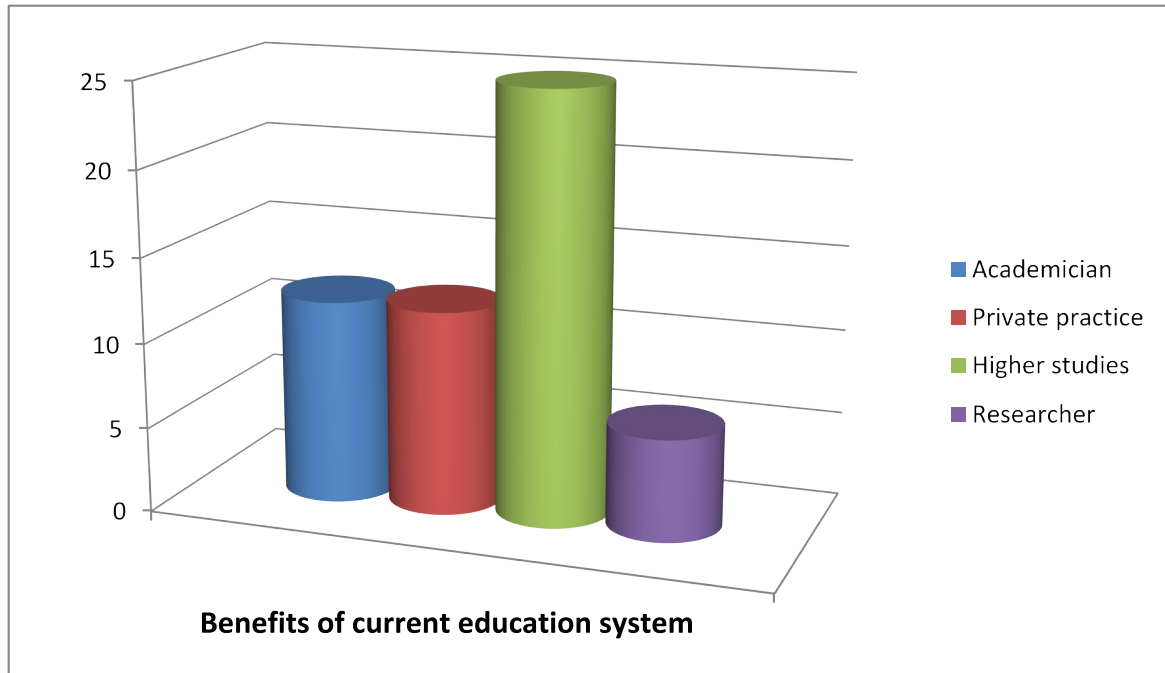
**Figure 4.** Benefits of additional teaching methods.

The role of a teacher in the present day is not only teaching but also in motivating students in the particular subject. Among qualities that are required by an educator, students opted for communication or clarity of subject and approachability to clarify doubts.

With the introduction of screening or entrance exams in India to pursue a post-graduation, the staff felt that the current curriculum in under graduation is preparative for PG entrance examinations. Students on the other hand felt that the current system did prepare them for



**Figure 5.** Treating an actual case preferred to quota.



**Figure 6.** Benefits of current education system.

the abstract pattern of examination and did provide the necessary skills in the appearing for objective based questions particularly in time management for answering such questions.

As was expected students found that the stress of quotas coupled with the anxiety of examinations did affect them in performing to the best of their potential. Moreover demonstration of a clinical case with actual clinical setting or scenarios of managing patients were preferred over lectures (Figure 5). Students studying professional courses feel that lectures do not prepare them for managing actual patient-case scenario despite having case quotas in the all specialities. The bridge between theory and the practical classes is considered a formality or prerequisite for appearing examinations. The approach to studying dentistry would be more theoretical than practical or empirical<sup>2,3</sup>.

Majority of staff feels current system of education motivates students to pursue their higher studies while more number of students is motivated to become an academician or to set a private practice (Figure 6).

Highest number of participants was satisfied with current annual/yearly system of education than following credit system<sup>2</sup>.

## 5. Conclusion

On analysing our questionnaire study, the current methodologies in teaching motivate the students in learning, but the acquiring of dental skills and clinical improvising is attained by exposure by an inquisitive approach to dental subjects. Current teaching methodologies include traditional chalk and board method with or without audio visual aids. Based on our survey, staff and students do believe that the theoretical or instructional training followed in the present generation is obsolete and need of the hour is to adopt a learning system to inculcate scientific attitude and reasoning towards dentistry.

## 6. References

1. Hackathorn J, Solomon ED, Blankmeyer KL, Tennial RE, Garczynski AM. Learning by doing: An empirical study of active teaching techniques. *The Journal of Effective Teaching*. 2011; 11(2):40–54.
2. Gerzina TM, McLean T, Fairley J. Dental clinical teaching: perceptions of students and teachers. *Journal of Dental Education*. 2005 Dec; 69(12):1377–84. PMID:16352774
3. Alrahlah A. How effective the Problem Based Learning (PBL) in dental education. A critical review. *The Saudi Dental*

- Journal. 2016 Aug; 28:155–61. crossref PMid:27872545  
PMCID:PMC5110467
4. Alkhuwaiter SS, Aljuailan RI, Banabilh SM. Problem-based learning: Dental student's perception of their education environments at Qassim University. *Journal of International Society of Preventive and Community Dentistry*. 2016; 6(6):575–83. crossref PMid:28032051  
PMCID:PMC5184393
  5. Gopinath V, Nallaswamy D. A systematic review on the most effective method teaching dentistry to dental students compared to video based learning. *American Journal of Educational Research*. 2017; 5(1):63–8.