

PRIMING, REPETITION, ACTIVE LEARNING: A NOVEL & EFFECTIVE TEACHING-LEARNING METHOD IN MEDICAL SCHOOLS.

Dr. Gandham Pavani*

1. Professor, Department of Microbiology, Apollo Institute of Medical Sciences and Research, Jubilee Hills, Hyderabad

*Corresponding author - **Dr. Gandham Pavani**

Email id - drpavani_g@apolloimsr.edu.in

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ABSTRACT

Background: Newer innovations in teaching learning methodologies is the need of the hour in Medical education. Our study focuses on a novel teaching learning method which is student centric where the teacher is a facilitator which is the requirement of the present day medical education. **Materials and Methods:** The teaching innovation was conducted for 2nd MBBS students of our Institute. The class was divided into small groups. Each groups were given an objective test questionnaire which was answered by them by open book method in 1 hour. Every group of students was monitored by the teacher so that every group completes the questionnaire in the stipulated time. After that, a 10 minute time was given to the students to memorise the answers. After that, the teacher elicited the answers from the students. Then the teacher summarized the chapter making use of the questionnaire only. After summarization, feedback was taken from the students and the teacher about the teaching innovation. **Results:** 97 - 99% of students felt that they could learn better, focus on main aspects of the chapter and recollect the chapter better with this method. Feedback from the teacher revealed utmost satisfaction in conducting the method as every student participated and enjoyed the class. **Conclusion:** “Priming, repetition, active learning “ is a new teaching method that can be incorporated in medical schools.

Keywords: Teaching innovation, objective test questionnaire, Priming, Repetition, Active learning.

INTRODUCTION

Gaining student’s attention and holding it till the end of the class is what all teachers aspire for (1, 2) This is almost always difficult in afternoon classes and long hour classes. From the students perspective, multitasking being the requirement for students in most medical schools, medical students are stressed out all the time. (3) They have multiple tasks to perform during the course of the day. They have to participate in case studies, seminars, group discussions, bedside discussions, attend lectures, practical classes and prepare for exams. As a result,

we often see quite a few students not concentrating in the class. As teachers, we need to find some methods for conducting lectures which facilitate maximum participation of students. Moreover priming activities which involve group tasks, targeted reading & quick recollection, easy acquisition of knowledge are preferred by most students. (4, 5) Hence we have introduced a new teaching learning method which holds student attention in long hour classes and also which incorporates all these aspects of student preference, which is student centric and where the

teacher is only a facilitator.

MATERIALS AND METHODS

The teaching innovation was conducted for 2nd MBBS students of Apollo Institute of medical sciences and research, Hyderabad. These classes were conducted three times during a period of one month involving a total of 103 students. Each class had about 33-35 students. These students were divided into small groups which included about 3 students in each group. Each group of 3 students were given an objective test questionnaire in the particular chapter to be discussed prior to the class which were answered by them by open book method in a stipulated time period of 1 hr.

The objective questions were framed in such a way that every important aspect of the lesson is covered and the students understand the flow of the lesson and the student could answer any type of question (essay, short essays, brief answers or viva questions) later on based on the questionnaire. These questions were mainly fill in the blanks. During this 1 hour period, all the groups of students were monitored by the teacher so that every group completes the questionnaire in the stipulated time. After the stipulated 1 hour, the students were given 10 minutes to memorise these answers. Then the teacher elicited the answers from the students questioning them singly giving chance to every student in the class. At the end, the teacher summarized the chapter making use of the questionnaire only for a period of 30 minutes. For the next 10 minutes, the teacher cleared any doubts pertaining to the chapter. After summarization, feedback was taken from the students as well as from the teacher about their opinion on this method of teaching by means of a Student & Teacher feedback form respectively.

STUDENT FEEDBACK FORM

Assessment tools	No / % of students who agreed	No / % of students who disagreed
The method is well organised		
There was a better review of the chapter		
There was a focus on main aspects of the chapter		
More interesting method		
Could learn better		
There was better recollection of the chapter		
Learned the chapter with ease		
The teaching-learning method was useful		
The teaching-learning method was effective		

TEACHER FEEDBACK FORM

Assessment tools	Agree	Disagree
There was high student participation		
Learning occurred		
The teaching - learning method was effective		
The teacher was satisfied with the teaching – learning method		
Active learning occurred		

RESULTS

When the feedback forms were analysed, 100 (97.08%) of the students felt that the innovative technique was a very useful and an organized method of teaching which helped them to learn better. 99 (96.11%) students felt that they could learn the chapter with ease and get a better review of the chapter by this method. 102 (99.02%) students felt that they could focus on main aspects of the chapter and recollect the chapter better with this method. They perceived it as a more effective, more interesting method of group discussion which would help them in the theory exams as well as in the viva. The students suggested that they preferred all the classes both theory and practical to be taken in this innovative way. Feedback from the teacher revealed utmost satisfaction in conducting the method as every student participated and enjoyed the class.

STUDENT FEEDBACK FORM

Assessment tools	No / % of students who agreed	No / % of students who disagreed
The method is well organised	100[97.08%]	3[2.91%]
There was a better review of the chapter	99[96.11%]	4[3.89%]
There was focus on main aspects of the chapter	102[99.02%]	1[0.97%]
More interesting method	102[99.02%]	1[0.97%]
Could learn better	100[97.08%]	3[2.91%]
There was better recollection of the chapter	102[99.02%]	1[0.97%]
Learned the chapter with ease	99[96.11%]	4[3.89%]
The teaching-learning method was useful	100[97.08%]	3[2.91%]
The teaching-learning method was effective	102[99.02%]	1[0.97%]

TEACHER FEEDBACK FORM

Assessment tools	Agree / Disagree
There was high student participation	Agree
Did learning occur	Agree
Was the method effective	Agree
Was the teacher satisfied	Agree
Did active learning occur	Agree

DISCUSSION

For improving the effectiveness of a lecture, the present teacher centric lecture must increasingly give way to student centric activities where the teacher is only a facilitator. In the words of Herbert A. Simon “More learning results from what the student does and thinks and only from what the student does and thinks. **(6)**

97.08 % of the students felt that the innovative technique was a very useful and an organized method of teaching. 96.11% of them could learn the chapter with ease and get a better review of the chapter. Organizing teaching has been noted as an important aspect of effective teaching. Effective teachers organize their classes in such a way that their classes facilitate learning **(7)** Moreover it is the prime responsibility of a teacher to facilitate learning by making the educational process easier for students. And any lecture would be easier to follow for the students when priming methods would compliment a lecture. Priming is nothing but orienting learners towards classes prior to the lecture. **(8)** Many priming methods were tried by various educational institutions like giving handouts to students before the lectures, giving prior projects allied to the subject

to be discussed, making students do a role play before a lecture etc. One such method we have tried is the open book objective questionnaire method.

99.02% of students felt that they could focus on main aspects of the chapter and recollect the chapter better with this method. It has been observed over the years that despite the best efforts by the teachers in reinforcing key concepts in their lectures, the students are not able to learn the key concepts. Research says that when students work together they retain information quicker and longer. Further, we have used ‘Repetition ‘as a key to facilitate better recollection. ‘Repetition ‘ is one concept that should be incorporated in all effective lectures. **(9)** One way to make sure students better recollect the class is to repeat what you have taught over and over again throughout the same class. Repetition is an important key in learning. In our teaching method, when the students answer the questionnaire they would be discussing the concepts among them for the first time, during the question & answer session conducted by the teacher there would be a repetition of the same concepts for the second time and lastly when the teacher summarises the lesson the concepts are again repeated for the third time. Therefore our novel method incorporates this key of repetition which could be the reason for the student recollecting the lecture better.

99.02% of students perceived it as a more effective, more interesting method of teaching which would help them in the theory exams as well as in the viva. Stress free and novel methods always inculcate interest in students **(10)** Further the use of innovative teaching techniques in medical education increase teacher and learner enthusiasm, interest, improve participation and develops techniques that are most appropriate to the learning goals. Moreover, the deviation from the typical classroom setting could have created interest. Strategic deviations from the formal classroom setting can incorporate a sense of fun, which can enhance learning. **(11)**

Feedback from the teacher revealed utmost satisfaction in conducting the method as every student participated and enjoyed the class. The

teacher felt that effective learning has occurred as almost all of the students could answer all the questions after the priming method. The satisfaction of the teacher could be due to the instructor taking on the role of a leader and providing motivational leadership which led to high student involvement in class and also because the teacher was successful in making learning process enjoyable. The teacher also felt that active learning has happened in the class.

An effective lecture as we all know should stimulate the students, should facilitate learning of key basic principles of the subject, should fit coherently into the overall teaching programme, be relevant and hold students attention, should be organized with a logical structure. Since all these criteria were fulfilled in our teaching innovation we infer that our method holds promise in delivering an effective lecture.

CONCLUSION

Priming, repetition and active learning are the three important keys for an effective lecture which influence student learning in medical schools. Our innovative approach leverages the concepts of priming and repetition, with the added benefit of learning support system within the more traditional learning model, to provide greater opportunity for teachers to affect the quality of participant learning outcomes. The success of this approach is also contingent upon the instructor taking on the role of a facilitator, assisting the students to make the learning process enjoyable also leading to high student involvement in class. The concepts of priming, active learning and repetition provide an excellent frame for an innovative learning system. In the present study, we propose a blended approach of priming, active learning and active learning for an effective lecture. But however, this innovative technique requires time, planning, a commitment to the teaching process and a belief that the resulting learning will be both more enjoyable and productive.

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