

“BLUNDER LECTURE” – NO MORE A BLUNDER: A REVISION TOOL IN COMMUNITY MEDICINE FOR MBBS STUDENTS**Praveen Kulkarni¹, Sunil Kumar D², Renuka M³, M R Narayana Murthy⁴**

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Abstract

Background: Community Medicine is considered to be a volatile subject and retention levels are low which demands for revision. Blunder lecture is an instructional strategy, which comprises the presentation of anomalous data or contradictory information which stimulates students to formulate their own queries and solve them by using their previous knowledge.

Materials and methods: This mixed method study was conducted among Seventh term MBBS students. After 15 days of initial lecture on the topic ‘Rabies’, blunder lecture was delivered incorporating 20 blunders. Each student was asked to identify them and mention in a checklist. Immediately after this all the blunders were revealed and perception of students was collected in a pre tested semi - structured questionnaire and focus group discussions. A structured long essay on the same topic was given in a subsequent internal assessment examination. Data was analyzed using Pearson’s correlation and unpaired t test. **Results:** Among 118 students who participated in the study, 64.4% identified ≥ 15 blunders. 97.5% students mentioned that blunder lecture helped them to recollect previous concepts, was useful in knowledge retention and 23.5% students opined that this method may result in remembering wrong information. The Focus Group Discussions (FGDs) also revealed similar information/response. There was a significant positive correlation between the number of blunders correctly identified and marks secured in internal assessment exam. The students who attended the blunder lecture secured significantly higher marks. **Conclusion:** Blunder lecture was found to be effective revision tool. This method had led to high retention level and performance of students in examination.

Key-words: Blunder lecture, Rabies, Community Medicine, Revision.

Introduction

Learning is a phenomenon that involves complex mental activities such as comprehension, recall, critical thinking and problem solving.¹ The goal for any facilitator or educational instructor is to provide the learners with the best learning tools available, so that they in turn can have thorough understanding, knowledge and relevant skills for their career.² There are multiple ways to impart knowledge on the learners, starting from the most ancient methods like lectures to the recent and most advanced techniques like virtual, simulation based and e learning platforms.³ Over the years it has been realized that interactive teaching methods are educational best practices and yield better student satisfaction compared to traditional didactic lectures.⁴

Adult learners like medical students are quite different in their learning style as they are not the clean white slates (tabula rasa) like children. Students come to learning situations with preconceived knowledge and understanding. A constructivist teacher uses this previous

knowledge to act as a base for the new knowledge that the student will create. Blunder lecture is one such method of challenging the students previous knowledge with anomalous information which stimulates students to formulate their own queries, allows them their own interpretations (reflection and synthesis of new knowledge), and encourages them to arrive at a correlation or conclusion in group work (collaborative learning).⁵

Blunder lectures are tried as teaching tools at different settings, but their utility is more if used as revision methods to reinforce the information which is already acquired by different means. Even though Community Medicine is taught across seven semesters in most of the MCI regulated Medical institutions, it is often seen that students start reading the subject only during the final year.² Thus the subject necessarily requires one or the other modes of revision or reinforcement in order to refresh the information and concepts among students.⁶ In the present study, we have tried to use Blunder lecture as a revision tool in Community Medicine among pre final

year MBBS students and assess its effectiveness in terms of their perception regarding the method and their performance in subsequent internal assessment examination.

Material and Methods

This mixed method study (Qualitative and Quantitative) was conducted among 7th term MBBS students studying in JSS Medical College, Mysuru in the year 2017. The study was approved by Institutional Ethics Committee. After obtaining informed consent from the students, an initial lecture on the topic “**Epidemiology and Prevention of Rabies**” was taken using Power Point Presentation. The date and schedule on which the blunder lecture will be conducted was not announced to the students.

After 15 days of initial lecture, blunder lecture was delivered incorporating 20 mistakes spread over different domains of cognitive learning using same instruction method. These students were asked to identify these blunders and mention them in a checklist. Immediately after the lecture, all the blunders were revealed to the students and the doubts on why these were blunders were clarified. Perception of students on this method of revision was collected in a pre tested semi - structured questionnaire which was self administered.

A week later, the students were categorized into three groups based on number of blunders they had correctly identified (<7 blunders, 8-14 blunders, 15 and above) and three focus group discussions were conducted to gather more in-depth information on what went well and what did not go well in the blunder lecture using a structured focus group guide which was face and content validated by three experts. The proceedings of the FGDs were recorded using a digital voice recorder along with field notes taken down by the recorder. At the end of three FGDs, when there was data saturation further enquiry was stopped.

A structured long essay on the same topic was given in a subsequent internal assessment examination to find out whether there was any correlation between the blunders they have identified and marks secured for the question. Effort was made to find out whether any of the blunders have been reproduced in the examination.

Statistical Analysis

Quantitative data analysis

Data collected was entered in MS Excel Spreadsheet and analyzed using SPSS version 23. Descriptive statistical measures like percentages, mean and Standard deviations were applied. Inferential statistical tests like Pearson correlation was applied to correlate number of blunders with marks obtained in the exam and Unpaired t test was

used for testing difference in marks between those attending and did not attend blunder lecture.

Qualitative data analysis

Qualitative data obtained from Focus Group Discussion using digital voice recorder were transcribed. The transcripts were analyzed manually by two analyzers trained in transcript analysis. The perceptions of students were listed across three pre defined themes namely, what went well, what did not go well and suggestions for improvement.

Triangulation of data was conducted by comparing the information through FGDs with that obtained by semi structured questionnaire.

Results

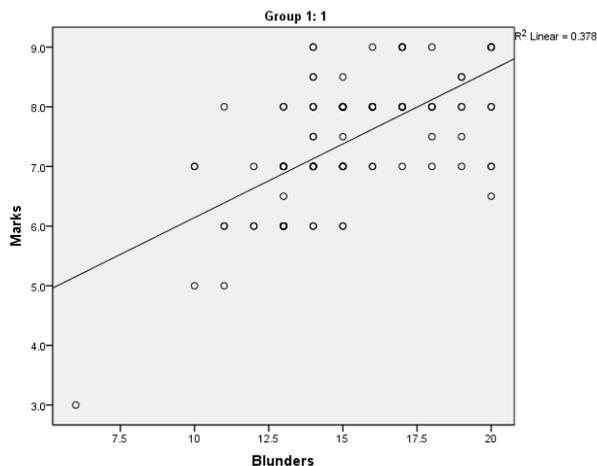
In the class of 206, 118 students were present for both initial lecture and blunder lecture. Among these students, majority 76 (64.4%) have correctly identified ≥ 15 blunders, 29(24.6%) detected 8-15 and only 13 (11%) students could identify less than 7 blunders.

115 (97.5%) students mentioned that blunder lecture helped them to recollect previous concepts, and was useful in knowledge retention. 113 (95.7%) mentioned that learning was more fun and helped them being alert in the class. 28 (23.5%) students opined that this method may result in remembering wrong information. There was a strong positive correlation between marks obtained by the students for question on Epidemiology of Rabies and its prevention (Maximum marks of TEN) and the number of blunders identified by the students ($r= 0.67, P<0.001$). The student who had attended the blunder lectured had secured 7.39 ± 1.30 marks compared to their counterparts who did not (4.41 ± 1.70). This difference was found to be statistically significant. Content analysis of answers suggested that none of the blunders were repeated in the examinations.

Table 1: Distribution of study subjects based on their perception on blunder lecture

Particular	Number	%
Helped us to recollect previous concepts	115	97.5
Was useful in retention of knowledge	110	93.2
Helped in memorizing the points quickly	104	88.1
Our concepts got cleared by such lecture	105	89
Helped to find one's learning needs	95	80.5
Learning was much more fun	113	95.7
Kept me alert in the lecture session	115	97.5
We were more attentive in class	113	95.5
The method may result in remembering incorrect information in the examination	28	23.7

Graph 1: Correlation between no. of blunders detected and marks secured in examination



Pearson’s correlation coefficient $r = 0.67$, $P < 0.001$

Table 2. Comparison of Marks of students who attended and not attended blunder lecture

Measures	Attended (n-118)	Did not attend (n-87)	P
Marks secured (Maximum Marks 10)	7.39 ±1.03	4.41 ±1.70	.001

Results of Focus Group Discussions

The results of focus group discussions are brought under the following three pre-defined themes, namely what went well, what did not go well and suggestions for future.

What went well?

Majority of students opined that blunder lecture is an innovative tool for revision of the concepts learnt in previous sessions in classroom. The session improves attentiveness, concentration level and retention of knowledge from previous classes.

- “One of the best revision tool”
- “Blunder lecture helped me to concentrate in class”
- “Made me realize my mistake”
- “Improves memorizing power related to lecture”,
- “Helps us to understand how much we remember of last class”,
- “Motivated us to be alert and learn”
- “Makes us think in depth”
- “Blunder lecture rocks !!”
- “We learn better when we find the mistakes of others”
- “Will not bunk lectures if it is continued”

Students also felt that blunder lecture was better than the contemporary revision and reinforcement tools like seminar, tutorial and unit test etc.

- “More effective than seminars”
- “It is better than mere revision classes”
- “Better alternatives to tutorials, in which hardly few participate”

Students also felt that blunder lectures break monotony and introduce fun in learning.

What did not go well?

Few students were of opinion that, the blunder lecture may end up in remembering wrong information.

- “Method may result in remembering incorrect information”
- “Sometimes it is confusing”
- “In the heat of the moment in exam we may reproduce wrong answer”

Students also raised the concerns on time consumption by blunder lecture as the same topic has to be repeated and also the amount of efforts to be put forth in designing and executing blunders.

Suggestions for future

Majority of students felt that blunder lecture should be used as a regular revision tool in Community Medicine in place of seminar and tutorials.

- “Make it regular revision tool”
 - “We want blunder lectures more than regular classes”
- Students also gave important suggestions like using blunder lectures as assessment tool, making willingness of students conduct the sessions instead of teachers, extend the mode to all the topics in Community Medicine etc. Students also felt that the schedule of blunder lecture should be announced well in advance so that they can brush up their memory and attend the class.

- “Blunder lecture can be used as an assessment methods also..!!”
- “Should be extended to all the topics”
- “Should be done for small group”
- “All the other departments can use this technique”

Overall students thoroughly enjoyed the session and felt that the theory lecture classes can be made more interactive by introducing techniques of this kind. They have described that Community Medicine is a volatile subject and taught over three years, revision classes are most essential and hence innovative methods like blunder lecture will surely help them to recollect the concepts.

Discussion

The concept of active learning is gaining much momentum especially in the field of medical education because the students do not want to be just the passive observers in the learning process.⁷ Hence, it is recommended that every effort should be made to encourage the use of active methods on firsthand experience.⁸ Blunder lecture is one such method of active learning which uses the cognitive conflict strategy by stimulating student ability of inquiry, reflection, and collaborative learning. The present study revealed that about three quarter of the student community could correctly identify the blunders incorporated in the class, similar observations were a made by Satendra Singh in

his study where the response rate was 80%. The very design of blunder lecture is so participatory that students are eager to spot the mistakes and in the process they learn and remember the concepts.⁵

Perception of students on blunder lecture, that the method improves the attentiveness, motivated to be alert, fun filled learning, improving memorizing power were similar to the studies conducted by Satendra Singh⁵ and Nayak et al.⁹ The common fact that emerges out of these statements is that, something which is uncommon is more interesting. Thus students enjoy the innovations and achieve larger level of satisfaction at the end of an educational experience.⁹ Our idea of using blunder lecture as a revision tool was fully endorsed by the students in the focus group discussion. They further recommended this mode of revision in all the other specialties as well. A unique observation of present study is strong positive correlation between blunders identified and the marks secured in the examination. This may be attributed to the fact that students remember the key points out of blunder lectures (which are correct) and stress them well in their examination, the same key points which the examiner identifies for his delight during assessment. My informal interaction with the paper assessors has also revealed the similar point, where one of the assessor mention “ I could easily get to see, the one which I wanted” .

Major concern at the beginning while designing the study was reproduction of blunders in examination ??? Similar to the previous two studies conducted in Anatomy and Physiology, none of the blunders were repeated in the examination. This might be because all blunders were corrected in the class itself and an opportunity was provided to discuss the issues further.

Our perceptive and experience of designing and executing a blunder lecture was encouraging in terms of students enthusiasm in terms of active participation and offcourse scoring better than their counterparts.

To conclude, the learning is a process directed towards developing ability for indepth thinking. Indepth thinking is essential because understanding is residue of thinking. Memorizing of contents delivered by teacher kills deep thinking. To encourage thinking we must create a joy, an excitement, and a love for learning. We must make learning fun; because if we are successful, our students will be impatient to run home, study, and contemplate-to really learn.¹⁰ Blunder lecture is one such technique which facilitates deep thinking with fun in learning. There is a need to give a serious thought on incorporating such interactive teaching tools in medical education in order to enhance the quality of output.

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