



RESEARCH ARTICLE

ASSESSMENT OF IMPROVEMENT IN PERFORMANCE OF FIRST YEAR M.B.B.S. STUDENTS IN DEMONSTRATION CLASSES BY USE OF OPEN BOOKS

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ARTICLE INFO

Article History:

Received 25th April, 2017
Received in revised form
11th May, 2017
Accepted 05th June, 2017
Published online 31st July, 2017

Key words:

Education,
Innovation,
Open book,
Students,
Performance.

ABSTRACT

Introduction: Teaching and learning is a two way method; but some traditional teaching methods are not sufficient enough to help students understand better. So there is a need for innovation as well as integrated teaching.

Aims and objectives: The study was aimed to find out the performance of the students of first M.B.B.S. in routine demonstration classes without books and with open books and to find out difference in performance between the open book method and traditional method.

Material and Method: The study was conducted with a strength of 100 students; with group of 50 students as study group and remaining 50 as a control group. Students of study group was introduced first to traditional method and then to open book method. After completion of study a surprise test was conducted. Later analysis and data collection was done and results were documented.

Observations: There were 44% male and 56% female students present in study group. Of these 98% found the method very interesting and 2% denied. Using this method interaction between students and teacher was more; agreed by 98%. 84% students strongly felt that this new method was good. Students felt that this method helps for better understanding of subject (70%), was easier for conduction (20%) and well organized (10%).

Conclusion: As the curriculum of medical education is too vast; teaching in a proper and innovative way is a necessity.

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Citation: Dr. Namrata N. Chavan, 2017. "Assessment of improvement in performance of first year M.B.B.S. students in demonstration classes by use of open books", *International Journal of Current Research*, 9, (07), 55010-55012.

INTRODUCTION

Teaching and learning is a two way method; but some traditional teaching methods are not sufficient enough to help students in better understanding of subject. Medical curriculum have reduced hours towards anatomy education and traditional lecture based anatomy teaching has been shown a very little effect on learners. (Ganguli, 2010) The approach should fulfill students requirement for learning and understanding and help them in improving their performance in exams. Knowledge retention is dependent on factors including intelligence, attitude and the learning strategies employed. The most effective methods of teaching and learning will increase knowledge retention. (Dominique *et al.*, 2014) Demonstration classes need improvement in teaching as most of the classes involve students participation to a very lesser extent. Students admitted to first year M.B.B.S. finds it difficult to remember the anatomical words as well as the structures. So a new innovative, integrated teaching method with students active participation is a need for better understanding of medicine.

Keeping in mind all requirements this study is planned to introduce a new and easy way of teaching by using open book method. This method is very easy to conduct as book is the only required material; which students usually bring. The study was aimed to find out the performance of the students of first M.B.B.S. in routine demonstration classes without books and with open books and to find out difference in performance between the open book method and traditional method.

MATERIALS AND METHODS

This study was carried out in Department of Anatomy of Rural Medical College, Loni over a period of 2 month on batch of 50 students of first M.B.B.S. admitted in year July-August 2014 with total strength of 125. Approval from Institutional Ethical committee was taken for this study.

Inclusion criteria

1. One batch of 50 students of first year M.B.B.S. students of 2014 batch.
2. Students willing to participate in study by taking verbal consent.
3. Students who are regular in attending classes.

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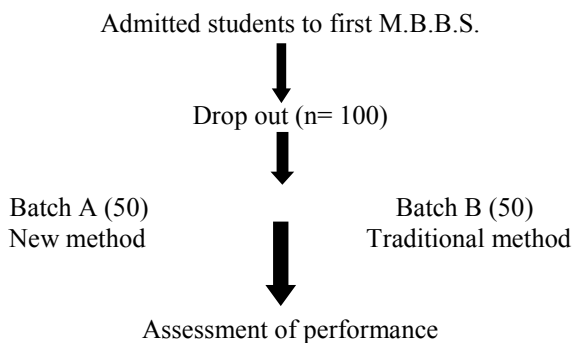


Photo 2. Assessment after completion of one region with innovative method

Exclusion criteria

1. Other batch of 50 students of first year M.B.B.S. students of 2014 batch.
2. Chronic alcoholic students were excluded from study.
3. Students on higher drug doses and those on medications for serious illnesses were excluded.

The outline of this study was as follows:-(conducted for osteology demonstration classes)

1. Introduction to the topics with traditional teaching method for first week was carried out. The traditional method followed for demonstration classes at present includes teaching the topic for one hour without use of open books. Then new teaching method was introduced from next classes by asking them to ‘read pictures’ of bones with attachments/labels for around 10-15 minutes initially on their own. Then the same topic was taught for rest of the time allotted for class (Eg. While teaching Clavicle bone students were asked to first see and read pictures with labels and then teaching was conducted).
2. After completion of teaching of upper limb bones with the above method; conduction of surprise structured MCQ test for this study group and control group was carried out for assessing the improvement in performance by new method.
3. Control group students were taught by routine/traditional method for all classes.
4. Feedback of this new method was taken from study group students.
5. Analysis of data was done and results evaluated.
6. Final outcome of new teaching method was then documented.



Photo 1. Introduction of new method

The data collected over the period of study was analyzed and expressed as percentage. Wherever required the data was subjected to statistical analysis.

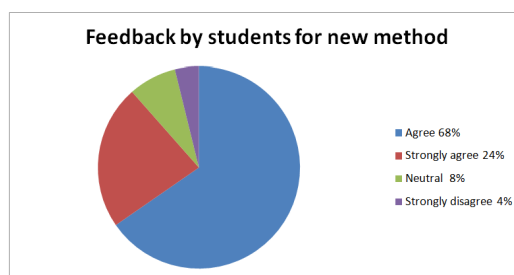
OBSERVATIONS AND RESULTS

A new teaching method with open book method was conducted. After completion of method feedback was taken by students. Also after completion of study a surprise MCQ test was conducted between study and control group and the results were compared. Feedback for the new method was taken on feedback form.

Results of feedback form is as follows

There were 44% male and 56% female students present in study group. Of these 98% found the method very interesting and 2% denied. Using this method interaction between students and teacher were more; which was agreed by 98%.

Acceptance for this new innovative method given by students is as shown in following pie chart:



This new method was better as for following points given by students:

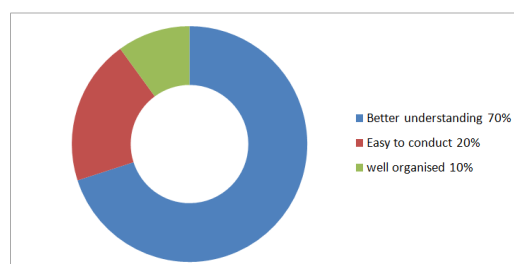


Table 1. Results of MCQ test

Study group			Control group		
61-70%	Range -	8-11	61-70%	Range -	5-11
	Mean value-	11		Mean value-	9
71-80%	Range -	9-16	71-80%	Range -	8-14
	Mean value-	13.46		Mean value-	11.36
81-90%	Range -	9-18	81-90%	Range -	10-17
	Mean value-	13		Mean value-	13.7

Students suggested that this method can be more useful if some factors are improved with respect of time duration (60%), content of teaching (16%), better organization (20%) and for new more methods/idea (4%).

Students rated this method as: (1=lowest score, 5= highest score)

- 1 - 0%
- 2 - 6%
- 3 - 14%
- 4 - 60%
- 5 - 20%

This rating indicates that this method should be followed and implemented in future classes.

Results of MCQ TEST is as below

Students are categorized based on their academic performance of Higher secondary examination.

The above table showing test results indicates that for students of higher academic performance this method doesn't make any major difference; but for students of lower academic performance this method does help in improving their performance.

DISCUSSION

Innovation is must for medical teaching. As the curriculum of medical education is too vast teaching in a proper and innovative way is a necessity. Frequency of using any newer method in demonstration classes is very less. Various innovative methods were implemented previously for various types of classes as audio-visual aids, demonstration models, videos etc (Ganguli, 2010). These methods definitely improve the teaching quality and level of understanding. But for these kind of methods some arrangements are required as LCD projector, electricity etc. So to simplify innovative methods use of open books was decided; as it is very easily available. Students understand more by spending less time in the traditional methods. (Ganguli, 2010) As this was a new, innovative study we did not find similar references in medical curriculum. Use of this method helped students to understand anatomical terms better and retain the subject for longer time. Students were active during teaching as they were familiar with pictures and acquainted with terminology; which was not seen in earlier classes. As seen from results of MCQ test (Chaurasia,

2007) this method helped students with lower academic performance to perform better; which will also help them to score more in viva during examination (Table 1). Also from the feedback received from students they all were satisfied and happy from this new method. Also the method helped them for better understanding and recollection.

Conclusion

This new method proved to be effective tool of teaching in demonstration classes as it is easier to conduct and helps in better retention. This method and similar such methods should be followed for medical teaching as we have to cover more syllabus in less time.

Acknowledgements

I thank all MET faculty for their help, support and guidance. I also thank my Head of Department of Anatomy and students of first M.B.B.S. at RMC, Loni.

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