

Motivation of 1st MBBS Student's by Active Learning with the Help of Poster Presentation Competition

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Abstracts: Background: All the metabolic pathways, reactions, regulations... Biochemistry seems to be very difficult for 1st MBBS students. Consequently most advanced topics, without a strong basis, difficult to learn, understand, remember and recall. Hence there is no motivation to go ahead for subject studies and leads to difficulty in correlating the knowledge of Biochemistry with clinical conditions. **Aims & objectives:** i) To improve the 1st MBBS student's learning process by active participation in poster presentation competition. ii) The students should be able to study the Biochemistry actively, interestingly. **Material & Methods:** From 150 students, 30 groups each with 5; were formed. The topics selected for the poster presentation competition were having clinical application. Pre-test viva was conducted before, and post-test after the poster presentation. Posters were assessed, by the subject expert and 2 senior teachers. Three best posters were awarded. **Results:** Improvement in performance of students in post-test (Mean 6.993 ± S.D. 1.358) after the poster presentation was highly significant than the pre-test (Mean 4.779 ± S.D. 1.447) (p < 0.00). Group discussion allows student to recognize meanings, express themselves in the language of the subject. The students gain a degree of self-direction & independence in their studies. **Conclusion:** Poster presentation proved that, it is a useful tool for the motivation of 1st MBBS biochemistry students for studies; & helpful to prepare students to satisfy their clinical responsibilities. **Take Home Message:** Such type of motivation when used for all 3 basic subjects of MBBS will be helpful to build the basics of the student. [Dhonde S NJIRM 2014; 5(6):98-102]

Key Words: Active learning, Poster presentation, 1st MBBS students

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Introduction: Biochemistry seems tough to all MBBS students. All the metabolic pathways, reactions, regulations are very difficult to remember & recall for the 1st M.B.B.S. Students. Consequently most advanced topics, without a strong basis, hard to learn, understand, remember and recall. As there is no motivation to the students, to go ahead for subject studies; this leads to poor ability of students to correlate their knowledge with clinical conditions. This scenario stimulates us to think on the use of active learning methods, which involves the student.

For last 5-7 years we are organizing students' seminar activity on different topics of Biochemistry & the best seminars were awarded. With this active learning method only the students who are presenting the seminar were clear with their topics. Out of 150 only 30-40 students have advantage of this. Rest of the students does not participate actively in such activity.

Usually lack of motivation, inability to grasp & retain, are the factors which hinders students'

learning with traditional passive transmission of knowledge during lecture hours. We agree the fact that the purpose of teaching is to facilitate learning & encourage the learners to learn more effectively; & the more effective the learning experience, better is the learning¹. Active learning involves learners during the learning process i.e. learning by doing & thinking about what you are doing². So this year we thought to involve all 150 students in such activity, & we organized a poster presentation competition. In this all students will be engaged actively for learning. We considered this will help to improve their learning process by active participation.

Aims and Objectives: i) The students should be able to answer the questions of pre-test viva after the completion of didactic lecture on the topic allotted for poster presentation.

ii) The student should prepare poster presentation as per the directions and with preparation.

iii) The students should be able to answer the questions of post-test viva after the poster presentation on the same topic answered for pre-test.

iv) The students should be able to study the Biochemistry actively, interestingly.

Material and Methods: This work was carried out in the Department of Biochemistry, Bharati Vidyapeeth Deemed University Medical College and Hospital, Sangli; during the year 2013-2014. In this project all 150 students of 1st MBBS were involved for poster presentation competition. From these 150 students, 30 groups of students were prepared each group including 5 students. Groups were formed according to the roll numbers. The topics selected for the poster presentation competition were having clinical application, which will help them in future also. e.g. Diabetes Mellitus, Gout, Fatty Liver, Ketosis, Enzyme inhibition, Oxidative phosphorylation, Phenylketonuria etc.

A poster is a visual presentation, attractive, interactive and dynamic; showed on a board where the ideas, results or communications are presented. Poster presentation has flexibility, space saving, long term availability, most interactions and more effectiveness in conveying the ideas.³ Idea of poster presentation was properly explained to all students. Liberty is given to students to use their creative ideas. But the material of the topic which would be presented was checked by the teachers to avoid the misconcepts about the topic. All groups were given idea about the area allotted for display, and instructed that any one of the group members will have to defend the viva, so that each student has to prepare perfectly.

Pre-test as viva, on the topics presented by the groups was conducted before the competition announcement. Pretest was viva of every student of all groups and was conducted at the department by all the subject teachers. Questionnaire for each topic was prepared which was same for pre and post-test. Marks allotted for each of the test (pre & post) were 10. Again at the time of the poster presentation post-test viva was conducted by the subject expert with the same questionnaire. Other

two senior teachers, (1 from dept. of Anatomy, & 1 from Community Medicine), assessed overall presentations, creative ideas applied, interaction of the student presenter with teacher and other students. Three best posters were awarded.

But the assessment of subject teachers was only considered for post-test viva. Results of both pre and post-test were compared. Results of both tests analyzed statistically by using paired 't' test.

All these posters were exhibited and the exhibition was open to all departments of Medical, Dental, Nursing students & faculty members. The huge & warm response to this exhibition was cheerful to us.

Results:

Table 1:

	Marks of Viva- Pre poster presentation	Marks of Viva- Post poster presentation
Mean	4.779	6.993
S.D.	1.447	1.358

t value – 15.71, p value- 0.00

There is statistically highly significant increase in marks of viva – poster presentation in post-test. (p value- 0.00)% change in the improvement of performance was 45.71%

The results of post-test viva (Mean 6.993 ± S.D. 1.358) after poster presentation were highly significant (p < 0.00) than the pre-test results (Mean 4.779 ± S.D. 1.447) before poster presentation. Our results were supported by the work of R. Montufar-Chaveznavia and co-workers who observed motivation of learning by poster presentation session³. Bernacki M.L., Nokes-Malach T.J. and Alevin v also had studied motivational states as pre and post questionnaire⁴.

Just reading without interest and understanding the subject is of no use for recalling or retaining. But when the topic is discussed in a group, the understanding of that topic is improved, and it is easy to recall or retain. Because the content

remembered are more likely to be linked storage that can be retrieved more effectively in the future.

The students used photographs, 3D models, cartoons to explain the subject effectively. Presentations were displayed in very decorative manner also. The performance of the students after poster presentation was improved than before. The reflective & self-directed nature of learning in practice is also widely recognized in the context of medical education as an important aspect of the professional development of students⁵.

Competition helps them to motivate for group discussion, interaction with each other & with teachers for clearing their doubts, better understanding, recalling. Group discussion can allow student to recognize meanings, express themselves in the language of the subject. Discussion can also develop the more instrumental skills of listening, presenting ideas, persuading & working as a part of team. This can or should give students the chance to monitor their own learning & thus gain a degree of self-direction & independence in their studies⁶.

Models of self-regulated learning describe the complex and dynamic interplay of learner's cognitions, motivations, and behaviours when engaged in learning activity.

There was improvement in the learning process of 1stMBBS students by active participation. Therefore poster presentation competition served as an effective tool for motivation of students' learning. All the students and faculties visited the poster exhibition were appreciated the idea of poster presentation competition as an active learning method and creative ideas of the presenters.

Conclusion: Though poster presentation is somewhat difficult to first year MBBS students and this concept was not applied anywhere for Biochemistry learning, we tried to apply it. Students enthusiastically involved and participated in this poster presentation competition. They enjoyed preparation of poster, loved their interactions with their classmates and teachers.

Most important thing is development of interest in the subject study, motivation. Finally they realized the clinical importance of the Biochemistry.

Students motivated for better learning, by presentation which may be due to associated emotional expressions, attentions, concentration during the preparation of poster. As this activity improves learning of 1stMBBS students, such type of activities when frequently used it will help to build the knowledge of Biochemistry and its clinical importance for 1st year student.

Take Home Message: Such type of motivation when used for all 3 basic subjects of MBBS, it will help to build the basics of the student.

Photographs of Posters, Presentations and Evaluation:

Figure 1:



Figure 2:



Figure 3:



Figure 6:



Figure 4:



Figure 7:



Figure 5:

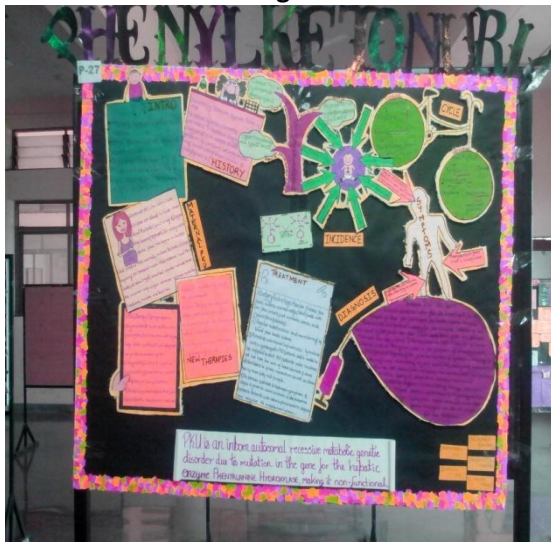


Figure 8:



Figure 9:



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