



ORIGINAL ARTICLE



FAD (Formative Assessment using panel Discussion)- A useful tool for medical undergraduate students

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Abstract

Introduction- Assessment plays an important role in medical education as it can stimulate & also direct the students towards what they should learn. In this study, we have highlighted that Panel discussion could be a good method of formative assessment for medical undergraduate students.

Material & Methods- The study was carried out on 51 students of 8th semester MBBS. The topic which was already covered by the faculty pertaining to Obstetrics & Gynaecology in a didactic lecture was again discussed in a 2 hour session in the form of a panel discussion.

Observations & Results- 31.3% and 58.8% students strongly agree and agree respectively that panel discussion helps in better understanding of the topic. 17.6% and 60.7% students strongly agree and agree respectively that this method helps in preparing better for exams. 68.6% students wished that panel discussion should be introduced as an adjunct to traditional didactic lecture on a regular basis in teaching methodology while covering a particular topic especially in clinical subjects.

Conclusion- From student's feedback and supervising faculty's observation, we conclude that "Panel discussion" is a highly effective method of active learning which enhances critical thinking and also the communication skills of the students.

Keywords: Medical education, active learning, bloom's taxonomy, cognitive skills

1 | INTRODUCTION-

Bloom's taxonomy contains six categories of cognitive skills ranging from lower order skills like remembering, understanding & application requiring less cognitive processing to higher order skills like analysis, evaluation & creation requiring deeper learning and a greater degree

of cognitive processing. Bloom's taxonomy highlights the need for including learning objectives that require higher level of cognitive skills that could lead to deeper learning & transfer of knowledge & skills [1]. Information is generally provided to the students through conventional approach as didactic lecture or chalk-talk method. However, to provide insight into understanding, comprehension and an-

alytical domain of education more student centric methods may be required as small group discussions, problem based learning etc. Formative assessment is a part of the developmental or ongoing teaching-learning process as in this type of assessment teachers provide a constructive guidance & feedback to students after assessing their performance [2, 3]. This feedback can help the students to correct their mistakes and improve their learning. Panel discussion among undergraduate medical students is a novel method of interactive teaching, which can increase students understanding and analysis and at the same time give them an opportunity to improve their communication skills in terms of answering questions and also gives them the confidence to face an audience, which in this case may be supervising faculty and fellow students. This is a good method of formative assessment as constructive & corrective inputs given by teacher can improve the learning of student participating both as panelists and also as audience.

On search of literature, we could not find many studies, where panel discussion has been used as an interactive teaching learning method. Here, in this study we carried out a panel discussion on particular topics in Obstetrics & Gynaecology & Orthopaedics to evaluate if this method of teaching increased their understanding, confidence and helped in preparing for exams and should be used in addition to conventional teaching methods.

2 | MATERIAL & METHODS

This was an experimental study carried out on 8th semester MBBS students (n=51). The topic which

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was already covered by the faculty pertaining to Obstetrics & Gynaecology in a didactic lecture was again discussed in a 2 hour session in the form of a panel discussion. The whole class was asked to go through the topic and 5 candidates were selected randomly to form a panel, with one member acting as a moderator and rest as the panellists. The whole panel was asked to prepare questions on the said topic, covering relevant areas of pathology, clinical features and the case scenario on a power point preparation. These were then checked by faculty incharge of the class and questions were modified and edited as per requirements. The panel discussion was carried out in front of the whole class under supervision of the senior faculty. The questions were asked by the moderator and answered by the panellists. The faults in answering the questions were pointed out by the faculty while guiding them to correct responses. Some questions were known to all students of the class to increase their participation, motivation and active involvement.

After the session a prestructured questionnaire was given to the entire class to give their feedback regarding the pattern of learning methodology. The questions pertained to the fact whether panel discussion helped the students in better understanding of the subject and whether it should be supplemented to the routine teaching pattern etc. and their answers analysed.

3 | OBSERVATIONS & RESULTS

72.54% students had undergone panel discussion before while 27.45% did not undergo any panel discussion before.

98% students did not know the answers to most of the questions asked in the panel discussion while 2% knew about them.

31.3% and 58.8% students strongly agree and agree respectively that panel discussion helps in better understanding of the topic while 9.8% did not feel so.

21.5% and 66.6% students strongly agree and agree respectively that this method is helpful in supplementing the routine teaching while 11.7% do not feel

TABLE 1: Q3- Panel discussion helps in understanding topic better?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Don't agree	5	9.8	9.8	9.8
	Agree	30	58.8	58.8	68.6
	Strongly agree	16	31.4	31.4	100.0
	Total	51	100.0	100.0	

TABLE 2: Q4- Should Panel discussion supplement routine teaching?

		Frequency	Percent	Valid Percent	Cumulative Percent
a	Don't agree	6	11.8	11.8	11.8
	Agree	34	66.7	66.7	78.4
	Strongly agree	11	21.6	21.6	100.0
	Total	51	100.0	100.0	

so.

17.6% and 60.7% students strongly agree and agree respectively that this method helps in preparing better for exams while 21.5% did not feel so.

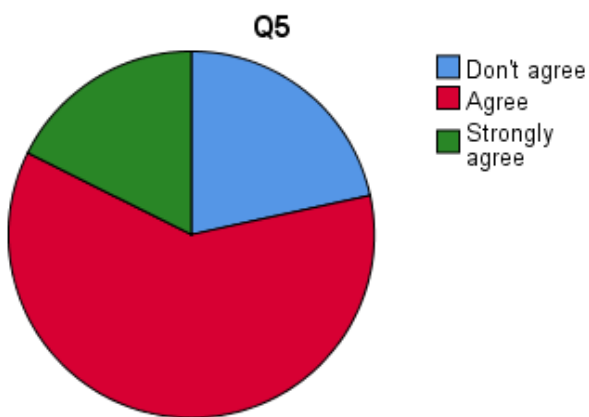


FIGURE 1:

13.7% and 56.8% students strongly agree and agree respectively that the panel discussion helps in increasing confidence to face the exams while 29.4% did not agree to it.

25.4% and 60.7% students strongly agree and agree respectively that panel discussion has increased the relevance of the topic taught and 13.7% did not agree to it.

68.6% students wished that panel discussion should be introduced as an adjunct to traditional didactic lecture on a regular basis in teaching methodology

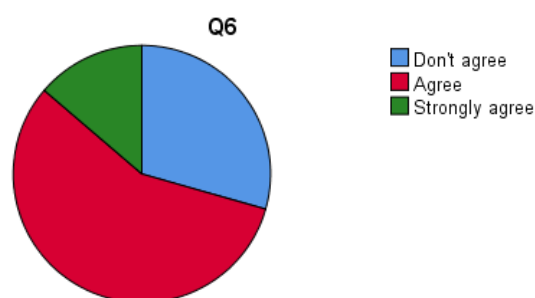


FIGURE 2:

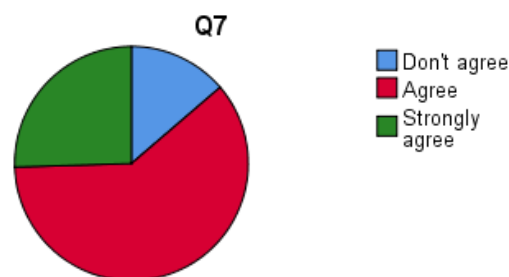


FIGURE 3:

while covering a particular topic especially in clinical subjects.

4 | DISCUSSION

In a study by J. Dacre et al, on how should we be teaching our undergraduates, panel discussion is defined as “a discussion in which few persons carry on a conversation in front of the audience and the

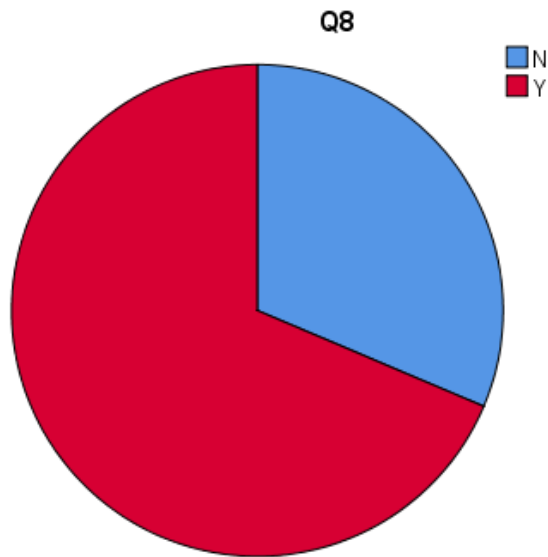


FIGURE 4:

objective is to provide information and new facts & to provide full understanding of the topic” [4].

We propose that didactic lecture is a good method to provide information or knowledge about a particular topic, but to improve the student ability to understand and analyse that information, more student centric teaching learning methods as mock viva, panel discussions should be adopted and incorporated during undergraduate teaching. Since panel discussion is entirely carried out by the students, under direct supervision of the faculty, there is more involvement of students and a better ability of their insight and understanding of the topic can be gauged by the faculty through their responses. In a study carried out by Murugan et al, find out perception of the medical students on the utility of panel discussion to enhance learning, they found that 90% students regarded this method as an useful method of learning by grading it as moderate, high and very high [5]. Less than 1/4th of the students felt that they could not comprehend the topic. In our study also 9.8% of the students felt that it did not improve their understanding, though 90.1% feel it enhanced their understanding and comprehension.

Teaching with admixture of humiliation and peer pressure is not conducive to learning and should not be happening. Special consideration was taken by faculty to ensure that none of the panelist feel

humiliated at any point even if they make a mistake and special effort was taken to ensure they realize their mistake, while at the same time guiding them to the correct answers.

Sudhendra kulkarni in his study on evaluation of small group discussion in teaching method, concluded that like earlier studies there was a significant improvement in performance of students after a small group discussions as assessed by a pretest and post test questionnaire [6]. The author also concluded that for small group discussions more faculties are needed in the department.

Sarah Edmunds and George Brown have proposed that communication and cognitive skills of the tutor and the students are the basis of effective small group learning and the methods used & questioning, listening and responding are key skills for tutors and students to develop [7]. Formative assessment is a good method to determine students critical thinking, decision making, communication skills, and at the same time giving the inputs to help them improve their shortcomings. Panel discussion is an important tool for formative assessment. The only problem which the authors encountered was to stimulate more participation from students who were the audience in that class. Same questions were thrown to the audience to promote more interactive teaching and questions not answered satisfactorily by panelists were passed to the audience. The faculty incharge noted that interactive teaching was better than in a traditional class, but few students who are more vocal, always show more interest and engage in a good discussion.

Lucelio B Conto in her study investigated the correlation among formative assessment in tutorial session with grades obtained in objective structured clinical evaluation (OSCE) and progress testing (PT) to better understand the assessment process in a PBL (problem based learning) in medical teaching and to predict student future performance and concluded that assessment strategies in PBL approach, including formative assessment, OSCE and PT has positive correlations [8].

Androgogy (adult education) is basically self directed learning. In such student centric learning the teacher initiates and stimulates the student and stu-

dent's own interest and efforts are required to actively participate in small group learnings, such as panel discussions, mock viva etc. Such modes of learning help the student to acquire critical thinking, decision making, communication skill & confidence to face an audience. In a study on modified conventional method with group discussions appears to be better than traditional teaching and have also highlighted the importance of increased student's efforts, probably including group discussions & revisions to improve understanding and subject retention [9].

In a study by Jarina Begum et al [10], on interactive teaching in undergraduate students, they used various interactive methods as think-pair share, buzz session, case based learning and pass the problem. They concluded from their study that after introduction of the interactive teaching module, student performance was increased in terms of knowledge, interaction, attendance and engagement in class. An in depth interview with faculty showed a positive response towards interactive learning, although time, resources, lot of planning, fear of losing control and not finishing the content in time were the big concerns for all.

5 | CONCLUSION

“Panel discussion” is a very good method of formative assessment for medical undergraduate students, as it is interesting and interactive and provides a good insight into critical thinking, decision making ability of the students. Communication skills and confidence to face an audience can also be analysed and improved by inputs by the faculty supervising the panel discussion. However both faculty and students have to show interest and put more efforts for utilizing this teaching learning method in routine academic classes.

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