ORIGINAL RESEARCH PAPER
Volume - 14 | Issue - 06 | June - 2025 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

INTERACTIVE TEACHING IN MEDICAL EDUCATION-A MULTI STAKEHOLDERS PERSPECTIVE

Community Medicine

Seema Jain	Professor, Department of Community Medicine, LLRM Medical College, Meerut.
Sanjeev Kumar	Professor, Department of Community Medicine, LLRM Medical College, Meerut.
Neelam S. Gautam	Associate Professor, Department of Community Medicine, LLRM Medical College, Meerut.
Harimu Bargayary	Senior Resident, Department of Community Medicine, LLRM Medical College, Meerut
Kraty Singh	Junior Resident, Department of Community Medicine, LLRM Medical College, Meerut.
Anjali Karanwal	Junior Resident, Department of Community Medicine, LLRM Medical College, Meerut.

ABSTRACT

Introduction- Medical education is shifting from a teacher-centred to a student-centred approach, emphasizing active, self-directed learning through interactive methods. This study aims to assess feedback from both students and facilitators/observers to understand the effectiveness and impact of such approaches. **Methods –** This quasi-experimental study was conducted among MBBS students, residents, and faculty at LLRM Medical College to assess the perception about traditional and interactive teaching methods. Feedback was collected using questionnaires and analysed quantitatively. **Result -** The study involved 44 students and 14 facilitators. While facilitators largely supported interactive teaching for promoting self-learning and identifying gaps, student feedback was mixed. Most stakeholders preferred a blended approach combining both methods. **Conclusion-**Interactive teaching methods enhance engagement and skill development in medical education but require institutional support, faculty training, and resources for effective implementation and scalability.

KEYWORDS

Interactive Teaching, Medical Education, Student-Centred Learning

INTRODUCTION

Medical education has traditionally been teacher-focused but is now beginning to shift to a student-centred approach. Increasingly, there is emphasis from educationists in the field of medicine to adopt student-centred approaches. There is a continuing need for reform in undergraduate medical education to address the evolving needs of practice.[1] Medical schools are also undergoing modifications in teaching methods and curriculum to empower students to take active roles in learning and to equip them for lifelong independent learning. [2]

A teacher's role extends to guiding students to become active, self-directed learners. The facilitator's job is to lead discussions, ask open-ended questions and ensure students are actively engaged.[3] A skilled tutor encourages critical thinking and helps learners navigate and evaluate information to solve problems.[4] Interactive strategies like problem-based learning (PBL), case-based learning (CBL), team-based learning (TBL), flipped classrooms, and simulation-based training have gained popularity. These approaches encourage active engagement, critical thinking, and the application of practical knowledge. Their success, however, relies to a great extent on faculty and student acceptance.[5]

While there have been many studies about the efficacy of such approaches, there is very little literature examining combined feedback from both learners and educators. This study seeks to bridge this gap by gaining holistic perspectives from both the learning and teaching communities, hence getting both sides of the story about implementing interactive approaches and their impact.

Aims and Objectives

1. To assess the perception of teachers or facilitators or observers regarding the impact of interactive teaching.
2. To determine the student-reported outcomes and overall satisfaction between traditional and interactive teaching sessions.
3. To compare teaching method preferences by different stakeholders.

MATERIALS AND METHODS

The present study was an Experimental study (A non-randomized quasi-experimental cross-over trial) conducted from August 2024 to January 2025. The study participants were Residents, faculty and Undergraduate MBBS students attending Clinical postings in the Department of Community Medicine at LLRM Medical College, Meerut, Uttar Pradesh

All students attending the Clinical postings from two batches present on the day of the planned intervention, gave consent for participation and completed their forms were included, while students absent on the day of the intervention were excluded from the study. Data for the study was collected using a pre-designed questionnaire to evaluate the impact and feasibility of the interactive teaching method. The interactive teaching methods used were Problem-based learning, Case-based learning and Fish bowl technique. First, the facilitators and observers were trained for conducting interactive teaching by explaining the different methods of interactive teaching. Later, the students were briefed for the same. The classes were conducted using both traditional and interactive teaching methods and feedback recorded using a tool that comprised several sections to record quantitative feedback from students, facilitators, and observers. Feedback was gathered using a Likert scale and open-ended questions to evaluate the impact of interactive teaching.

The data thus collected were entered into MS Excel and statistical analysis was performed using Epi Info (ver. 7.2.5.0). Categorical variables were summarised as frequency counts and percentages. Ethical clearance was obtained from the ethics committee of Lala Lajpat Rai Memorial Medical College, Meerut.

RESULTS

The study was done among 44 students and 14 facilitators.

Table 1: Feedback Responses by Facilitator or Observer. (n=14)

Statement	Strongly Agree	Agree	Un-certain	Dis-agree
	No. (%)	No. (%)	No. (%)	No. (%)
Facilitation/Observing enhanced self-learning through interactive teaching method	4 (28.6)	9 (64.3)	1 (7.1)	0 (0)
Interactive teaching can enhance better subject learning among subjects	5 (35.7)	7 (50)	2 (14.3)	0 (0)
Facilitator role in interactive teaching can improve your teaching skills	6 (42.8)	8 (57.2)	0 (0)	0 (0)
Interactive teaching is more useful than traditional lectures	2 (14.3)	8 (57.1)	2 (14.3)	2 (14.3)
Interactive teaching provides students autonomy & student-centered learning	5 (35.8)	7 (50)	1 (7.1)	1 (7.1)

Interactive teaching method helped better in identifying the learning gaps among students	5 (35.8)	7 (50)	1 (7.1)	1 (7.1)

The table 1 presents feedback from facilitators or observers regarding the Interactive teaching method, highlighting its effectiveness in enhancing learning and teaching. The majority of respondents felt that interactive teaching promoted self-directed learning, with 64.3% agreeing and 28.6% strongly agreeing. Most respondents also believed it could enhance subject learning, with 50% agreeing and 35.7% strongly agreeing. In terms of improving teaching skills, 57.2% agreed and 42.8% strongly agreed that facilitating Interactive teaching helped improve their own teaching abilities. Regarding its comparison to traditional lectures, the response was mixed, with 57.1% agreeing that it was more useful, while 14.3% disagreed. Interactive teaching was also seen as student-centred learning with 50% agreeing and 35.8% strongly agreeing that it provided autonomy and fostered student-centred learning. Additionally, 50% of respondents agreed and 35.8% strongly agreed that the interactive method helped identify learning gaps among students, indicating its effectiveness in addressing such gaps. None of the participants had a strong disagreement to any of the questions asked.

Table 2: Feedback from Students on Traditional and Interactive Teaching Methods (n = 44)

S. No.	Statement	Responses	Traditional Teaching	Inter-active Teaching
			n (%)	n (%)
1.	Would you rate your understanding on the topic better after the session?	Strongly Agree	17(38.6)	5 (11.4)
		Agree	27 (61.4)	31(70.4)
		Neither Agree nor Disagree	0 (0.0)	8 (18.2)
		Disagree	0 (0.0)	0 (0.0)
		Strongly Disagree	0 (0.0)	0 (0.0)
2.	Do you think your problems regarding the topic has been completely met during the session?	Strongly Agree	15 (34.1)	3 (6.8)
		Agree	29 (65.9)	32 (72.7)
		Neither Agree nor Disagree	0 (0.0)	7 (16.0)
		Disagree	0 (0.0)	2 (4.5)
		Strongly Disagree	0 (0.0)	0 (0.0)
3.	Do you think your interest in the topic has been stimulated after the session?	Strongly Agree	13 (29.5)	5 (11.4)
		Agree	29 (66.0)	28 (63.6)
		Neither Agree nor Disagree	2 (4.5)	8 (18.2)
		Disagree	0 (0.0)	3 (6.8)
		Strongly Disagree	0 (0.0)	0 (0.0)
4.	Would you rate your knowledge better on the given topic after the session?	Strongly Agree	10 (22.7)	2 (4.5)
		Agree	34 (77.3)	35(79.6)
		Neither Agree nor Disagree	0 (0.0)	6 (13.6)
		Disagree	0 (0.0)	1 (2.3)
		Strongly Disagree	0 (0.0)	0 (0.0
5.	How satisfied are you with the teaching method used for the given topic?	Very Satisfied	17 (38.6)	3 (6.8)
		Satisfied	27 (61.4)	15 (34.2)
		No Opinion	0 (0.0)	9 (20.4)
		Dissatisfied	0 (0.0)	15 (34.1)
		Very Dissatisfied	0 (0.0)	2 (4.5)

Table 2 summarizes student feedback on Traditional and interactive teaching methods after a class conducted on the same topic. A greater proportion of students in the interactive group (70.4%) agreed their understanding improved compared to 61.4% in the Traditional group, though more students in the Traditional group strongly agreed (38.6%) than in the interactive group (11.4%). Both methods were effective in addressing problems, but interactive teaching had a higher percentage of students who felt their issues were fully resolved (72.7%). Traditional Teaching was slightly more successful in sparking interest, with 66.0% of students agreeing compared to 63.6% in interactive. In terms of knowledge gained, the Traditional group had 77.3% of students feeling improvement, while 79.6% of Interactive students reported the same. Overall satisfaction was higher for Traditional Teaching, with 61.4% satisfied and 38.6% very satisfied, whereas Interactive Teaching had only 34.2% satisfaction and 34.1% dissatisfaction. In conclusion, Traditional Teaching generally received more positive feedback on understanding, interest, and satisfaction, while Interactive Teaching was more effective in addressing student concerns.

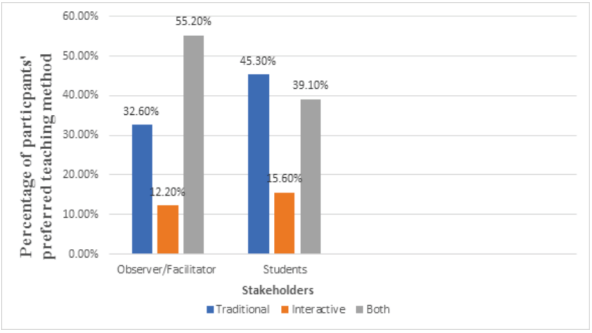

Figure 1: Overall Feedback from the Different Stakeholders Regarding the Preferred Teaching Method.

Figure 1 illustrates the varying preferences for different teaching approaches among different stakeholders. Among Observers/ Facilitators, the majority (55.2%) preferred a combination of both traditional and interactive methods, while 32.6% favoured traditional and only 12.2% preferred interactive methods alone. In contrast, most Students (45.3%) favoured traditional teaching, followed by 39.1% who preferred a blended approach, and 15.6% who supported interactive methods.

DISCUSSION

The study demonstrated that the Interactive Teaching technique significantly enhanced student learning outcomes compared to Traditional Teaching. Previous studies, such as those by Hadimani (2014) [6] and Savkar (2016) [7], support these findings, highlighting that small group discussions improve understanding by fostering active participation and peer interaction. Facilitators also observed that Interactive Teaching encouraged critical thinking and problem-solving, though initial hesitation in participation was noted, as reported in Kalra (2015) [8] and Bhide (2019) [9].

Studies by Pavani (2016) [10] and Rabbani (2023) [11] suggested that interactive teaching methods enhance engagement and long-term retention, which aligns with the current study's results. Interactive teaching allowed students to discuss real-world environmental challenges, improving their analytical and decision-making skills. Additionally, student feedback revealed a preference for Interactive Teaching due to its interactive nature, which made learning more practical and relatable. Similar findings were seen in research by Sahu (2017) [12] and Vasudevan (2024) [13] that student-centred approaches, such as Problem-Based Learning (PBL) and Fish Bowl Technique, enhance conceptual understanding and self-directed learning. However, challenges in managing group dynamics and ensuring equal participation were noted, with some students preferring passive learning environments.

CONCLUSION AND RECOMMENDATIONS

This study demonstrates that Interactive teaching methods are well-received by both students and faculty. While interactive methods align with the goals of contemporary medical education, particularly the cultivation of essential professional skills such as communication, leadership, and ethical reasoning, the persistent shortage of qualified faculty, time constraints, limited institutional resources, and insufficient faculty training poses a challenge to the scalability of small-group, learner-centred models. The institutions must support the needed infrastructure and instill innovation culture in teaching interactive teaching so that it evolves as a backbone of contemporary medical education.

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