PREFERRED TEACHING TECHNIQUES AMONG UNDERGRADUATE MEDICAL STUDENTS AT A PRIVATE MEDICAL COLLEGE IN LAHORE

Humayun Mirza,[1] Seema Daud,[2] Hina Ali,[3] Farheen Ahmad,[4] Bilal Ahmad,[5] Shazray Zaffar[6]

ABSTRACT

Background and Objective: With ongoing educational reforms, understanding the teaching styles adopted by medical faculty is crucial for refining instructional strategies and enhancing learning outcomes. Limited research has explored the distinct teaching approaches employed by medical educators. This study aims to identify the preferred teaching methodologies among undergraduate medical students at Lahore Medical & Dental College, Lahore, Pakistan.

Methods: This cross-sectional study was conducted over a four-month duration from March to June 2023 at LM&DC, Lahore. All 131 students registered in fourth year MBBS were taken as the study population. Approval from the Institutional Review Board (IRB) LM&DC was obtained and an informed consent was taken from the participants. Data were collected using a modified questionnaire. A structured questionnaire was developed by adapting validated items from prior studies on medical education to assess preferences for lectures, small group discussions, scenario based learning and other techniques. The collected data were analyzed using the Statistical Package for Social Sciences (SPSS) version 22 and presented through tables.

Results: The results showed that most of the students (95.4%) were strongly in favor of practical hands-on activities and Case-Based Learning Scenarios, followed by clinical rotations and practical exposure for which 93.9% participants agreed, while the least preferred method was lectures to which only 54.2% agreed.

Conclusion: This study underscores the importance of adapting teaching methods to align with students' preferences. Incorporating a variety of teaching techniques, such as small group discussions and practical activities, alongside traditional lectures, can enhance the medical education experience.

Key Words: Medical education, teaching techniques, student preferences, small group discussion, lectures

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For years, educators have recognized that teaching techniques play a crucial role in shaping the way students absorb and retain information.[1] Research on learning styles has provided valuable insight into the diverse ways in which individuals approach learning, emphasizing that no single teaching strategy can maximize learning outcomes for all students.[2] Learning preferences, a key aspect of instructing styles, influence how students engage with educational material and, consequently, their overall academic performance.

In the field of medical education, advancements in educational technology continuously refine teaching methodologies, ensuring that learning remains both effective and efficient.[3] Traditional lecture-based learning, while widely used, often fosters a passive learning environment, whereas interactive approaches, such as seminars and small group teaching, encourage active participation and deeper comprehension.[4] These methods not only enhance knowledge retention but also develop critical skills such as

1-6. Department of Community Medicine, LMDC, Lahore.

Correspondence:
Dr. Humayun Mirza, *Associate Professor, Department of Community Medicine, LMDC, Lahore. Email: humayunmirza@yahoo.com*

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problem-solving, teamwork, and self-directed learning.[5]

As modern education systems evolve, the need for diverse and well-validated teaching strategies becomes increasingly evident.[5] Small group learning and problem-based learning (PBL) have gained traction in medical education, offering structured, interactive settings that promote analytical thinking and student engagement. While the effectiveness of PBL continues to be debated, its integration into medical curricula highlights a shift towards student-centred learning models that prioritize adaptability and critical reasoning.[6]

By leveraging multiple teaching approaches tailored to students' learning styles, educators can create a more dynamic and inclusive learning environment that not only enhances academic performance but also prepares future healthcare professionals with the essential skills needed for real-world medical practice.[6]

There is an expanding collection of research on effective coaching techniques in medical education. For example, a study by Luecht et al highlighted the effectiveness of active learning and scenario-based learning in medical training.[2] Other studies have also emphasized the importance of integrating technology and simulation-based learning in medical education.[3]

This study will expand on these findings and give important insights into the preferred teaching strategies among medical undergraduate students at a private medical institution in Lahore.

METHODS

This institution-based cross-sectional study was conducted at Lahore Medical and Dental College (LMDC), Lahore, over a period of four months from March to June 2023. The study targeted all 131 fourth-year MBBS students. Inclusion criteria was 4th year MBBS students who agreed to participate in the study. While students enrolled in other years of MBBS or other programs and 4th year MBBS students who did not give consent were excluded. Approval from the Institutional Review Board (IRB) was obtained prior to the commencement of the study. Data collection was carried out using a structured questionnaire after taking informed consent from participants. The collected data was cleaned, processed, and analyzed using the Statistical Package for Social Sciences (SPSS) version 22. Deceptive statistics were presented using frequency and percentages.

RESULTS

In the current study 43 participants (32.8%) were males, while 88 (67.2%) were females. Among the 131 participants, 99 (75.6%) reported having an FSc qualification, 31 (23.7%) had an A Level qualification, while only 1 student had an American Board qualification.

Regarding self-assessed academic performance 11 (8.4%) participants rated their performance as excellent, 77 (58.8%) rated as good, 39 (29.8%) as average and 4 (3.1%) as below average.

Regarding the preference for teaching methods, as depicted in Table 1, majority of the students (95.4%) agreed or strongly agreed to Practical Hands-on Activities and Case-Based Learning Scenarios both, followed by Clinical Rotations and Practical Exposure for which 93.9% participants agreed or strongly agreed while the least preferred were lectures as a primary teaching method, to which only 54.2% agreed or strongly agreed.

Table 1: *Preferences for Teaching Methods (n = 131)*

Aspect	Rating	n (%)
Lectures as a primary teaching method	Agree/Strong Agree	71 (54.2%)
	Neutral	39 (29.8%)
	Disagree/Strong Disagree	21 (16.1%)
Benefits of Small Group Discussions	Agree/Strong Agree	113 (86.3%)
	Neutral	15 (11.5%)
	Disagree/Strong Disagree	3 (2.3%)
Practical Hands-on Activities	Agree/Strong Agree	125 (95.4%)
	Neutral	5 (3.8%)
	Disagree	1 (0.8%)
Multimedia Presentations	Agree/Strong Agree	98 (74.8%)
	Neutral	22 (16.8%)
	Disagree/Strong Disagree	11 (8.4%)
Case-Based Learning Scenarios	Agree/Strong Agree	125 (95.4%)
	Neutral	6 (4.6%)
Online Learning Platforms	Agree/Strong Agree	70 (53.4%)
	Neutral	40 (30.5%)
	Disagree/Strong Disagree	21 (16.1%)
Clinical Rotations and Practical Exposure	Agree/Strong Agree	123 (93.9%)
	Neutral	6 (4.6%)
	Disagree	2 (1.5%)
Interactive Learning Activities	Agree/Strong Agree	96 (73.3%)
	Neutral	24 (18.3%)
	Disagree/Strong Disagree	11 (8.4%)

Discussion

The findings of this study provide valuable insight into the preferred teaching methodologies among private medical undergraduate students in Lahore. Understanding these preferences is crucial

for adapting medical education strategies to accommodate diverse learning needs and optimize academic outcomes.

Lectures continue to be a prominent teaching preference among the surveyed students, with 54.2% either agreeing or strongly agreeing with this traditional method. While lectures have been a staple in medical education, they need to evolve to incorporate active learning strategies.[4] Evidence from recent research underscores the importance of engaging students actively during lectures to enhance comprehension and retention.[5]

A significant percentage of students (29.8%) expressed neutrality towards teaching methods, reflecting the diversity of learning preferences within the medical student population. This highlights the need for medical educators to adopt a learner-centered approach and offer a variety of teaching modalities to cater to different learning styles.[6]

Majority of students (86.3%) in this study recognized the benefits of small group discussions for learning. This finding aligns with contemporary educational principles that emphasize collaborative and active learning[7]. Small group discussions foster peer interaction, critical thinking, and knowledge application, making them a valuable pedagogical tool.

An overwhelming majority of students (94.3%) acknowledged the effectiveness of practical hands-on activities in enhancing their understanding of medical concepts. This highlights the importance of integrating practical experiences, such as simulations and clinical skills training, into the curriculum.[8] Current studies highlight how experiential learning helps close the gap between theory and practice.[9]

Three-quarters of students (74.8%) in this study believed that multimedia presentations, including videos and slides, aid in comprehending complex topics. The use of multimedia resources aligns with modern educational technology trends.[10] Multimedia elements can enhance visual and auditory learning, providing students with flexible and interactive learning opportunities.

A significant majority of students (95.4%) either strongly agreed or agreed that case-based learning scenarios are effective for applying theoretical knowledge. Recent research showing the advantages of scenario-based learning in fostering critical thinking and patient assessment skills is in line with this finding.[11] Integrating real-life cases into the curriculum prepares students for practical challenges in healthcare.

Online learning platforms received mixed responses, with 53.4% of students either strongly agreeing or agreeing with their helpfulness for self-paced learning. Recent studies emphasize the potential of online platforms in medical education.[12] However, the variance in student perceptions suggests that educators should carefully design online materials and consider blended learning approaches to accommodate diverse preferences.

The majority of students (93.9%) in this study recognized the significance of clinical rotations and practical exposure for their learning experience. This finding resonates with current medical education standards.[13] Clinical exposure is essential for developing clinical skills, professionalism, and an understanding of real-world healthcare contexts.

Interactive learning activities, as indicated by the majority of agreeing students engage students in the learning process. Active participation and engagement are central to modern pedagogical approaches.[14] Incorporating interactive elements in the curriculum can enhance student motivation, critical thinking, and knowledge retention.

CONCLUSION

This study underscores the importance of adapting teaching methods to align with students' preferences. Incorporating a variety of teaching techniques, such as small group discussions and practical activities, alongside traditional lectures, can enhance the medical education experience. The study also highlights the value of interactive exercises, clinical experience, and case-based learning in developing medical students' critical thinking and practical abilities.

Ethical Approval:

The ethical approval was obtained via letter no. ERB No. 13354-23 dated 10/08/2023 from Institutional Review Board (IRB), Lahore Medical and Dental College, Lahore.

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Author's Contribution

All authors read and approved the final draft.

Conceptualization study design	HM, SD
Data Acquisition	HM, SD, BA
Data Analysis/ interpretation	HM, SD, HI
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