

‘Qualitative Evaluation of Teaching - Learning Approaches Effectuated in the Teaching Program of First-Year Medical Undergraduates at Aiiims Gorakhpur’

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Abstract:

Objectives: The students learning relies to a great extent upon how they contemplate regarding their assessment. This study meant to investigate the existing teaching-learning methods effectuated at our institute and record the insight of medical students towards the importance of teaching-learning methods and its feedback on their learning. **Methods:** A qualitative analytical method was embraced in which a pre-validated, well-structured questionnaire was designed and administered to the students to record their impression of appraisals. Student perceptions were additionally investigated in focus group discussions. Questionnaire findings were correlated with students counselling data and perception of academic facilitators. **Results:** 74.5% of the students believe that too much portion covered in less time, thereby rendering didactic lectures effective. 37 study participants mentioned that small group discussions are more beneficial and should occur more often. **Conclusions:** Academic facilitators distinguished that a portion of the students' recommendations are more practical than others. Majority of the students preferred the traditional classroom lectures and believed it to be beneficial in enhancing knowledge and learning over the self-directed active learning.

Key words: Teaching methods, Medical Education, Learning strategies, Feedback

Introduction:

Medical Council of India (MCI) compulsorily implemented CBME in the medical curriculum in 2019 [1]. Before the introduction of Competency Based Medical Education (CBME), the medical education curriculum was subject-centered and time-based. The teaching-learning activities and the assessment methods focused more on knowledge instead of attitude and skills [2]. CBME ensured that the under-graduates develop the competencies required to fulfil the patients' needs in the society, de-emphasizing time-based training [2]. Since CBME is learner-centered, it offers flexibility in time, and focuses on all the three domains of learning together; the teaching-learning activities would need a change in structure and process. Since it focuses on outcomes and prepares students for actual professional practice, teaching-learning activities would be more skill-based, involving more clinical, hands-on experience [2]. Our article explores the perceptions of the medical students on the teaching-learning methods presently effectuated in the integrated undergraduate medical course undergoing at AIIMS Gorakhpur.

Organizational context:

The undergraduate medical course at AIIMS Gorakhpur is an incorporated 5 ½ year program structured with an objective to make an "Indian Medical Graduate" (IMG) have the essential information, abilities, mentalities, qualities and responsiveness, so that the person in question may work fittingly and successfully as a doctor of the principal contact of the network while being around the world significant [3]. The initial three years of the course give a prologue to the essentials of medical education, with early clinical exposure and targeting learning the strategies of fundamental clinical aptitudes. The last two years of the program contain instructing clinical subjects through rural and urban clinic based clinical postings with the 6th year explicitly assigned as the internship year. Undergraduates are admitted to the medical course subsequent to clearing the 'National Entrance Test' conducted annually. The teaching-learning design utilized in the course differ from subject to subject and incorporates several methods. The methods incorporated for teaching theory are Didactic (classroom) lectures, Integrated lectures, Flip classroom lectures, Demonstrations/tutorials, Student seminars; whereas for practicals we incorporate Dissection sessions, Histology practicals using audio-visual aids, Clinical skill training and Small Group discussions. Subtleties of the teaching-learning techniques utilized are introduced in Table 1.

Table 1.

Type of the Competencies	Teaching-learning method	Description
Knows, Knows how		
	Didactic lecture	Traditional classroom lectures proportion should less than 20%. (Approx. 230 hours)
	Integrated lecture	Should be of Horizontal and Vertical type (approx. 28 hours in an academic session)
	Small Group discussions	Demonstrations, or tutorials for small topics
Shows, Shows how		
	DOAP session	Cadaveric dissection sessions conducted for students in small groups.
	Practicals	Histology practicals in laboratory in small batches.
	Clinical skill training	For selected topics by showing videos, hands on training on mannequins.
	Seminars	Student seminars every fortnight.

Note: SGD: Small Group discussions, DOAP: Demonstration Observation Assistance Performance

Methodology:

Study design:

A study design utilising quantitative data collection method was adopted for this study. Qualitative data was collected using a specially designed, structured, and pre-validated questionnaire, which was followed by one-to-one counselling session with each and every

student in order to record their perceptions, responses and propositions regarding the advantages and disadvantages of various types of teaching-learning methods.

Study setting and participants:

The study was conducted over a period of one year from September 2019 to August 2020 in the Department of Anatomy of AIIMS Gorakhpur. All the fifty first-year students gave consent and willingly participated in the study.

Study instruments:

Firstly, a structured questionnaire comprising of three sections was specially designed after an extensive review of literature and rounds of discussions. The first section included questions seeking feedback on the effectivity of various types of teaching-learning methods. The second section contained questions related to pursuing feedback on effectivity of assessment methods in evaluating the students. The questions too aimed at recording the responses and suggestions of the students on various forms of assessment methods. The final section contained questions regarding the learning strategies of the students. Secondly, the assessment data of the formative and summative examinations conducted throughout the first-year academic session was used to categorize the students in three study groups: high achievers: above 80th percentile, mid achievers: between 80th – 50th percentile and low achievers below 50th percentile, based on the marks scored in all these examinations combined together.

Observations:

Qualitative data analysis

- a) When asked if didactic lectures are beneficial in enhancing knowledge, 91.5% students gave positive response while 8.5% gave negative response as shown in Figure 1.

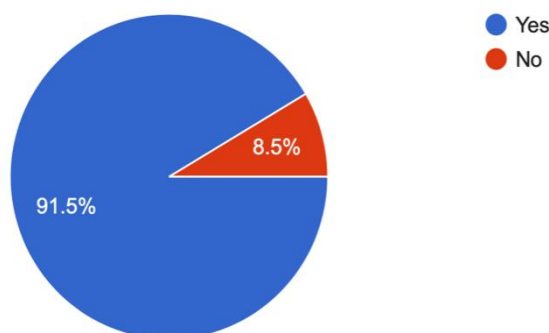


Table 2: Reasons indicated by the students that makes the classroom lectures ineffective.

Sr. No.	Responses given by students	Number of responses
1.	Not integrated with another related subject	1 (2.1%)
2.	Least use of audio visual aids	8 (17%)
3.	Too much portion covered in less time	35 (74.5%)
4.	Boring so ineffective	3 (6.4%)

Table3:Perspectives given by the students for enhancing the knowledge in classroom lecture.

Sr. No.	Perspective of students	Number of responses
1.	Unidirectional theoretical talk is more effective	Nil
2.	Powerpoint presentation displaying images videos text are more beneficial	10
3.	Chalk board method is more beneficial	21
4.	Classroom lectures are still interactive and effective	06
5.	Integrated lectures are more effective than didactic classroom lectures	10

Table 4:Aspects of classroom lecture that needs to be rectified to make them more effective

Sr. No.	Perspective of students	Number of responses
1.	Unidirectional theoretical talk is more effective	21
2.	Chalk board method of teaching for diagrams and textual contents	03
3.	Powerpoint presentation method of teaching in lectures	18
4.	Classical classroom setting	05

- b) When students were asked practical sessions are beneficial in enhancing knowledge 74.5% strongly agreed and 10.6% strongly disagreed and 2.1% were neutral.

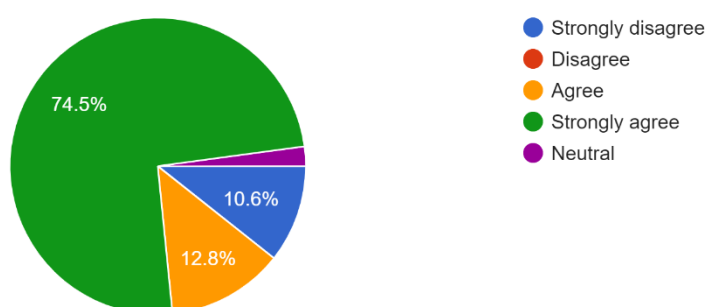
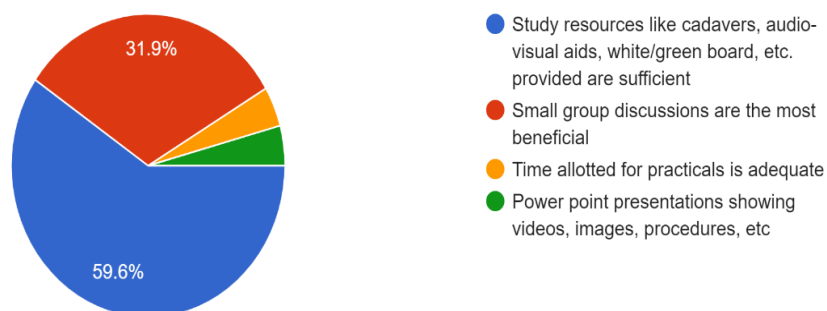


Table 5:Aspects of practicals that needs to be replaced to make them more effective

Sr. No.	Perspective of students	Number of responses
1.	Infrastructure(study resources) provided are insufficient	02
2.	Small group discussions are not beneficial	03

3.	Time allotted for practicals are inadequate	05
4.	Small group discussions are beneficial and should occur more often	37

- c) When students were asked which aspect of practical sessions were most accountable for enhancing knowledge, 59.6% suggested that the study resources like cadavers, audio visual aids, white/green board, etc. provided are sufficient, whereas, 31.9% said small group discussions are most beneficial, 4.3% said power-point presentations, showing videos images procedures are beneficial.



- d) When students were asked which aspect of student seminars are the most accountable for improving knowledge, 44.7% suggested mentoring by the faculty for the assigned topic, 27.7% mentioned presentation given by the individual students and 14.9% said focus on the individual students and 12.8% indicted the involvement of audience.

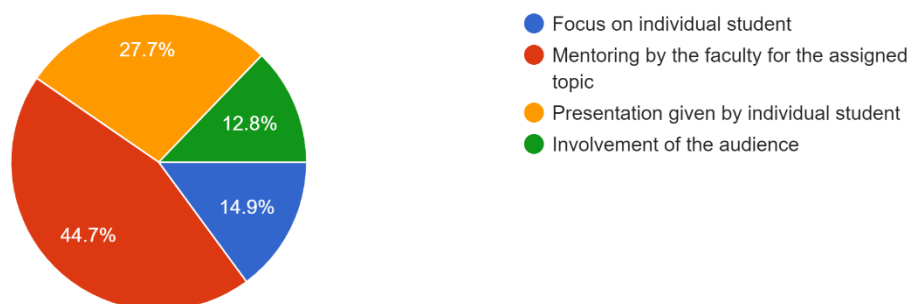
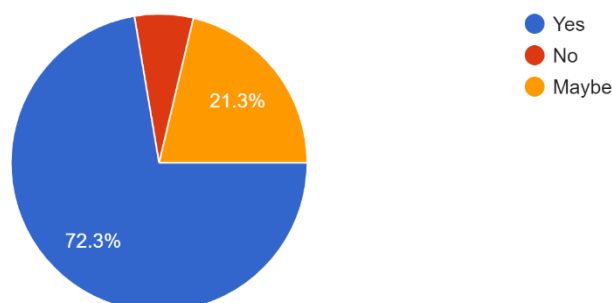


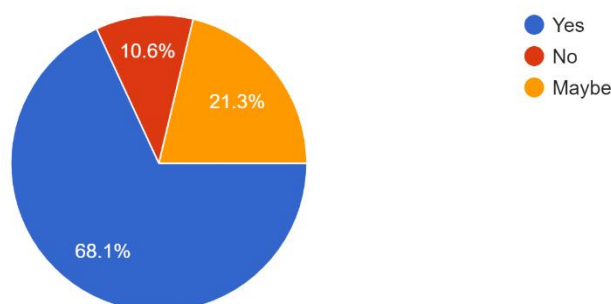
Table 6: The different learning strategies used by students to enhance their studies

Sl. no.	Learning Methods	Yes	No	Maybe
1.	Regularly Prepare Notes	31.9%	34%	34%
2.	Referring Previous question papers	51.1%	12.8%	36.2%
3.	Techniques like mnemonics	78.7%	2.1%	19.1%
4.	Guidance from faculty members	63.8%	2.1%	34%
5.	Assignment manuals, seminars, quizzes, internet etc.	76.6%	4.3%	19.1%

- e) When students were asked whether they are motivated to study, 72.3% said yes, and 6.4% said no and 21.3% said maybe.



- f. When students were asked if exam results motivate the students to study better, 68.1% said yes, 10.6% said no, 21.3% said maybe.



Discussion:

Across the world, medical education is in the process of major transformation where the students can learn effectively and efficiently. There is no doubt that teachers are experts in their fields but importantly they must know how students learn [4]. Medical teaching and learning are integral part of medical education to bring out the finest and committed doctors in our nation. Wojtczak defined lecture as an instruction or verbal discourse by a speaker before a large group of students [5]. Brown et al. stated that the main advantages of lecture were coverage of topics, simplification of difficult concept [6]. Traditional, didactic lectures were perceived by the students as the least effective method used, yet involving students actively within the lecture time was regarded as a more effective learning tool [7]. Our majority of the students found didactic lectures more useful in enhancing their knowledge although too much portion covered in short period of time makes learning ineffective. Students preferred chalk- board method for delivering lectures supplemented with audio-visual aids rather than power point presentation method alone. It helped them to learn the subject in the classroom itself especially the diagrams in anatomy while few suggested integrated lectures would help them to have better understanding of the subject as a whole. Lecturing is still the most commonly used learning method as it is an economical and practical method; especially when the number of students is large and infrastructure provided are insufficient.

Many medical schools around the world have adopted this strategy of teaching to make the classes more interactive and to give opportunities for students to take part in discussion

[8,9].Saleh et al suggested the priority for improving the quality of teaching methods including strategies for teaching were introduction of small groups in all years of the study [10]. Our Students found study resources like cadavers, audio visual aids, white/green board were more beneficial than small group teaching in enhancing knowledge in practical sessions.

It is not only the method of teaching that affects the learning process; students' own learning approaches influence their learning significantly. The learning approach adopted by students appears to be an important factor in determining both the quantity and the quality of their learning resulting in different learning outcomes [11]. Learning styles and learning approaches differ among medical students[12]. Majority of the students have disciplined study schedule for academics and prepare notes, use mnemonics, assignment manuals, seminars and take guidance from faculty members as their learning approaches. Self-learning was the preferred mode by the students rather than group study.

Conclusions:

Majority of the students preferred the traditional classroom lectures and believed it to be beneficial in enhancing knowledge and learning over the self-directed active learning. This could be explained by the fact that they were in the first year of MBBS and they might be unaware of the new learning methods. Medical educators must work forward to optimize students learning based on their preferred learning methods and to encourage a shift towards deeper learning.

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