

Feedback of 'Feedback'– a mixed method study on Phase 1 MBBS students' perception on practice of feedback in Anatomy formative assessments

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Abstract: *Introduction:* Since last four years, the provision of 'feedback' is practiced in Department of Anatomy, but till date no evidence has been collected to explore how much it felt appropriate for the students to improve themselves for further studies. So far literature was searched, there was scarcity of such document in our state. *Objective:* To explore students' perception on the practice of feedback, as practiced in the Department. *Methodology:* After necessary permission from authorities, this cross sectional mixed-method study was conducted amongst the students of Phase 1 MBBS with a pre-designed validated semi-structured questionnaire proforma. The quantitative part was analysed by standard statistical software & the qualitative data was analysed by thematic analysis. *Results:* On analysis of 230 responses, 86.7% said it was on-time, within one week of the exam gets over. 65.7% said that they got scope for one-to-one interaction with the teacher. Half of the students said they felt scary during feedback time. 90.4% students were able to find out their lacunae in the study. 68.3% students got scope to ask queries to the teacher. 93% students felt overall motivation after the feedback and it was an effective guide for the preparation of next exam. *Conclusion:* Practice of giving feedback, is solely with ambition for improvement of the teaching-learning programme. But whether it is been practiced effectively- needs the analysis of perception of students. Although, for different situations, the ideal scenario of feedback could not be perceived by the students, but their responses give us the scope for improvement of 'feedback sessions' in future.

Keywords: Medical Education, Competency Based Medical Education, Assessment, In-Depth Learning.

Introduction

Feedback, a mandated component of the formative assessments as prescribed by National Medical Commission from time to time, in present day's medical education curriculum gives not only an opportunity to students to analyse their work, performance, correct themselves and improves further learning, but also throws light to the teacher as well as the teaching learning system for its lacunae and gives scopes of rectification [1].

Since the inception of CBME- based module almost half of the decade ago, formative assessments are in practice in name of different 'part-completion tests' in Anatomy, used to be conducted almost one at every month. As in

practice after each part-completion tests students are made in groups of 20/25, and one faculty is allocated for their feedback sessions. As ideal model of feedback, students should be discussed upon the ask-tell-ask approach (so called sandwich model), so to explore first the students insight of the performance and then to rectify him/her and lastly to provide her/him the key messages for improvement. It would be descriptive, non-judgmental, specific, and should not be a cognitive overload for the students as suggested in earlier studies [2-3].

Till date, so far literature been searched for, students' perception on the 'feedback session' after Anatomy formative examinations has not been found in our state.

Objective: To explore the perception of the students on the 'feedback' given to them after their formative exam.

Material and Methods

Study Type: Mixed method study.

Study Design: Cross sectional Observational study.

Study setting: Department of Anatomy, IPGME&R, Kolkata.

Study period: After the approval of Institutional Ethics Committee, this study was carried out in two months of time period (January-February 2026)

Study population: Phase 1 MBBS students (passed out and ongoing batch).

Exclusion Criteria: Those who were absent in the exam.

- Those who were present in exam, but absent in the feedback session.
- Those who were present in both situations, but not consented to participate.

Inclusion Criteria: All Phase 1 MBBS students, present during feedback session.

Sampling technique: Convenience method of non-randomised sampling.

Sample size: Students of just pass-out batch & present on-going batch were approached with hard copy forms. Following the inclusion & exclusion criteria, finally responses of 230 students were obtained.

Study tool: A pre-validated, semi structured questionnaire.

Definition of variables: The questions in the questionnaire were filed under 2 categories:

- The first category included general information of students like their Age, Gender, Medium of schooling, place of stay currently, whether they have received feedback in the last departmental exam etc.
- The second category included specific information of students regarding their perceived usefulness of the feedback where a scale ranging from 1-10 was used for the

purpose and lastly their views regarding the effectiveness and future modifications of "feedback sessions" was asked to be detailed.

Validation of the tool: It was done as per norm, with participation of esteemed faculties of department of Anatomy and the faculties of Medical Education Unit of the institution as well as outside the institution.

Method of data collection: Usually as per departmental academic calendar in every month, formative examinations are arranged in form of Part completion examination (last one held in just one week ago) and after each examination every student is given feedback by the faculties, either in group or in individual mode as per their feasibility. For the current batch, after the feedback session every student were approached for their consent. Once they gave their consent, they would be approached with the proforma. Once they fill it up, the data was preserved.

For the just pass-out batch, after the results got declared, many of the students visited the department with their results. When they came, they were approached with the proforma and their responses were obtained.

IEC permission no: IPGME&R/IEC/2026/0037(Dated: 20/01/2026).

Confidentiality maintained: The confidentiality of the data was maintained throughout the study.

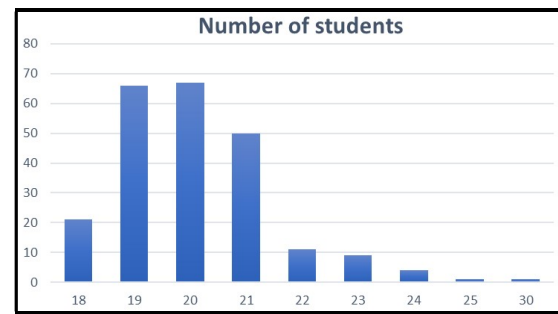
Data analysis method: The quantitative data was analysed by standard statistical software (SPSS), and the qualitative data was analysed by thematic analysis. The quantitative data on 1-10 scale was categorised in strongly disagree (1,2), disagree (3,4), neutral (5,6), agree (7,8) & strongly agree (9,10) for convenience of analysis-cum-interpretation.

Results

230 students participated in filling the Google forms used for data collection. Among them majority were males (74%) and the rest were females (26%). Also, as per the data obtained the average age group of the students were

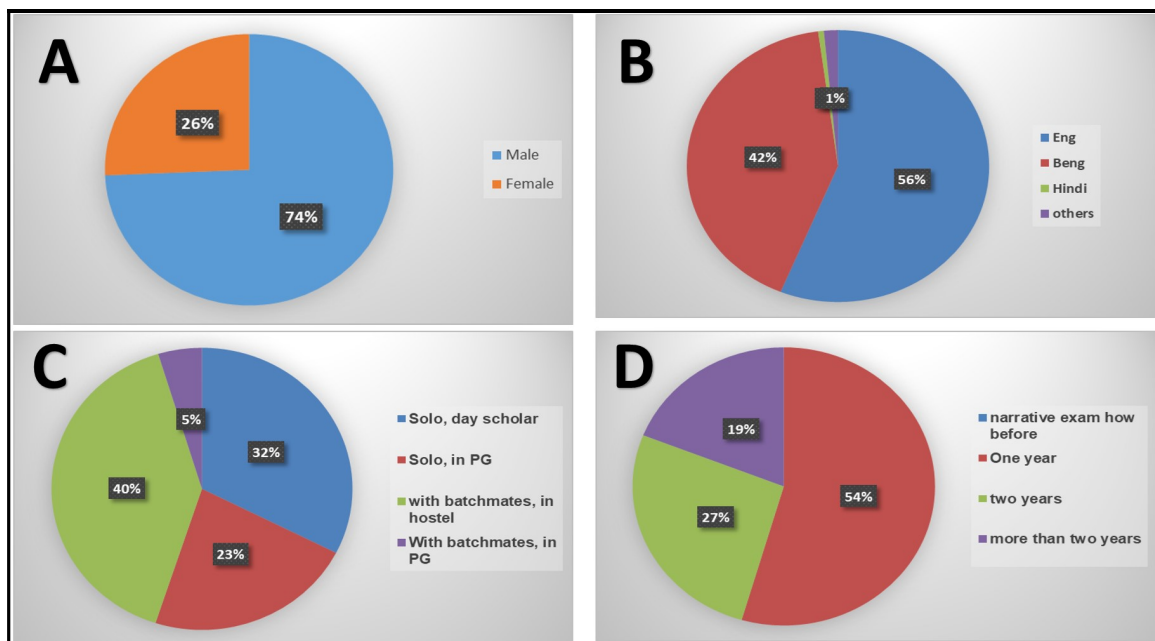
between 19(28.6%) to 20(29.1%) years. Majority of the respondents were from English medium school (54%), and next to it were students from Bengali medium school (42%). 32% students were day scholars, 23% students favoured to live solo in paying-guest, 40% students live in hostel and 5% students favoured to live as paying-guest with other batch mates. Almost half of the students (46%) replied that they were out of habit to write narrative theory questions two/more than two years ago, though 54% expressed their habit out only of one year [Fig-1 & 2].

Fig-1: Bar diagram showing frequency distribution of age of the participants (N=230).



Inference: Majority of the students were in the age group of 19(28.6%) - 20(29.1%) years.

Fig-2: Pie charts showing frequency distribution for different parameters among the participants (N=230).



Inference: Chart A shows 74% of the respondents were male & 26% were female. Chart B showing that majority of the respondents were from English medium school (54%), and next to it were students from Bengali medium school (42%). Chart C showing 32% students were day scholars, 23% students live solo in paying-guest, 40% students live in hostel and 5% students favored paying-guest with other batch mates. Chart D showing their habit of answering essay type questions. 54% students replied that they were habituated in essay type questions one year before. 46% students commented that they had habit of narrative exams two/more years before.

Almost half of the students have encountered their feedback sessions 'just after the exam'. Very

small proportion of students (5.3%) have experienced feedback session even after one month of exam passed. Rest of the students had their sessions within one month of the exam. Almost 98% students perceived that the timing of feedback sessions were appropriate to them. Almost all of them (90%) said that teachers have discussed model answers in their feedback session. Although in two third cases (64%) there were one-to-one interaction, but in one third of situations students missed such discussion (35%). Approximate 90% students perceived the freightless environment in the feedback sessions although one respondent could not comment on it. 17% student perceived during feedback session teacher first asked their queries, then

addressed their shortfalls and afterwards addressed their confusions (classical Ask-tell-ask approach), although 81% students perceived feedback where teacher passionately addressed their queries only. With the help of feedback sessions, almost 97% students were very much able to find out their lacunae in their studies. 85%

students said that those feedback sessions were very much helpful to them to guide them in proper ways to study. Almost all of them (98%) student's perceived feedback as strong motivation for their study & all of them finally proposed to carry out such feedback sessions in future regularly [Table-1].

Table-1: Frequency distribution table of the distribution of students(N=230) based on their responses owing to the questionnaire		
Questions	Type of response	No. of students (percentage)
<i>When your 'feedback' session on theory scripts was conducted?</i>	Just after the exam	123(53.4%)
	Within one week of exam	78(34.1%)
	More than one week of exam	17(7.2%)
	More than one month of exam	12(5.3%)
<i>Whether the teacher discussed model answers?</i>	Yes	210(91.4%)
	No	20(8.6%)
<i>Was/were there any one-to-one session during the feedback?</i>	Yes	148(64.9%)
	No	82(35.1%)
<i>Do you think that the 'timing' of feedback was appropriate?</i>	Strongly agree	101 (43.9%)
	Agree	126 (54.7%)
	Cannot comment	2 (0.8%)
	Disagree	1 (0.4%)
	Strongly disagree	0
<i>Feedback sessions were very scary</i>	Strongly agree	0
	Agree	1 (0.4%)
	Cannot comment	1 (0.4%)
	Disagree	63 (27.4%)
	Strongly disagree	165 (71.8%)
<i>In maximum encounters how you have received feedback?</i>	Teacher described your faults as one way verdict	1 (0.4%)
	Teacher has asked your queries and addressed them	188 (81.7%)
	Teacher first asked your queries, then described the faults and then again asked your confusions	40 (17.3%)
	Teacher just described answers and not interacted further	1 (0.4%)
<i>After feedback from the teacher whether you were able to identify your lacunae in study?</i>	Strongly agree	201 (87.4%)
	Agree	25 (10.9%)
	Cannot comment	0
	Disagree	4 (1.73%)
	Strongly disagree	0
<i>You felt feedback from teacher was/were not effective guide for preparation of your next exam.</i>	Strongly agree	1 (0.4%)
	Agree	1 (0.4%)
	Cannot comment	33 (14.34%)
	Disagree	152 (66.08%)
	Strongly disagree	44 (19.13%)

Questions	Type of response	No. of students (percentage)
<i>Feedback from teacher has motivated you for further in-depth study</i>	Strongly agree	215 (93.4%)
	Agree	13 (5.65%)
	Cannot comment	2 (0.8%)
	Disagree	0
	Strongly disagree	0
<i>In your opinion regular feedback session should to be carried out</i>	Strongly agree	200 (86.95%)
	Agree	30 (13.04%)
	Cannot comment	0
	Disagree	0
	Strongly disagree	0

Inference: Almost half of the students have encountered their feedback sessions ‘just after the exam’. Very small proportion of students (5.3%) have experienced feedback session even after one month of exam passed. Rest of the students had their sessions within one month of the exam. Almost 98% students perceived that the timing of feedback sessions were appropriate to them. Almost all of them (90%) said that teachers have discussed model answers in their feedback session. Although in two third cases (64%) there were one-to-one interaction, but in one third of situations students missed such discussion (35%). Approximate 90% students perceived the freights environment in the feedback sessions although one respondent could not comment on it.

17% student perceived during feedback session teacher first asked their queries, then addressed their shortfalls and afterwards addressed their confusions (classical Ask-tell-ask approach), although 81% students perceived feedback where teacher passionately addressed their queries only. With the help of feedback sessions, almost 97% students were very much able to find out their

lacunae in their studies. 85% students said that those feedback sessions were very much helpful to them to guide them in proper ways to study. Almost all of them (98%) students’ perceived feedback as strong motivation for their study & all of them finally proposed to carry out such feedback sessions in future regularly.

From the thematic analysis of the open ended question from the students, regarding the timing of the session two types of responses came out- some told it would be done as close as to the exam happened but some opted that it would be done close to the upcoming exam. Students emphasized more on the per-student allocated time and they opined it would be conducted in more spanned out time even one-two hour sessions. They liked to have the written model answer displayed in the department. They wished that the feedback session would to be more individualized with more one-to-one contact. Overall almost everyone told that the feedback sessions were helpful to them [Table- 2].

Table-2: Thematic analysis of the narrative responses from the students <i>“How you feel the feedback sessions can be improved in better way”?</i>	
Theme	Responses
Timings of the feedback sessions	“bring it closer to exam dates” “paper discussions should be taken up just after the exam, as long gap makes it fade” “if possible, to be arranged for all students within 7 days of the exam”
Time-given in feedback sessions	“more time would be provided in such sessions” “one lecture sessions to be provided for such” “can it be in lecture theatre with all students” “the session should to be long” “minimum two hours to be given”

Theme	Responses
Contents of feedback-sessions	• “accurate answers to be provided” • “a common answer key to be provided in group” • “answer key would to be provided in Anatomy group” • “written model-answers should to be displayed in department” • “we should be allowed to take pictures of our answer copies” • “every student should to be given time to raise queries” • “if we can get one written model-answer copy we could do much better” • “each student should be allowed to submit the rectified answers to the teacher”
Size of feedback session group	• “it is to be always given in small group” • “one student should to be called at a time”
Delivery style of feedback	• “as many of us were from outside west Bengal, so teachers would avoid only-Bengali communication while giving feedback” • “one-to-one feedback session should be must” • “often shyness makes me debarred to raise questions”
Effectiveness of feedback session	• “it has always helped me in final prof exam” • “it was always helpful in clearing the doubts” • “it boosts my confidence”

Inference: From the thematic analysis of the open-ended question from the students, regarding the timing of the session two types of responses came out- some told it would be done as close as to the exam happened but some opted that it would be done close to the upcoming exam. Students emphasized more on the per-student allocated time and they opined it would be conducted in more spanned out time even one-two hour sessions. They liked to have the written model answer displayed in the department. They wished that the feedback session would to be more individualized with more one-to-one contact. Overall, almost everyone told that the feedback sessions were helpful to them.

Discussion

A cross-sectional observational study, including 230 Phase 1 MBBS students, was done in the Department of Anatomy to know their perception on the ‘feedback’ given to them after the formative examination, well aligning to the objective of the study. It was conducted after proper validation from the subject experts by using a pre-tested, pre-validated, semi structured questionnaire and Google forms for data analysis. Findings of the study point out an absolute necessity of feedback in today’s medical educational sphere and also portray the impact of student’s perception on the same.

Analysing the perception of students always creates a better impact in the field of Medical Education as it not only benefits the teacher in making effective future efforts but also brings more clarity among the students for their next examination.

Studies conducted even before the NMC-mandate of practice of feedback, since 2010 and even afterwards, on “Students’ Perceptions toward Continuous Assessment in Anatomy Courses” and “Students perception on Internal Assessment in Anatomy”, found that it is important to obtain more frequent feedback from the students which will help teachers to modify the assessment methods and improve the standards of medical education [3-7].

In last five years, different studies continued to explore the value of feedback in medical education even for the Phase 1 MBBS students to aid them for deep learning in Anatomy. In 2020, work of Vijayanthimala.P, Leonoline Ebenezer J, Mahima Sophia M et al. concluded with importance of feedback in continuous internal assessment in Anatomy, which helped students to increase their academic score. Studies of Patil VP, Patil VS (2021), NB

Pushpa, K Pushpalatha, MC Smitha (2021), in different institutes, could conclude that structured feedback for first year MBBS students were helpful for their understanding the subject. Reka Kutasi's work (2023), concluded the practice of 'feedback' not only encouraged students for active learning by raising their engagement in study, but also it was motivational to review their assignments and make corrections when they receive quick and constructive feedback [8-11].

Recent studies by Atwa HS, Potu BK, Fadel RA et al. (2024), established that every feedback students received after internal assessments could finally help them in their summative examinations. Different studies by Arroyo N, Quizás C, Rubilar-Cuevas J et al. (2025), Malik T, Tehseen Abaid, Tehreem Zulfiqar et al. (2025), Yulhendri, Hakim, L., Sofya, R et al. (2025) from inside and even abroad came out of similar conclusions that Positive feedback significantly increased student engagement in learning compared to negative feedback [11-15].

Work of Maqsood Z, Sajjad M, Yasmin R. from Rawalpindi (2025), attempted with experimental inclusion of reflection writing with feedback, which was an addition of a new dimension in system of feedback. The study concluded with significant 'learning' of the students in comparison of those who were exposed to only feedback [16] Fisher, D. P., Brotto, G et al. (2025) concluded in their work that feedback comments and turnaround were to be significant determinants of student motivation by providing areas of focus for both educators and administrators [17].

In current year, work from Malaysia on 317 Phase 1 MBBS students could reveal that medical students at present day perceived one to one feedback to be the highest impact on learning even more than large group teaching. [18]. Whatsoever, so far we searched for, could not avail any literature on students' perception of the

feedback practice in Anatomy, especially in our state. So the present study was planned and conducted. The strength of the study lies in the fact that we were successfully able to get significant results well aligning to the objective of the study and it also gave us scope for further improvement of "feedback sessions" in future.

The limitations of the study lie in the fact that the study was conducted in a short duration, feedback was not obtained after every session, many students did not consent to participate and the students' actual score-wise improvement was not corroborated. The future scope of the study lies in the fact that further qualitative study (Focused Group discussion/In-depth interview etc.) may be trailed to explore detailed opinion from the students to rectify the process of feedback. Also, students' participation in the feedback session may be tallied with the academic score.

Conclusion

Practice of giving feedback, is solely with ambition for improvement of the teaching-learning programme. But whether it is been practiced effectively- needs the analysis of perception of students. Although, for different situations, the ideal scenario of feedback could not be perceived by the students, but their responses give us the scope for improvement for the 'feedback sessions' in future.

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References

1. Feedback in IA. Module - Assessment, Competency Based Medical Education. Published by Board of Governors in supersession of Medical Council of India. 2019; page 11. https://www.nmc.org.in/wpcontent/uploads/2020/08/Module_Competence_based_02.09.2019.pdf

2. Kalra J, Mahajan R, Singh T. Preparing for Feedback in Context of Competency Based Medical Education Undergraduate Training in India. *South-East Asian Journal of Medical Education*. 2020; 14(2):3-7.
3. Cilliers FJ, Schuwirth LW, Adendorff HJ, Herman N, Van Der Vleuten CP. The mechanism of impact of summative assessment on medical students' learning. *Adv Health Sci Educ*. 2010; 15(5):695-715.
4. Rezigalla AA, Abdalla AM, Mohammed HM, Alhassen MM, Mohammed MA. Students' Perceptions Toward Continuous Assessment in Anatomy Courses. *J Med Sci Health*. 2017; 03(02):5-8.
5. Ramakoteswara Rao N, Shah IP. A Role of Undergraduate Student Feedback in Medical Teaching Evaluation: A Cross Sectional Study. *Int J Med Biomed Stud*. 2019 Aug 26;3(8):212-219.
6. Swapnali S, Varsha Mokhasi V. Students perception on internal assessment in anatomy. *Int J Anat Res*. 2019; 7(3.3):6939-6943.
7. Vijayanthimala P, Leonoline Ebenezer J, Mahima Sophia M, Sasirekha M, Kamalakannan S. Perception of Students Towards Anatomy Internal Assessment in Competency based Undergraduate Curriculum. *Indian Journal of Public Health Research & Development*. 2020; 11(12):95-98.
8. Patil VP, Patil VS. Effectiveness of Structured Feedback After Formative Tests on First Year MBBS Students' Performance in Summative Examination. *Int J Adv Med Health Res*. 2021; 8(2):70-74.
9. Pushpa NB, Pushpalatha K, Smitha MC. Periodic Unit and its Effect on Improving Academic Performance of Students in Anatomy - A Pilot Study. *International Journal of Anatomy, Radiology & Surgery*. 2021; 10(3):AO05-AO07.
10. Kutasi R. Feedback. Unveiling its impact and enhancing its effectiveness in education. *Journal of Pedagogy - Revista de Pedagogie*. 2023; 2:7-32.
11. Malik VS, Ghalawat NB, Sharma D, Garsa VK. Study of OSPE as a Method of Assessment in the Anatomy: Implementation and Attitude among MBBS students. *Int J Anat Res*. 2024; 12(2):8910-8916.
12. Atwa HS, Potu BK, Fadel RA, Deifalla AS, Fatima A, Othman MA, Sarwani NAL, Nasr El-Din WA. Implementing Formative Assessment in Human Anatomy Practical Sessions: Medical Students' Perception and Effect on Final Exam Performance. *Adv Med Educ Pract*. 2024; 15:551-563.
13. Arroyo N, Quizás C, Rubilar-Cuevas J, Salinas P. Effect of formative feedback on human anatomy learning: a mixed-methods study on student perceptions and academic performance. *Front Educ*. 2025; 10:1471254.
14. Malik T, Tehseen Abaid, Tehreem Zulfiqar, Maria Khalid, Muhammad Nadir Iqbal, & Isham Saleem Mughal. The Effectiveness of Teacher Feedback in Augmenting the Academic Performance of Medical Students. *Annals of King Edward Medical University*. 2025; 31(1):26-31.
15. Yulhendri, Hakim L, Sofya R, Nora D & Rahmi Y. The Influence of Feedback Learning on Student Engagement and Student Performance. *Educational Process: International Journal*. 2025;17:e2025318.
16. Maqsood Z, Sajjad M, Yasmin R. Effect of feedback-integrated reflection on deep learning of undergraduate medical students in a clinical setting. *BMC Medical Education*. 2025; 25:66.
17. Fisher DP, Brotto G, Lim I & Southam C. The Impact of Timely Formative Feedback on University Student Motivation. *Assessment & Evaluation in Higher Education*. 2025; 50(4):622-631.
18. Samdeshi S, Dandala KCR, Vishnumukkala T, Gopalakrishna PK, Ravindranadh G, Latif MYBA, Ramakrishnappa S, Jagadeesan S, Nassir CNMC, Sreenivasulu Sura, Zaw Myo Hein. Medical students' perceptions of anatomy teaching resources and their impact on learning outcomes: Insights from a private medical university in Malaysia. *Translational Research in Anatomy*. 2026; 42(100454):1-11

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