Original Article

# Effectiveness of Faculty Development Program to Enhance the Knowledge of Faculty Towards "FEEDBACK"

**Havilah Twinkle Reddipogu[1], Lakshmi Lalitha Dantuluri[2]**

[1]Professor, Department of Physiology, Maharajah's Institute of Medical Sciences, Vizianagaram, Andhra Pradesh, India. [2]Dean & Professor of Biochemistry, Great Eastern Medical School and Hospital, Ragolu, Srikakulam, 532484, Andhra Pradesh, India

## Abstract

**Background:** Feedback is an essential component of effective teaching and learning in medical education, as it helps learners identify performance gaps and improve their knowledge and skills. However, many faculty members lack formal training in providing structured and constructive feedback to students. Faculty Development Programs (FDPs) play an important role in enhancing the teaching competencies of educators and improving feedback practices in academic institutions. The objective is to identify the need for a Faculty Development Program on feedback among faculty members and to assess the effectiveness of the FDP in improving faculty knowledge regarding feedback using pre-test and post-test assessments. **Material and Methods:** This educational interventional study was conducted among 30 teaching faculty members from pre-clinical, para-clinical, and clinical departments at Great Eastern Medical School and Hospital, Ragolu, Srikakulam, Andhra Pradesh. Ethical approval was obtained from the Institutional Ethics Committee (06/IEC/GEMS/Feb2021). A needs assessment survey was conducted using a validated questionnaire. A three-hour hybrid FDP was organized, consisting of interactive lectures on the concepts, methods, and timing of feedback, followed by role-play and group discussions. Faculty knowledge was assessed using pre-test and post-test questionnaires. Data were analyzed using paired t-test. **Results:** The mean pre-test score was 5.73 ± 1.60, which increased to 8.17 ± 1.51 in the post-test. The difference was statistically significant ($t = 9.162$, $p < 0.001$). A majority of faculty (86.7%) expressed the need for training on feedback. **Conclusion:** The FDP significantly improved faculty knowledge regarding effective feedback practices. Regular faculty development initiatives can enhance teaching quality and promote better learning outcomes in medical education.

**Keywords:** Faculty development program, Feedback, Medical education, Teaching skills, Educational intervention.

**Received: 01 February 2026** **Revised: 15 February 2026** **Accepted: 28 February 2026** **Published: 13 March 2026**

## Introduction

Faculty development programs (FDPs) play a crucial role in improving the quality of medical education by strengthening the pedagogical competencies of teaching faculty. In modern competency-based medical education, feedback is considered one of the most essential components of effective teaching and learning. Feedback enables learners to understand the gap between their current performance and expected standards, thereby promoting reflective learning and continuous improvement. However, several studies have highlighted that faculty members often lack adequate training in delivering constructive and timely feedback to students. As a result, faculty development initiatives focusing on feedback skills have gained increasing importance in medical education systems worldwide. These programs aim to enhance faculty awareness, knowledge, and practical skills related to providing meaningful feedback in clinical and classroom settings.[1]

Feedback is defined as specific information provided regarding aspects of a learner's performance or understanding, intended to guide future improvement. Effective feedback is timely, constructive, learner-centered, and aligned with predefined learning objectives. In the context of health professions education, feedback helps students identify strengths and weaknesses, encourages self-directed learning, and improves clinical competence. Despite its importance, feedback is often inconsistently delivered due to lack of faculty training, time constraints, and inadequate institutional support. Faculty development programs are therefore designed to address these barriers by providing structured training sessions, workshops, and interactive learning opportunities to improve faculty competence in delivering high-quality feedback.[2]

The shift towards competency-based medical education (CBME) has further emphasized the need for regular and structured feedback mechanisms. In CBME, students are expected to achieve defined competencies in knowledge, skills, and professional attitudes. Continuous feedback plays a pivotal role in guiding learners toward achieving these competencies and ensuring that learning objectives are met effectively. Faculty members must therefore possess the necessary knowledge and

**Address for correspondence:** Dr. Havilah Twinkle Reddipogu, Professor, Department of Physiology, Maharajah's Institute of Medical Sciences, Vizianagaram, Andhra Pradesh, India
E-mail: rhtwinkle@yahoo.co.in

DOI:
10.21276/amit.2026.v13.i1.414

**How to cite this article:** Reddipogu HT, Dantuluri LL. Effectiveness of Faculty Development Program to Enhance the Knowledge of Faculty Towards "FEEDBACK". Acta Med Int. 2026;13(1):662-666.

skills to provide feedback that is constructive, non-judgmental, and focused on improvement rather than criticism. Faculty development programs help educators understand various feedback models such as the feedback sandwich, Pendleton's rules, and reflective feedback techniques, thereby enhancing the quality of teacher-student interactions.[3]

Several educational interventions have demonstrated that faculty training significantly improves the effectiveness of feedback practices. Workshops and structured training sessions help faculty members develop communication skills, understand the principles of adult learning, and adopt evidence-based strategies for feedback delivery. These programs also encourage faculty members to reflect on their own teaching practices and adopt learner-centered approaches. By participating in faculty development initiatives, educators become better equipped to create supportive learning environments that promote open communication and constructive dialogue with students. Such improvements ultimately contribute to better learning outcomes and enhanced clinical competence among medical trainees.[4]

Furthermore, faculty development programs foster a culture of continuous professional development among educators. Medical education is a dynamic field that requires faculty members to regularly update their teaching methodologies and educational strategies. Training programs not only improve knowledge about feedback but also strengthen other essential competencies such as assessment methods, curriculum design, and mentorship skills. Institutions that invest in faculty development often observe improvements in teaching quality, student satisfaction, and overall academic performance. Therefore, structured training programs focusing on feedback are considered an essential component of quality assurance in medical education.[5]

In recent years, several regulatory bodies and academic institutions have recognized the importance of faculty development initiatives. Organizations such as the World Federation for Medical Education (WFME) and national medical councils have recommended regular training programs to enhance faculty teaching competencies. These programs aim to standardize teaching practices and ensure that educators are equipped with modern educational tools and strategies. Evaluating the effectiveness of such programs is essential to determine whether they successfully improve faculty knowledge and attitudes toward feedback. Assessing the impact of training also helps institutions refine program content and design more effective faculty development interventions.[6]

Moreover, research studies have shown that faculty members who undergo structured training in feedback techniques demonstrate greater confidence in interacting with students and addressing their learning needs. They are more likely to provide timely, specific, and constructive feedback, which in turn improves student engagement and learning outcomes. Such programs also encourage reflective teaching practices and promote a culture of continuous improvement within academic institutions. Therefore, assessing faculty knowledge before and after participation in a development program provides valuable insights into the effectiveness of educational interventions.[7]

Despite the recognized benefits of feedback training, many institutions still face challenges in implementing structured faculty development programs. Limited resources, time constraints, and lack of institutional emphasis on pedagogical training often hinder widespread adoption. Additionally, some faculty members may perceive feedback training as less important compared to clinical responsibilities. Addressing these challenges requires institutional commitment, adequate resources, and integration of faculty development activities into routine academic schedules. Creating awareness about the importance of effective feedback can motivate educators to actively participate in training programs and improve their teaching practices.[8]

Evaluation of faculty development programs is therefore essential to determine their effectiveness and sustainability. Assessing knowledge gain, changes in attitudes, and improvements in feedback practices helps educational institutions measure the impact of training interventions. Structured assessment methods, including pre- and post-training questionnaires, reflective exercises, and participant feedback, are commonly used to evaluate such programs. Evidence generated through these evaluations contributes to improving the design and implementation of future faculty development initiatives.[9]

In this context, the present study aims to assess the effectiveness of a faculty development program designed to enhance faculty knowledge regarding feedback in medical education. By evaluating the knowledge levels of faculty members before and after participation in the training program, the study seeks to determine whether such educational interventions significantly improve understanding of feedback principles and practices. The findings of this study may provide valuable insights for educational planners and academic institutions in strengthening faculty development initiatives and improving the overall quality of medical education.[10] This study aims to evaluate the effectiveness of a Faculty Development Program (FDP) designed to enhance faculty knowledge and skills in providing effective feedback. It also seeks to identify the need for an FDP on feedback among faculty members and to assess the change in their knowledge by comparing pretest and post-test scores following participation in the program.

## Materials and Methods

**Study Design:** This educational interventional study employed a convenient sampling method, selecting 30 teaching faculty members from clinical, pre-clinical, and para-clinical departments at Great Eastern Medical School and Hospital, Ragolu, Srikakulam, Andhra Pradesh.

**Ethical Approval:** The study received ethical approval from the Institutional Ethics Committee in February 2021 (06/IEC/GEMS/Feb2021).

**Needs Assessment:** A needs assessment survey was conducted using a validated questionnaire to identify the gaps in faculty knowledge and the necessity for an FDP on feedback.

**Faculty Development Program:** A hybrid FDP was conducted over three hours. The program included three interactive lecture sessions covering the "what and why," "how," and "when" of

feedback. These sessions were followed by role-play and group discussions on various feedback scenarios. The FDP concluded with a posttest and a feedback survey on the workshop.

**Statistical Analysis:** Data were entered into Microsoft Excel and analyzed using SPSS software version 27.0 (SPSS Inc., Chicago, IL, USA) and GraphPad Prism version 5. Continuous variables were expressed as mean ± standard deviation, while categorical variables were presented as frequencies and percentages. The unpaired t-test was used to compare continuous variables between independent groups, and the paired t-test was applied for within-group comparisons. Categorical variables were analyzed using the Chi-square test or Fisher's exact test as appropriate. A p-value of <0.05 was considered statistically significant.

## RESULTS

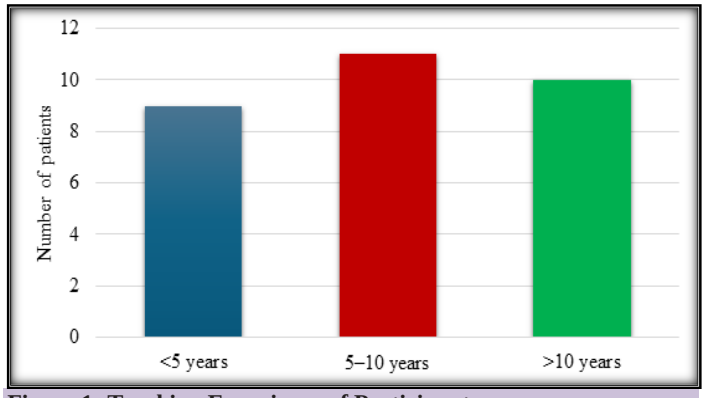


**Figure 1: Teaching Experience of Participants.**

**Table 1: Department-wise Distribution of Faculty Participants (N=30)**

| Department | Number of Participants | Percentage (%) |
|---|---|---|
| Pre-clinical | 8 | 26.7 |
| Para-clinical | 10 | 33.3 |
| Clinical | 12 | 40 |
| Total | 30 | 100 |

**Table 2: Gender Distribution of Faculty Participants**

| Gender | Number of Participants | Percentage (%) |
|---|---|---|
| Male | 17 | 56.7 |
| Female | 13 | 43.3 |
| Total | 30 | 100 |

**Table 3: Teaching Experience of Participants**

| Teaching Experience | Number of Participants | Percentage (%) |
|---|---|---|
| <5 years | 9 | 30 |
| 5–10 years | 11 | 36.7 |
| >10 years | 10 | 33.3 |
| Total | 30 | 100 |

**Table 4: Need for Faculty Development Program on Feedback**

| Response | Number | Percentage (%) |
|---|---|---|
| Yes | 26 | 86.7 |
| No | 4 | 13.3 |
| Total | 30 | 100 |

**Table 5: Comparison of Pre-test and Post-test Knowledge Scores**

| Parameter | Pre-test (N=30) | Post-test (N=30) | p-value |
|---|---|---|---|
| Mean Score | 5.73 | 8.17 | <0.001 |
| Standard Deviation | 1.6 | 1.51 | |
| Standard Error of Mean | 0.29 | 0.28 | |

**Table 6: Paired t-test Analysis of Pre-test and Post-test Scores**

| Parameter | Value |
|---|---|
| Mean Difference | 2.44 |
| t-value | 9.162 |
| Degrees of Freedom | 29 |
| p-value | <0.001 |

[Table 1] Department-wise Distribution of Faculty Participants

A total of 30 faculty members participated in the study. Among them, 12 (40.0%) participants were from clinical departments, 10 (33.3%) from para-clinical departments, and 8 (26.7%) from pre-clinical departments. The results indicate that the majority of the participants belonged to clinical departments, followed by para-clinical and pre-clinical departments.

[Table 2] Gender Distribution of Faculty Participants

Out of the 30 faculty participants included in the study, 17 (56.7%) were male and 13 (43.3%) were female. The results

show that male participants constituted a slightly higher proportion compared to female participants.

[Table 3] Teaching Experience of Participants

Regarding teaching experience, 9 (30.0%) faculty members had less than 5 years of experience, 11 (36.7%) had between 5–10 years of experience, and 10 (33.3%) had more than 10 years of teaching experience. The majority of participants belonged to the 5–10 years' experience group.

[Table 4] Need for Faculty Development Program on Feedback

The needs assessment survey revealed that 26 (86.7%) faculty members expressed the need for a Faculty Development Program (FDP) on feedback, whereas only 4 (13.3%) reported that such a program was not necessary. This indicates a strong perceived need among faculty members for training in effective feedback methods.

[Table 5] Comparison of Pre-test and Post-test Knowledge Scores

The mean pre-test knowledge score of faculty participants was 5.73 ± 1.60, which increased to 8.17 ± 1.51 in the post-test following the Faculty Development Program. The improvement in mean scores indicates a significant enhancement in faculty knowledge regarding feedback after attending the FDP. The difference between the pre-test and post-test scores was statistically significant ($p < 0.001$).

[Table 6] Paired t-test Analysis of Pre-test and Post-test Scores

The paired t-test analysis showed a mean difference of 2.44 between the pre-test and post-test scores. The calculated t-value was 9.162 with 29 degrees of freedom. The p-value was found to be <0.001, indicating a highly statistically significant improvement in faculty knowledge after participation in the Faculty Development Program. These findings demonstrate the effectiveness of the FDP in enhancing faculty understanding of feedback practices.

## Discussion

The present study demonstrated a significant improvement in faculty knowledge regarding feedback after participation in the Faculty Development Program (FDP). The mean knowledge score increased from 5.73 in the pre-test to 8.17 in the post-test, and the paired t-test revealed a highly significant difference ($t = 9.162$, $p < 0.001$). These findings indicate that structured training programs can effectively enhance faculty understanding and skills related to providing constructive feedback. Faculty development initiatives are increasingly recognized as essential strategies to improve teaching competencies and educational quality in medical institutions. Such programs provide opportunities for educators to learn modern pedagogical approaches, including structured feedback techniques, reflective teaching, and learner-centered education.

The findings of the present study are consistent with those reported by Steinert et al., who found that faculty development workshops significantly improved teaching effectiveness, communication skills, and the ability to provide meaningful feedback to learners. Their systematic review concluded that structured training programs positively influence educators' knowledge, attitudes, and teaching behaviors, thereby enhancing the quality of medical education.[11] Similarly, Veloski et al. reported that faculty development interventions, including workshops and seminars, significantly improved teaching performance and assessment skills among medical faculty members.[12]

Comparable results were also reported by Ramani and Krackov, who emphasized that formal training in feedback techniques enables faculty members to deliver timely, constructive, and learner-centered feedback. Their study highlighted that educational workshops help educators understand feedback models and improve their confidence in interacting with students during clinical teaching sessions.[13] Likewise, Cantillon and Sargeant demonstrated that structured faculty training programs significantly improve the quality and frequency of feedback provided to medical students, which ultimately contributes to improved learning outcomes.[14]

In another study, Tariq et al. evaluated the impact of faculty development workshops on structured verbal feedback and reported significant improvement in the feedback practices of participating faculty members following the intervention.[15] The authors emphasized that regular faculty development sessions are essential to sustain improvements in teaching practices and to promote a culture of reflective learning in academic institutions.

Furthermore, Fernandez et al. highlighted that faculty development programs contribute not only to individual knowledge enhancement but also to institutional improvement by strengthening teaching practices and fostering innovation in medical education.[16] Such programs encourage faculty members to adopt evidence-based teaching strategies and improve their engagement with students, thereby promoting better educational outcomes.

Similar observations were reported by Ayub et al., who found that sustained and hands-on faculty development training significantly improved educators' knowledge and skills in assessment and feedback processes. Their study emphasized the importance of interactive learning approaches such as workshops, peer feedback, and group discussions in enhancing faculty competencies.[17]

Additionally, Mustika et al. reported that redesigned faculty development programs focusing on clinical teaching and feedback significantly improved faculty confidence and teaching effectiveness in medical education settings.[18] These programs help faculty members develop a deeper understanding of learner needs and provide structured guidance for improving student performance.

Another study conducted at a medical college in Saudi Arabia demonstrated that faculty members who attended an FDP reported improved knowledge of educational principles and increased enthusiasm to participate in future training programs. The majority of participants acknowledged that such workshops introduced them to new teaching concepts and improved their approach to assessment and feedback.[19]

Overall, the findings of the present study are consistent with the existing literature, which indicates that faculty development programs are effective tools for enhancing teaching competencies and feedback skills among educators. The significant improvement observed in post-test scores confirms that even short, structured training interventions can positively

influence faculty knowledge and promote better teaching practices in medical education.[20]

## Conclusion

The present study demonstrated that the Faculty Development Program (FDP) was effective in improving faculty knowledge regarding feedback in medical education. The findings showed a significant increase in the mean knowledge score from 5.73 in the pre-test to 8.17 in the post-test, with a statistically significant difference ($t = 9.162$, $p < 0.001$). This indicates that structured training programs can substantially enhance faculty understanding of the principles and practices of effective feedback. The needs assessment conducted prior to the program also revealed a strong demand among faculty members for training in feedback skills. The interactive components of the FDP, including lectures, role-play, and group discussions, likely contributed to improved learning and engagement among participants. Overall, the study highlights the importance of incorporating regular faculty development initiatives to strengthen teaching competencies and promote effective feedback practices. Such programs can ultimately improve the quality of medical education and enhance student learning outcomes in academic institutions.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

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