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Feedback Approaches in Undergraduate Pharmacy and Medical Education: Investigating a Feedback Literacy Strategy through Student Partnerships

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Abstract

Studies highlight the importance of shared comprehension regarding the objectives of feedback, encompassing both educator and learner feedback literacy. Collaborative interprofessional teamwork is essential for optimal patient outcomes. Although undergraduate students from various disciplines are progressively engaging in joint learning and evaluation, limited insights exist into their common or distinct feedback encounters. The objective of this investigation was to examine perceptions among medical and pharmacy students and educators concerning a proposed feedback approach grounded in existing evidence. This inter-faculty investigation adopted a collaborative student-staff partnership model. A faculty member conducted focus groups with educators from the Schools of Medicine (SOM) and Pharmacy (SOP). Student focus groups involving participants from both schools were led by a student from the SOP. Thematic analysis of the data employed template analysis, performed collaboratively by educators and students across the two schools.

The analysis yielded three primary themes: objectives of feedback, contextual setting, and structural elements. Diverse understandings complicate educators' ability to clearly indicate feedback instances and learners' capacity to identify them. Variations in feedback aims and implementation were evident between early and later program stages. Students in earlier years expressed dissatisfaction with excessively polite and non-specific comments, whereas those in advanced years reacted negatively to a culture of harsh criticism, which was particularly pronounced among medical students. Notwithstanding extensive theoretically supported research, actual practices fail to foster feedback literacy effectively. Contextual variations persist even within individual programs, necessitating careful consideration when establishing a constructive, program-wide feedback environment.

Keywords: Feedback, Feedback literacy, Faculty feedback literacy, Learner feedback literacy, Feedback strategy

Introduction

High-quality feedback is a core component of educational processes, promoting learner progress and professional growth [1]. Both educators and students recognize its importance, yet delivering it adequately and effectively poses ongoing difficulties. Educators often face challenges in providing feedback [2], while students encounter obstacles in utilizing it [3, 4]. Feedback does not invariably improve learning outcomes, as approximately one-third of instances may negatively impact learner achievement [5].

Contemporary perspectives have shifted feedback from a unidirectional process centered on the provider to dialogic interactions focused on the recipient [6–8]. Since current evidence positions feedback as an "educational alliance" involving both parties, alignment in definitions and practical application is vital [7]. A BEME systematic review identified varied interpretations of feedback among learners and educators [9]. Discrepancies persist

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even when both groups concur on the need for a positive orientation, particularly in implementation [10].

Current views stress that feedback experiences are deeply influenced by specific contexts [11]. Interprofessional education is prioritized in contemporary programs to prepare for workplace collaboration [12]. Feedback forms a key part of competency-based frameworks common to health professions curricula. Although substantial literature addresses feedback literacy in medical training, pharmacy education has received comparatively less attention [13]. Feedback literacy, as outlined by Carless and Boud [14], encompasses the 'understandings, capacities, and dispositions needed to make sense of information and use it to enhance work or learning strategies'. Considering future interprofessional collaboration, examining undergraduate supervisory feedback experiences could guide improvements in workplace interprofessional feedback practices. The purpose of this research was to investigate perceptions of an evidence-based proposed feedback approach among medical and pharmacy students and educators.

The study objectives involved gathering and interpreting data from educators and students across all program years in both schools, applying feedback literacy principles to shape the proposed approach and as the analytical lens.

The guiding research questions were:

In what ways do students and educators from a School of Medicine and a School of Pharmacy view a feedback approach? In what manner might variations in feedback experiences across these cohorts shape their views of the approach?

Materials and Methods

Study design and methodological orientation

Reflecting recent scholarship portraying feedback as a socially constructed process, this research adopted a relativist ontology and social constructivist epistemology, acknowledging that participants' interpretations of feedback arise from their unique situations and environments. Qualitative approaches were utilized to address the questions through distinct focus groups for medical educators, medical students, pharmacy educators, and pharmacy students. A collaborative partnership was implemented, with medical and pharmacy educators working alongside students in study planning, focus group moderation, data interpretation, result analysis, and recommendation development. Template analysis was applied within an exploratory qualitative framework for rigorous data examination. Reporting adhered to the consolidated criteria for reporting qualitative research (COREQ) [15].

Theoretical framework

Numerous feedback frameworks exist, previously reviewed systematically by the authors (reference available in non-anonymised version). Ramaprasad's definition emphasizing closure of the performance gap proved useful for highlighting clear standards, mutual objectives, and aspirations. The RC2C model offers a comprehensive relational and coaching-oriented approach, primarily applied in postgraduate appraisal and recently in immediate feedback scenarios [16]. Given this study's focus on undergraduates interacting with multiple educators rather than assigned mentors, and receiving feedback in diverse modes (e.g., written, audio, group, or individual verbal), a broadly applicable framework was selected. Feedback literacy served as the guiding theory. Carless and Boud identify four key features [14]. Appreciating feedback involves valuing its role: feedback of knowing (current performance insights) and feedback for knowing (future improvement guidance) [17]. Making judgements entails self- and peer-evaluation skills. Managing affect addresses emotional responses to feedback and coping mechanisms. Taking action underscores the learner's proactive engagement and application of feedback. These elements center on learner capabilities for maximizing feedback benefits. Educator feedback literacy is a newer concept [18], though shared accountability has long been recognized. Literate educators primarily design and oversee assessment contexts to enable learners to develop and refine feedback literacy [18]. This lens was deemed appropriate for its learner focus while stressing mutual efforts to create supportive conditions for appreciation, judgement, affect management, and action.

Participants and setting

The study drew participants from academic staff and undergraduate students in the Schools of Medicine and Pharmacy at the Royal College of Surgeons in Ireland (RCSI). Medical students in Ireland join through either direct entry or graduate pathways. In the initial years, feedback is delivered during group sessions, such as tutorials (conducted in classrooms) and lectures, for instance through reviews of exemplar responses, marking criteria, and discussions highlighting frequent errors or weakly addressed questions from submitted work. Every

student is allocated a personal tutor for mandatory biannual progress discussions, with additional sessions available upon request. In clinical settings (years 3–5 for Medicine and years 4–5 for Pharmacy), feedback is predominantly oral. Compulsory written evaluations at the end of rotations are accessible to students for inclusion in their portfolios but are not shared with external organisations, such as internship or residency schemes. Students also attend required progress review meetings with staff members multiple times annually.

Pharmacy students primarily enter directly, with most coming from secondary education and a smaller proportion being mature or graduate entrants. Early-year feedback arrangements align closely with those described for medicine. Certain assignments receive individual written comments, as does the Year 2 placement. Practical sessions and formative Objective Structured Clinical Examinations (OSCEs) include personalised oral feedback. In later years (4–5), feedback is chiefly verbal, and placement facilitators offer structured opportunities for reciprocal exchange—where students receive evaluations of their performance while also being able to give feedback to the facilitators—during both formative and summative competency assessments. A personal tutor is assigned to each pharmacy student from the start of the programme for ongoing progress conversations.

Participant Information Leaflets (PILs) and recruitment invitations were distributed by email via a gatekeeper to teaching faculty involved in feedback delivery (JS) and to undergraduate students by the student investigator (AM). Staff not engaged in teaching or feedback were excluded from the initial outreach, as were students on leave of absence or solely in supplemental courses. Roughly 300 medical students and 50 pharmacy students per year group were approached. Convenience sampling was applied to volunteers who replied and were available within the target period, while maintaining approximate gender equilibrium. Focus groups were conducted virtually in April 2022. Participants received a draft feedback strategy in advance. This document served as a stimulus to elicit views on feedback definitions, the proposed strategy, and personal institutional experiences as either staff or students.

Recruitment and data collection

The study was outlined to participants during an introductory briefing. The focus group guide was initially drafted by MS, then refined collaboratively by AM and JS. Faculty sessions were moderated by MS, while student sessions were led by AM. Recordings were transcribed verbatim using Otter.ai's transcription service [19]. Corrections were applied to faculty transcripts (by JS) and student transcripts (by AM) through audio review to verify transcription accuracy and ensure complete participant anonymity before analysis.

Researchers and reflexivity

AM is a registered pharmacist and was a pharmacy undergraduate during the study period. MS holds a senior lectureship in medicine with a focus on feedback research. JS is an associate professor in pharmacy specialising in pharmacy education research. At the time of analysis, TK and AMcS were third-year medical undergraduates. Although affiliated with the same institution, the team brought varied perspectives and roles, deliberately incorporating diverse preconceptions vital to the partnership model. Group discussions were used to interrogate individual viewpoints and sharpen data interpretations. Independent initial coding was performed by two researchers (TK, AMcS), followed by regular meetings with MS and JS to debate and reconcile interpretations, centred on the research questions. Member checking involved sharing raw data excerpts and proposed interpretations with participants, resulting in minor refinements but no major changes to prevailing themes.

Ethics

Ethical approval was obtained from the RCSI Research and Ethics Committee (REC Approval Number 01557). All procedures complied with the principles of the Declaration of Helsinki. Recruited individuals received a participant information leaflet, had opportunities to raise questions, and provided informed verbal and written consent before attending focus groups. Consent was treated as ongoing and withdrawable at any stage.

Data processing / data analysis

Analysis utilised template analysis to organise data hierarchically, facilitating identification of primary domains and subordinate themes. Manual thematic coding followed King's Template Analysis approach [20]. Although template analysis is not conventionally paired with constructivist epistemology, it can accommodate broader discursive elements [21], which suited this investigation. A priori codes drew from socially constructed insights in prior literature,

acknowledging that existing knowledge emerges from earlier contexts; these originated from a preceding scoping review [9]. Application of a priori codes was cautious—they were provisional, open to modification, and indeed evolved. This flexibility supported a constructivist stance by allowing revision, refinement, or elimination of codes as deeper contextual understandings emerged from participant meanings. Codes thus provided a adaptable framework rather than a fixed imposition, developing through engagement with the data. The analysis adhered to the six-step template analysis process detailed in **Table 1**. Initial familiarisation involved TK, AMcS, JS, and MS repeatedly reading transcripts to gain thorough immersion and preliminarily identify themes. Team members independently generated codes and grouped them into themes before convening to compare findings. MS examined all transcripts for her initial template version. TK and AMcS each analysed half the transcripts for theirs. Subsequently, MS, TK, AMcS, and JS collaboratively reviewed the three draft templates, eliminating redundancies, integrating novel sub-themes with established a priori ones, and removing inapplicable prior themes, yielding the first consolidated template. Iterative discussions continued until agreement was achieved (among TK, AMcS, JS, and MS). Coding proceeded until no additional pertinent insights emerged relative to the study aims [22]. Further refinement cycles produced three ultimate overarching themes. The final template appears in **Table 2**.

Table 1. Template analysis process

Stage	Description
Familiarisation with data	Every team member repeatedly read and reviewed the transcripts to gain deep immersion in the material.
Preliminary coding	Initial a priori themes were drawn from the outcomes of a prior scoping review [9]. AMcS and TK also deductively examined the data to detect emerging codes, pinpointing overarching themes and associated sub-themes aligned with the study questions.
Clustering	Emerging themes were grouped with pre-existing ones using visual diagramming techniques. Any a priori codes deemed ineffective for the analysis were discarded.
Producing an initial template	An early version of the template was constructed based on the organisation of primary themes (contributed by AMcS, TK, and MS).
Applying and Developing the template	Through ongoing cycles of analysis and team discussions (involving AMcS, TK, JS, and MS), the template underwent revisions, culminating in a consensually approved structure of main themes and subordinate codes (finalised by TK).
Final Interpretation	Overarching themes were confirmed through group agreement, and the definitive template was established. Findings from the analysis were shared with participants for member checking, resulting in no major modifications (led by MS) [23].

Table 2. Final template analysis

Feedback Goals
a. Students
i. Commentary on Performance
ii. transparent standards
b. Faculty
i. Definitions
1. Suite of definitions for different contexts
2. Signposting
ii. Context dependent
1. Formative observation
2. Summative assessment
3. Student seniority- dependent
2. Feedback Environment
a. Setting and Format
i. Written feedback
ii. Students

1. Group feedback
a. Pre-clinical
i. Underused
b. Clinical
i. Risk of humiliation
iii. Staff
1. Group feedback
a. Difficult to build relationship
iv. One-to-one feedback
1. Students
a. Valued, especially in clinical years
2. Staff
a. Time-consuming
b. Language and Dialogue
i. Staff
1. Language and tone
2. Dialogical feedback
a. Written
b. Group responses
ii. Students
1. Dialogical feedback
a. Pre-clinical
i. Few opportunities
b. Clinical
i. Staff discourage it
2. Bidirectional Feedback
a. Pre-clinical
i. Conscious of power differential
b. Clinical
i. Afraid of effect on assessments
c. Relationships and Emotions
i. Relationships
1. Staff
a. Limited relationship building
i. Large classes
ii. One-off encounters
b. Student well-known to faculty
i. High-quality feedback
2. Students
a. Limited relationship-building
i. One-off encounters
ii. Hierarchical culture
ii. Emotions
1. Staff
a. Managing emotions
i. Challenging
ii. Avoiding feedback encounters
iii. Time-consuming
iv. Not a faculty role
2. Students
a. Managing emotions
i. Relationship-building
ii. Faculty investment in learner-centredness
iii. Focus on constructive messages

Feedback Design
a. Timeliness
i. Delayed
1. Not Implementable
b. Resources
i. Time burden
ii. Ways to optimise opportunity
c. Faculty Development
i. Staff
1. Standardised training
ii. Untrained faculty
1. Inappropriate, unhelpful feedback
2. Perpetuating observed harmful practice

Results and Discussion

A total of eight focus groups were conducted, including four with faculty members (n = 28; SOM = 13, SOP = 15) and four with students (n = 30; SOM = 11 [six clinical, five pre-clinical], SOP = 19 [15 clinical, four pre-clinical]). Analysis revealed three principal themes related to implementing a feedback strategy: Feedback Goals, Environment, and Design.

Feedback goals

Students emphasized that effective feedback should both recognize achievements and highlight areas needing improvement, providing guidance for future tasks:

(feedback should) point you in the direction of what you're good at…identify areas that you can improve on and…guide you towards that for future assignments (Speaker P, Pharmacy, Student). They also valued clarity in expected performance standards:

…probably the best example of good feedback…"this is the standard that we expect" (Speaker C, Medicine, Student).

Faculty acknowledged the complexity of defining feedback goals. Across both medicine and pharmacy, most agreed that clearly defined objectives are essential so students can appreciate feedback as a tool for learning:

Understanding how we define feedback in different contexts is important…we all come at it with very different definitions and understandings…without unpacking that, it's difficult to have a global strategy (Speaker J, Medicine, Faculty).

Faculty noted that feedback objectives vary depending on context, for example, immediate feedback after observed performance differs from feedback given weeks or months after an assessment:

There are many levels of feedback…immediate post-observation feedback is a different category than feedback months later incorporating all your learning (Speaker H, Medicine, Faculty).

Additionally, feedback goals evolve with the student's level of training:

First-year feedback may focus more on SBAs or written assessments…you won't have one-on-one relationships where you've seen a student perform a task in first year (Speaker K, Medicine, Faculty).

To ensure consistency, faculty suggested that the strategy should provide clear definitions of feedback goals along with concrete examples for specific learning activities:

It would be worthwhile to have a clear definition of feedback in the strategy with examples of different types of feedback so that everyone is on the same page (Speaker D, Pharmacy, Faculty).

Environment

Faculty highlighted that cultivating a supportive feedback environment is crucial for developing feedback literacy, emphasizing aspects such as format and setting, communication style, and interpersonal dynamics.

Feedback environment

Setting and format

Both students and faculty stressed the significance of how feedback is delivered. Written feedback is more common during early years, while verbal feedback becomes prominent in later years. Despite literature emphasizing interactive dialogue, some students were satisfied with one-way written feedback:

Dare I say I'm happy with any method of feedback…emails directly to us for essays, I was happy with that (Speaker B, Pharmacy, Student).

Written feedback

Students appreciated having written feedback as a resource to revisit later:

It's nice to have it written down because you can bank it away and read it again (Speaker A, Pharmacy, Student).

Some faculty considered that marking rubrics and exemplar answers for written assessments provided adequate feedback:

If a student asks why their score was low, I can point them to the rubric or assessment criteria, and it's quite clear (Speaker C, Pharmacy, Faculty).

Group feedback

Students reported that group feedback can be highly valuable and should be utilized more frequently. In classroom settings where instructors provided group feedback, pharmacy students felt empowered to give input both to the teacher and to their peers, recognizing it as an efficient use of time and resources:

It also like sparked conversation…even if it wasn't individual, we then went and spoke about it afterwards…giving ourselves feedback to each other (Speaker B, Pharmacy, Student).

Pre-clinical medical students and early-year pharmacy students noted many missed opportunities for group feedback:

When lecturers talk about tutorials, it's described as collaborative…but in reality, you're just sitting there. These tutorials would be ideal moments to give feedback (Speaker H, Medicine, Student).

In first year, small-group learning might allow lecturers to provide more interactive, back-and-forth feedback (Speaker K, Pharmacy, Student).

However, final-year medical students expressed reservations about group feedback, citing concerns about public embarrassment:

You don't want to be humiliated on camera and have that broadcast to 300 classmates (Speaker B, Medicine, Student).

Faculty observed that group feedback can limit opportunities to build individual rapport with students:

In ward-based learning, it's difficult to give in-depth feedback that's not 'on display' in front of others (Speaker B, Medicine, Faculty).

One-to-one feedback

Senior students agreed that individual feedback is particularly valuable for personalized guidance, though it was noted that this is not always effectively implemented:

In the later years, there's more chance for individualized feedback…sometimes they give only general feedback and say no individual feedback is provided, which is when we most need it (Speaker K, Pharmacy, Student).

Language and dialogue

Both students and faculty shared experiences of dialogical feedback. Pharmacy faculty highlighted challenges in managing email exchanges and situations where students questioned or resisted feedback:

Once students engage in bidirectional dialogue, it can turn into grade disputes…'why didn't I get that?' (Speaker H, Pharmacy, Faculty).

Medical faculty mainly interacted with pre-clinical students individually via email or class-wide feedback sessions:

Occasionally, a face-to-face conversation is needed if it's clear a student doesn't understand…otherwise, feedback is handled through class sessions or email (Speaker I, Medicine, Faculty).

All faculty stressed the importance of careful language and tone in all feedback contexts:

You have to choose your words and tone very carefully (Speaker D, Pharmacy, Faculty).

Pre-clinical medical students reported limited opportunities for back-and-forth dialogue due to large group learning, while final-year students felt the faculty set a tone that discouraged questions:

Once you hit a knowledge block, they say 'everyone should know this,' so it doesn't feel like a safe environment to ask questions (Speaker C, Medicine, Student).

Students from both disciplines expressed concerns about potential negative consequences on assessments:

Even though it shouldn't affect it, you know these people might be assessing your exams, so you don't want to jeopardize the student–lecturer relationship (Speaker E, Pharmacy, Student).

From a self-preservation point of view…you feel on the back foot because the examiner isn't on your side (Speaker B, Medicine, Student).

Pharmacy students' experiences with bidirectional feedback were mixed. Some were hesitant to engage via email:

You might feel nervous emailing lecturers…they're busy, and you don't want to bother them over a small essay (Speaker O, Pharmacy, Student).

Others worried that providing feedback could lead to conflict:

I don't feel comfortable giving feedback to a lecturer…not because I'd be wrong, but because I fear confrontation (Speaker F, Pharmacy, Student).

Yet some students described highly positive experiences with two-way feedback:

We had a conversation where she respected that we're final year…dialogue worked really well…it encouraged further discussion among us outside of class, giving feedback to each other and from her to us…it became a big conversation, and I liked it (Speaker B, Pharmacy, Student).

Relationships and emotions

Students highlighted that the quality of relationships and emotional climate plays a crucial role in an effective feedback strategy. Experiences differed notably between early-year students and those in senior, clinical years. Pre-clinical medical students reported frustration when instructors were excessively "nice," perceiving that clear corrective guidance was avoided to prevent upsetting students. They described such relationships as respectful, perhaps excessively so:

I don't think I've experienced professors being rude or unsupportive…most of the time, if anything, they're almost too nice (Speaker F, Medicine, Student).

In contrast, final-year medical students described feedback in clinical settings as intimidating and demotivating, reflecting what they called a "roasting culture":

Instead of fostering a safe environment to learn and ask questions, it's more like a grilling or roast session…'Wow, you don't know that? How can you be in final med right now?'…it's frustrating (Speaker E, Medicine, Student).

Students noted that hierarchical dynamics and perceived "superiority complexes" often hindered meaningful two-way dialogue:

Relationships are characterised by superiority complexes and hierarchy (Speaker E, Medicine, Student). Senior medical students, in particular, described the environment as harsh and unsympathetic, fostering what they felt was a "culture of toxicity" (Speaker D, Medicine, Student). Faculty in medicine acknowledged these negative experiences and emphasized that future feedback strategies must focus on learning and performance rather than personal criticism:

Feedback could be developed to ensure it is always performance- or learning-focused, not person-focused, because personal criticism can be very destructive (Speaker E, Medicine, Faculty).

Pharmacy students reported a mixture of positive and negative experiences, demonstrating how the instructor's approach to relationships influenced their perception of feedback quality:

He really is invested in what you have to say, listened to me, and that made me more comfortable…there was a clear difference between good feedback and poor feedback depending on the lecturer. Lecturer Y listened and incorporated our experiences, while Lecturer X did the opposite (Speaker G, Pharmacy, Student).

Conversely, some supervisors provoked distressing reactions:

Absolutely cut us in two for it…I just remember feeling absolutely awful (Speaker B, Pharmacy, Student).

Figure 1 illustrates students' perceptions of facilitators and barriers to developing feedback literacy, highlighting contrasts between junior and senior-year learning environments.

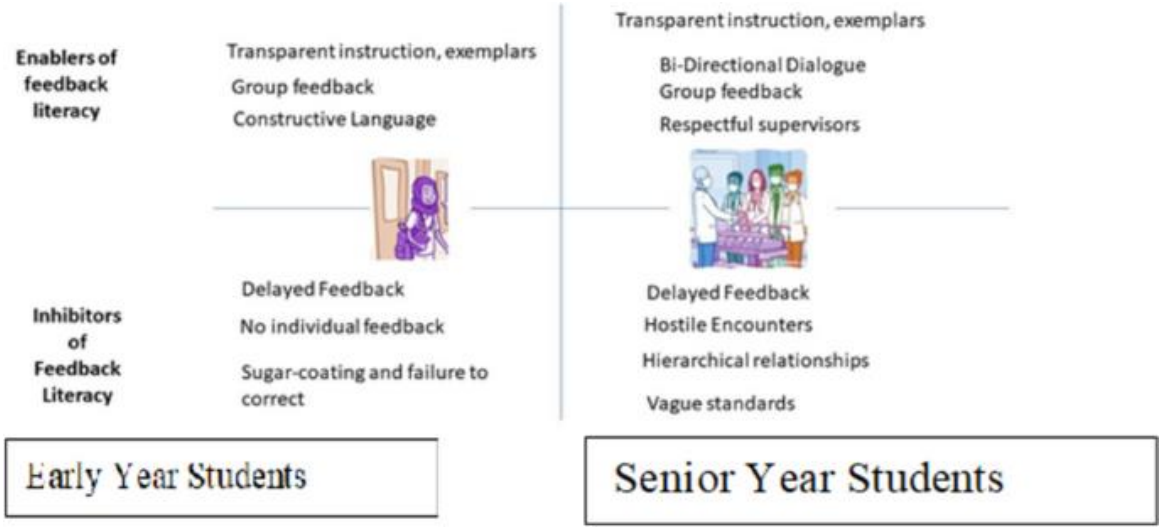

Figure 1. Enablers and Barriers in Implementing a Strategy to Promote Feedback Literacy – Student Perspective

Faculty identified limited direct supervision as a major obstacle to building constructive relationships with students, making it difficult to establish the rapport necessary for effective feedback. They emphasized that respect, careful language, and professionalism are key to fostering these relationships:

There's definitely a psychological aspect to feedback. I'm more inclined to give feedback—and more of it—when I have a good understanding of the student, rather than if I just drop in for a single lab in a third-year class…I don't know them (Speaker I, Pharmacy, Faculty).

They acknowledged that developing these relationships is complex. Faculty also noted that the inherent subjectivity of evaluations can challenge trust:

From a student perspective, will they receive the same level of feedback from me as another lecturer? Managing these expectations is a major part of the process (Speaker E, Pharmacy, Faculty).

Faculty reported difficulties in managing student emotions and navigating challenging conversations. Opinions varied regarding how much responsibility staff should have for supporting students' emotional responses. Some felt this was beyond the scope of their role:

The idea of a fully sympathetic feedback environment, particularly supporting emotions, was surprising…we are not pastoral support (Speaker B, Medicine, Faculty).

Others felt some level of emotional support was necessary, though challenging:

People worry about students' emotional reactions to poor performance, like if they cry…we try to talk with them and calm them down, not to provide pastoral advice (Speaker G, Pharmacy, Faculty).

Feedback design

Timeliness

Students reported feeling powerless when feedback arrived too late to inform performance improvements:

Timing of feedback is important…especially after practical exams—if feedback is negative, there's nothing you can do to improve, and you feel disheartened (Speaker A, Pharmacy, Student).

Pharmacy faculty similarly recognized that delays in providing feedback represented missed opportunities for learning:

The timing of giving marks and feedback could be adjusted to mitigate some issues if delivered simultaneously (Speaker G, Pharmacy, Faculty).

For medical faculty, timing was less of an issue, as feedback often occurred during observed tutorials or ward-based assessments.

Resources

Faculty consistently identified limited time and resources as a major barrier to delivering more feedback and facilitating bidirectional dialogue:

It's primarily a time and resource problem…no matter what suggestions you make, reading an assignment thoroughly and providing appropriate feedback takes time (Speaker C, Medicine, Faculty).

They also highlighted the importance of prioritizing

resources to maximize the impact of feedback:

We want feedback to have the greatest effect, so it's about ensuring staff are supported and trained to deliver high-quality feedback and focusing resources where they will be most beneficial (Speaker K, Pharmacy, Faculty).

Faculty development

Students reported that some faculty approaches to feedback did not effectively promote feedback literacy and highlighted the need for faculty development to ensure educators adopt an evidence-informed approach:

"I think it's ridiculous that people teaching us have had no formal training in medical education or education in general…you wouldn't let someone without qualifications teach your child in primary school, yet physicians are being taught by people without formal training…there should be a structured approach to feedback rather than just copying how a professor does it, which perpetuates harmful practices" (Speaker A, Medicine, Student).

"It's important for faculty to recognize that students invest considerable time and effort, for example in exams…training in this regard would be beneficial because sometimes feedback can be overly general" (Speaker L, Pharmacy, Student).

Faculty also acknowledged the importance of professional development. They recognized the complexity of defining feedback goals, the challenges of implementing them consistently, and the difficulties in managing students' vulnerability and strong negative reactions. Faculty welcomed structured training to improve their ability to provide constructive, supportive feedback while maintaining professional boundaries:

"I would love to see standardized, mandatory training for all faculty" (Speaker H, Medicine, Faculty).

This study explored how medical and pharmacy students and faculty perceive an evidence-informed feedback strategy, uniquely examining perspectives from both groups in a partnership approach.

Although establishing clear feedback goals appears straightforward, faculty highlighted the nuanced complexity of aligning goals across different professional and learning contexts. Variability in understanding among faculty further underscores that feedback literacy requires appreciation of the specific disciplinary contexts in which feedback occurs [24]. The observation that faculty interpret feedback and its goals differently supports the socio-constructivist view that feedback meanings are both individually and collaboratively constructed [25], validating the importance of a co-developed, collaborative strategy.

Some faculty examples—such as reliance on model answers and marking rubrics—demonstrate that teacher-centred, information-transmission models persist [26]. However, incorporating these tools into learning activities that require students to evaluate, suggest modifications, seek clarification, and critically appraise their own work offers a practical route to shift toward learner-centred approaches that foster appreciation of feedback **(Table 3)**. Strategically embedding feedback literacy is therefore essential to ensure that both faculty and students engage with research-informed, best-practice feedback methods.

Table 3. Co-designed recommendations for an institutional feedback literacy strategy

Recommendation	Practical Application	Feedback Literacy Concept
Define Clear Feedback Goals: Establish unambiguous feedback objectives with a shared understanding among staff and students, adapting to contextual needs	Develop a comprehensive map of feedback activities, illustrating different formats, settings, and contexts for both learners and faculty, to clarify what feedback entails and where it occurs	Appreciating Feedback
Intentional Operationalisation: Ensure feedback is timely, actionable, and development-focused. Faculty should prioritize high-impact opportunities and adopt innovative methods (e.g., group feedback, digital tools) to optimize efficiency	Provide fillable, structured templates with constructive prompts and action plans co-signed by learner and teacher; design learning activities where students critically assess model answers and rubrics against their own work	Making Judgments Taking Action
Faculty Development: Mandate standardized training for faculty to update knowledge of feedback literacy, focusing on clear communication, constructive two-way dialogue,	Widely communicate the feedback strategy; provide FAQ resources; deliver scalable virtual workshops with role-play and practice using audio, video, and written feedback to efficiently address emotions and skill development	Appreciating Feedback Making Judgments Managing Affect Taking Action

emotional sensitivity, and co-creation of action plans		
Collaborative Strategy Development: Approach feedback literacy collaboratively with both faculty and students to co-construct shared understanding and foster a learner-centred feedback culture	Organize feedback hackathons for faculty and students to collaboratively solve challenges in feedback practices; integrate bidirectional feedback into learning activities to drive learner-informed improvements	Appreciating Feedback Making Judgments
Whole-School Approach: Build an institutional culture that supports feedback literacy by embedding feedback across learning activities, ensuring timeliness, bidirectionality, psychological safety, forward-focused guidance, and peer/self-evaluation	Integrate the feedback strategy within institutional teaching, learning, and assessment frameworks; identify activities that could benefit from enhanced feedback opportunities	Appreciating Feedback Making Judgments Managing Affect Taking Action

Students in the later years often perceived feedback goals as more focused on criticism than guidance, highlighting concerns about their feedback experiences. A consistent theme was the expectation that feedback should act as a roadmap to help identify areas for development and support growth. Students emphasised that both faculty development and student partnership are essential for implementing such goals. For educators, a practical implication is to actively involve students in co-defining what feedback entails and the objectives of specific feedback activities across diverse contexts within their programme, as elaborated in the recommendations for implementing a feedback strategy **(Table 3)**.

Despite some faculty concerns that group feedback might be too generic to be valuable, students generally viewed it positively, describing it as a catalyst for communities of practice [27, 28] when executed effectively, including presenting exemplars of varying performance standards, contextualising them, and fostering dialogue. This approach allowed learners to adopt effective practices from peers and encouraged discussion outside of class, progressing toward peer feedback. Feedback-literate educators are characterised by their ability to utilise resources effectively while creating authentic feedback-rich environments [29]. We suggest that small-group feedback sessions could be co-designed with students and faculty; these were piloted in Pharmacy with notable success, with students valuing the small group setting for fostering a safe space for bidirectional dialogue. There is potential to expand this model strategically across the institution and beyond. Additional practical applications include leveraging audit and video technologies to make feedback more timely, relational, and emotionally supportive.

While the concept of bidirectionality in feedback was generally welcomed, few participants had experienced it, leaving them unable to communicate where feedback was insufficient. Traditional transmissive, rater-centred encounters [8, 30] were still common, making it challenging for students to interpret feedback effectively, consistent with existing literature [9]. Although written feedback does not naturally lend itself to dialogue, it remains valuable for reflection, which is known to enhance feedback acceptance [31]. Incorporating facilitated reflection into written feedback could increase its learning value. Practical strategies include providing feedback glossaries and guidance on how to use feedback effectively to enhance literacy [32], with further potential for efficient, timely facilitated reflection through generative artificial intelligence [33].

Faculty opinions differed regarding their role in supporting students' emotions during feedback; some saw it as a pastoral duty, while others considered nurturing supportive interactions and respecting student vulnerability integral to feedback. The latter aligns with research showing that an educational alliance fosters constructive feedback use [7]. Nonetheless, faculty recognise that developing the skills to support student feedback literacy requires formal training [34], and not all educators will easily adopt contemporary, emotionally complex feedback practices. This underscores the importance of faculty development in supporting assessor professionalism [18, 35].

All students acknowledged the importance of their relationships with faculty for positive feedback experiences, yet perceptions of what constitutes constructive relationships varied. Early-year medical students considered faculty "too nice," noting that "hedging"—indirect correction to avoid upsetting students [36]—hinders honest feedback, a common phenomenon [37, 38]. Early-year medical and pharmacy students also reported limited opportunities for

individual interactions and fewer emotional responses to feedback, potentially connected factors. Senior students faced hierarchical dynamics that discouraged bidirectional feedback and sometimes caused embarrassment or humiliation. Such polarised experiences within the same university are not unexpected, given the documented hidden curriculum of hostility and humiliation in clinical medicine [39]. Pharmacy students reported a mixture of positive and negative feedback experiences; notably, final-year medical students attributed negative encounters to the wider culture, whereas senior pharmacy students considered them teacher-specific. All challenging experiences that elicited negative emotions occurred in verbal feedback settings, significant given healthcare professions' reliance on face-to-face feedback in senior years. Collectively, these findings reinforce that context and learning culture significantly shape learner responses to feedback [40], highlighting the need for educators to carefully consider situational factors to equip learners to manage emotions and support teachers in fulfilling their feedback roles confidently.

Pharmacy students emphasised that timely feedback would substantially improve their learning experience, whereas both pharmacy and pre-clinical medical faculty acknowledged delays due to resource constraints [41], reflecting a widespread recognition that feedback workload is burdensome [42]. Timing of feedback represents both a design and pedagogical challenge, as integrating feedback into everyday learning activities (intrinsic feedback), rather than restricting it to end-of-semester assessments, provides opportunities for immediate improvement as learning unfolds [43]. Interestingly, timeliness was not highlighted as a key concern for senior medical students, indicating potential to draw on alternative approaches, such as in-the-moment feedback commonly delivered on clinical wards. In pharmacy, this could be addressed through expanding workplace-based assessments, such as entrustable professional activities [44].

Notably, curriculum design was largely absent from discussions around feedback strategy development. Faculty proposed signposting feedback to help orient students and incorporating activities to enhance feedback literacy, yet neither students nor faculty suggested embedding feedback processes systematically within curriculum design, despite expert recommendations advocating this approach [18]. Nevertheless, in pharmacy, OSCEs have been redesigned by reducing the number of stations in mock examinations and extending time at remaining stations, allowing space for bidirectional dialogue and addressing design considerations such as timeliness and resource allocation.

Conclusion

This study examined student and faculty perceptions regarding the implementation of an evidence-informed feedback strategy, revealing that while theory is well-established, practical processes and conceptualisation may be outdated. Operationalising feedback literacy presents significant challenges for both faculty and students. Feedback experiences differ markedly across programme stages, with pre-clinical students experiencing feedback as "overly nice," whereas clinical students encounter environments described as toxic, hostile, or a "roasting culture," highlighting transitional difficulties in perceiving feedback value.

Recommendations in **Table 3** should be implemented carefully, considering resources and continuously evaluated to ensure effectiveness across varied educational contexts. By fostering open dialogue, acknowledging emotional responses, and equipping students and faculty with appropriate skills, institutions can cultivate a transformative feedback culture that enhances the learning journey.

Strengths and limitations

The study's partnership approach, involving both students and faculty, provided impactful insights into differing perspectives on feedback and policy implementation [45]. Data were collected from a broad range of participants across medicine and pharmacy, enabling meaningful comparisons. To maximise validity and reliability, two facilitators trained together for focus group execution; pilot groups were reviewed collaboratively to refine the interview schedule. A diverse research team further contributed to challenging potential biases. Although participant biases could exist, this was mitigated by the number of focus groups conducted. Future research could adopt mixed-methods approaches, combining qualitative and quantitative data to provide a more comprehensive understanding and reduce context-specific limitations. Multi-site recruitment would improve transferability, and longitudinal studies examining intervention impacts on feedback perceptions and learning outcomes would further advance the field.

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