

Brief Communication:

Reflection on improving feedback skills and a framework for moving towards feed forward

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Background

As my understanding about how clinical skills are acquired in medical education continues to evolve, so does my vision of my role in the clinical skills laboratory. When I began teaching, I considered my prime responsibility to be that of providing lectures and clinical skills training sessions. A lot has changed over the past few years as I realise that medical student learning is powerfully influenced by the clinical tutors with whom they interact. I now see my primary role as that of creating contexts for my students to improve their clinical competence (i.e. technical skills and knowledge, such as the ability to perform and interpret medical procedures) and behavioural competence (i.e. interpersonal or affective skills, which includes the ability to communicate effectively, use judgment and empathy, and manage relationships) in their daily tasks suitable to their proficiency level by providing them with feedback on their use of these skills.

The medical curriculum at Nelson R. Mandela School of Medicine, University of KwaZulu-Natal (NRMSM, UKZN), is organised in thematic blocks of six weeks focused on a specific group of body system based patient problems or conditions. The main educational format for each theme involve problem-based learning sessions incorporating lectures and clinical skills training that include small group practical skills demonstration sessions. The subjects of clinical skills training are aligned with the themes of the problem-based sessions. A skills training session for the pre-clinical undergraduate medical students follows the same five teaching stages George described for teaching clinical skills¹. These involve a skills lecture as a large group session followed by small group practical demonstration sessions.

Each small group skills session begins with a short discussion to allow students to reflect on their preparatory reading from the large group lecture.

They then get to view a video of the skill to be learned using a recommended clinical methods video following which the tutor explains and demonstrates the particular skill using a student, a simulated patient or a model (mannequin). Simulated patients are normal individuals trained to act as real patients to simulate a set of clinical problems. The students then practice the learnt skill on the simulated patient, on each other or on the models under tutor supervision with feedback and corrective critique. The tutor at the end of the session summarises the session and students are allowed to ask questions.

At the beginning of the academic year each student is handed a logbook with tasks to be assessed formatively. They are also provided with a clinical skills protocol with performance standard learning goals and assessment criteria for each skill. The written protocol includes clear instructions and general requirements on the systematic approach to performing the skills to be assessed in each theme. The clinical skills formative logbook was designed and revised multiple times by the clinical skills tutors at NRMSM, UKZN to develop a structured feedback tool. The purpose of the formative logbook assessment is to reinforce the medical students' knowledge of and ability to perform certain examination and procedural skills in their pre-clinical years.

At the end of a six week theme, the skills' training includes a directly observed formative logbook assessment session with immediate personalised verbal and written feedback from both their tutors and peers. The written feedback is provided in the student's clinical skills logbook answering three questions:¹ What was done well², What was not done well, and³ What can be improved. This offers students insight into their actions with the intention to highlight the difference between their actual performance and the intended performance with suggestions for improvement². The aim was to also improve students' confidence in examining patients as well as assessing

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each other's skills as they approached their end of semester clinical examination i.e. the objective structured clinical examination (OSCE) and later on in their clinical years³. The OSCE's are held at the end of the semester as a collective assessment of three themes.

I have lately been reflecting a lot about feedback in medical education. Although the benefits and mechanics of feedback dominate the feedback literature, our medical students continue to lament on the deficiencies of the quality of feedback received by them⁴. There is therefore a disconnection between the qualities of feedback learners receive with the quality of feedback that educators think they give. The question then is why do our learners continue to criticise the quality of feedback provided to them? Adult learners should be calibrating their own performance accurately and seeking feedback regularly⁵. The question is therefore, are our students doing so? In an ideal setting, medical students would engage in performing their clinical examination and procedural skills, they would then be provided with immediate feedback on their performance, and the students would then use this feedback to set goals enabling them to work towards performing these clinical skills more proficiently in the future. In the inadequate world, this process may not always be working the way it should. William & Paul, Carol & Weaver linked this failure to student's confusion on how to understand and use feedback⁶⁻⁸.

Although the clinical skills formative logbook feedback has been timely enough we may not have provided adequate opportunities for our students to reflect on feedback and plan next steps to feed-forward based on the feedback they have received. William and Paul call this "the essential epilogue" of the feedback process, and without it, feedback is a complete and total waste of time because it does not result in new learning for students⁶. Unlike giving feedback, receiving feedback is not a simple, passive act as it requires self-awareness, self-reflection and a commitment to improving clinical skills⁹. We therefore clearly need to do much better at closing the feedback loop.

After careful reflection, I have come up with the following framework (Fig 1) for engaging students to move feedback forward for the upcoming school year. My focus turned to exploring the feedback loop which starts well before the feedback conversation is planned. This should begin when the teachers

and learners meet for the first time by enforcing the following in practice:

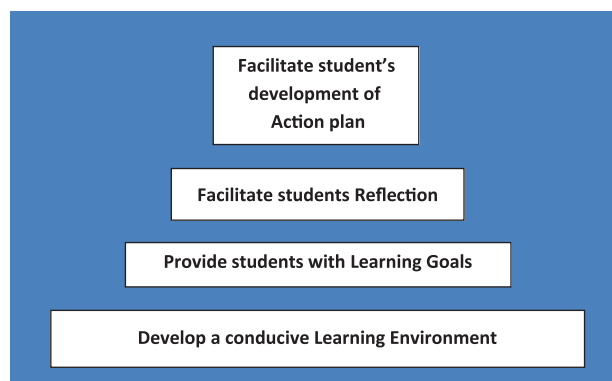


Fig 1: Framework for engaging students to move feedback forward

1. Develop a conducive learning environment

Developing a friendly and compatible learning environment is important and conducive to learning. It allows students to make mistakes, freely admit to their limitations with willingness to learn at all levels and establishes trust between teachers and learners. The trust established ensures that the feedback process becomes a two-way exchange involving discussion of strengths and weaknesses with the goal of achieving professional growth and improvement^{10, 11, 12, 5}. Therefore establishing a positive learning environment from the beginning of each academic year would reinforce and set the stage for future feedback exchange.

The clinical skills learning culture at NRMSM ensures learners are scheduled to rotate with a limited number of clinical tutors for a period of two pre-clinical years. Students are often exposed to frequent opportunities of systematic dialogic feedback built into the system providing tutors with the ability to monitor their progress. These feedback processes and performance outcomes are likely to flourish as it also facilitates the development of a trusting longitudinal tutor-learner relationship. Building such relationships tend to increase the credibility of the feedback exchanged and is a pre-requisite to promoting feedback acceptance and learning.

2. Provide students with learning goals

Once a positive learning environment is established, the next step will be for the clinical skills leader to communicate the learning goals to the tutors and students through a clinical skills protocol. The tutors will further communicate these goals to students as

specific behaviour or performance standards during the skills demonstration sessions. The students are then required to practice their clinical skills and establish their own learning goals serving as a criteria towards self-regulating their learning. At the end of the theme, learners will be expected to communicate these learning goals through their skills performance to the tutors and peers during multiple directly observed formative logbook assessment sessions. The learner's clinical performance would be accompanied by immediate dialogic verbal and written feedback with a feed-forward strategy, captured in their logbooks. The feedback provided will be based on specific behaviours to allow learners calibrate their clinical performance at various stages, with the aim at motivating professional development to complete the feedback loop^{2,13}.

3. Facilitate student's reflection

During the formative logbook performance assessment session students would also be encouraged to self-reflect on their strengths and weaknesses before tutors provide feedback. "Asking students to think about their work before receiving feedback scratches up the soil in their brain so the feedback seed has a place to settle in and grow"¹⁴. Starting a conversation with self-reflection reduces anger and negative emotions, increases receptiveness of corrective feedback and provides students the opportunities to self-regulate their own learning¹⁵⁻¹⁷. Implementing an integrated formative logbook assessment with feedback on multiple integrated clinical skills has the additional benefit of promoting the relevance and authenticity of the assessment and feedback in medical practice. This type of assessment method encourages students to reflect and deeply engage with both the assessment criteria and feedback while incorporating an assessment for learning strategy¹⁸⁻²¹. There is therefore the advantage of bringing the assessment and feedback processes in line with medical student's clinical relevance to promote their subsequent motivation to feed forward.

Students use feedback from teachers as a source to reflect and evaluate their progress. Providing students with quality feedback information that includes a forward looking strategy presented in a positive way improves their learning environment. Developing self-assessment or self-reflective practices in students to interpret data about their own performance by comparing it to a standard promotes future learning and capacity for on-going self-monitoring making tutor feedback more effective^{22,23}.

4. Facilitate student's development of Action plan

Though medical educators may include action planning in education, reliable and effectively given feedback can still be useless when not well received by students and will not be put into practice to improve performance. Without students being proactive and sharing in the responsibility of the feedback process by identifying and listing their specific strengths and areas that need improvement, and then identify improvement plans, feedback will have no purpose²⁴⁻²⁶. Students should be given the chance to reflect on feedback, analyse the feedback content and think about changes they can make as a result of the feedback comments. This process is known to improve motivation and self-esteem towards developing an action plan²⁵. It is very important that students develop a feedback loop where they are constantly thinking about what they have done and how they could be doing it better so as to develop the skills of independent reflective and self-regulated learning that are part of the attributes expected of a graduate¹⁴. As students have very little experience of the process of reflection and planning forward, they will need support in doing this²⁷.

For feedback to be effective and valuable it should be understood before it can be used to make productive improvements. I would therefore like to guide students to extract the actual meaning of feedback comments and to build on tutor feedback. This would require getting them to develop an action plan as a systematic and productive approach to making optimum use of feedback. Students would be informed that when feedback is first received it is important that they read all feedback carefully whether positive or negative. They will need to take note of comments on areas for improvement or areas where specific performance was not up to the mark. Re-reading and reviewing these feedback comments a day or two later helps with their self-reflection and self-assessment by asking themselves questions and trying to understand why the feedback contained those comments. This should lead them to developing a plan on how to address the issues highlighted in the feedback in terms of which steps to take to improve on their performance. Students will be requested to jot down the main points from each feedback comment both positive and negative as well as steps they would take to address them and save in a feedback folder. This would reflect important skills in the student's ability to recognise both their strengths as well as areas for improvement.

By comparing the feedback comments they receive over time and the steps they have taken to improve their performance across a number of assessments, the student can determine the progress they are making with regards their professional development.

Scheduling frequent peer dialogue through peer review processes will also provide added opportunities for students to reflect, have discussions about their performance and to better understand their feedback by bridging the gap between their current and the anticipated level of performance^{28,29}. To demonstrate if any learning has resulted from feedback, follow-up sessions will be scheduled where students are requested to re-do the same task. Other methods to check improvement would be to compare the student's formative and summative assessment performance for the particular task. The best feedback process should loop back into a consequent performance assessment feedback indicating whether the previous feedback has resulted in improved clinical performance. Providing multiple opportunities for receiving informed feedback within an integrated formative assessment framework encourages more frequent and better-quality assessments that has the advantage of being learner-driven³⁰.

As the ultimate goal of a medical learner is to become a competent clinician, they are constantly looking out for information about their performance as well as motivation from their clinical tutors and peers to support their development. For a feedback process to be effective it should therefore result in the tutors and peers generating strategies for improvement in terms of feedback recommendations to feed-forward. A faculty development programme to stimulate student's reflection on feedback would be to include a post evaluation intervention in an existing feedback model to train students for performance change by getting them to respond to feedback. Developing and incorporating a post evaluation feed-forward action plan tool/form into the current clinical skills logbook, as suggested in the form illustrated here; will provide an opportunity to facilitate student's reflection on their clinical performance as well as their engagement with feedback to identify gaps between the desired goal and their performance. It further will facilitate students to choose action steps through goal-setting, then work out strategies for future performance improvement through development of better-quality action plans towards closing the feedback loop.

FEED-FORWARD ACTION PLAN FORM/ TOOL (Post evaluation intervention)

Student's please use this framework when you receive feedback on your work. This will help you analyse your feedback and get the most out of your tutor's comments to improve your learning experience.

SKILL ASSESSED:

ZONE OF PERFORMANCE (tick):

failure weak pass competence superior performance

What I feel about this feedback or extent to which I agree with the feedback:

My positive feelings:

My negative/critical feelings:

Actions I can take to improve my clinical performance for the next assessment:

Actions to build on what was done well:

Actions to address what was not done well:

What I want to improve or do differently next time:

Recurring trends I have noted in the feedback I am receiving:

Positive comments:

Negative/critical comments:

For tutor use only (grading students reflection on feedback and action plan)

Students reflection on feedback and development of an action plan	Yes	No
1. There is clear evidence from student's reflection on feed-forward using the action plan proforma that feedback was read and considered carefully		
2. There is clear evidence of approaches to work indicated on how the student might improve their clinical performance for future clinical skills performance		
3. There is a clear action plan		

Tutor's comments:

Designing such opportunities that develop assessment and feedback literacy skills within the curriculum is critical and has the advantage to also motivate student's feedback seeking behaviour as part of closing the feedback loop²⁸. A learning culture that values feedback and makes good feedback available by prioritizing feedback conversations facilitates the uptake and use of feedback²⁹.

In summary, the feedback loop below (Fig 2) highlights the feedback processes and outcomes I would like to create within a supportive feedback learning culture. Feedback has the potential to improve the learning experience of medical students by facilitating and motivating their development as independent learners to monitor, evaluate, and regulate their own learning within a feedback loop.



Fig 2: Feedback loop - Feedback processes and outcomes within a supportive feedback learning culture

Further, evaluation of learning modules should allow for students to feedback to academic tutors on their feedback. This provides an opportunity to look at what students have said about the module and allows tutors to modify teaching so that learning outcomes are more explicit in response to evaluation. This 360 degree evaluation would aim at closing the feedback loop with significant effects at professionalising teaching¹¹. Therefore good feedback practice in our clinical skills laboratory would not only provide useful information to the medical students about improving their learning, but would also offer decent information to our tutors that can be used to help

shape their teaching and ultimately the learning experience of the students.

Conclusion

Improving feedback skills as a means to move feedback forward throws light on the process of promoting feedback in medical education while addressing a wide spectrum that includes the cognitive, behavioural and motivational aspects of reflection. It shifts the focus firmly away from the transmission or behaviourist model of feedback to a modern, effective and more valuable socio-constructivist model that has a major influence on the quality of the students learning process³¹. Through my reflection I aimed to provide a practical solution to bridge the gap between receiving feedback and utilizing it the best possible way. It is high time medical tutor's re-think feedback process to improve student's learning. Future studies should examine if medical students produced action plans after receiving feedback, the quality of the medical students' action plan, and whether the action plans were relevant to the feedback received.

Compliance with Ethical Standards

Competing interests: The author Dr R Abraham declares that she has no competing interests.

Ethics approval and consent to participate: Ethical approval for this study was granted (HSS/2213/017D) by the University of KwaZulu-Natal's Ethics Committee.

Availability of data and materials: The datasets used and/or analysed are available from the corresponding author on reasonable request.

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