

## EDUCATIONAL STRATEGIES

# REFLECTIONS : AN APPROACH TO COMPREHENSIVE LEARNING IN MEDICAL EDUCATION

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Reflection, an approach to learn from personal experience, inculcates the habit of taking responsibility for one's actions and decisions. In medical education, reflection is evolving as an essential component to cultivate the habit of self-regulated and lifelong learning. Different modalities can be adapted for reflection; however, discussing experiences and the reflective thoughts that accompany them is the key to bring an internal process and external information together. Reflective activity usually occurs after an action; hence, the strategy adopted should specifically focus on the reflection-on-action. It is equally important for the teacher to model reflection and to decipher what are the goals of the reflective activity. Feedback about reflection is essential to promote learning. It is important not just to provide feedback on the content of the reflection but also on the student's reflective skill. A well-thought incorporation of simple reflective techniques should be considered in all phases of medical curriculum, and the learner should be in position to appreciate its benefits so that it becomes a voluntary effort in all the phases of professional development.

## INTRODUCTION

Reflection is replication of an image or an experience in its minutest of detail. Considered in a broader perspective, "reflection" is the most powerful indicator to assess oneself—morally, emotionally, and cognitively. It drives the quest for excellence with a constant desire to improve. Reflection, an approach to learn from own experience, inculcates the habit of taking responsibility for one's actions and decisions. As a metacognitive process, it creates a greater understanding of both self and the situation so that future actions can be informed by this understanding.

In medical education, reflection is evolving as an essential component to cultivate the habit of self-regulated and lifelong learning, a crucial process in transforming experience into knowledge, skills, and attitudes. Professional organizations and accrediting bodies have strongly suggested the inclusion of reflection at all levels of medical education.<sup>[1]</sup> Lately, the faculty development programs in Medical Education, e.g., Fellowship in Foundation for

Advancement in International Medical Education & Research (FAIMER) and Advance course in Medical Education, have incorporated "Reflection" as an imperative component of training. As such, it is at the core of both learning and continually evolving professional practice. Reflective activities are becoming part of the curriculum at all levels of medical education. It is important to incorporate activities that foster reflection. Off late, researches are focused on simpler methods of reflective tactics such as log sheets, case-based discussions, reflective essays, and reflection in groups as an alternative method apart from the well-established learning portfolios.<sup>[2]</sup>

## REFLECTIONS: AS THEY QUOTE

The word reflection comes from the Latin word "reflectere," which means "to bend" or "to turn back." Hillkirk et al defined reflection as "A conscious and intentional examination of the behaviour, ideas and feelings generated by a learning experience with the purpose of increasing the experience's usefulness to the learner."<sup>[3]</sup> In education, we can, therefore,

define reflection as a process in which our thoughts are “turned back” to a certain event or situation; we analyze and make sense of the event, and these insights are used when we encounter a similar event in the future. A more comprehensive definition of reflection states that “it is a metacognitive process that occurs before, during, and after situations with the purpose of developing greater understanding of both the self and the situation so that future encounters with the situation are informed from previous encounters.” Contrary to the general belief, reflection is not an abstract concept. It is an important tool in the practice of medicine, as Epstein and Hundert state in their article on professional competence—“Professional competence is the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individuals and communities being served.”<sup>[3]</sup> Accordingly; if we strive to achieve professional competence among our learners, we have a sufficient mandate to teach our trainees to reflect.

Boud et al. defined reflection as “a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to a new understanding and appreciation.” In line with this definition, three elements of reflection were identified: (1) awareness of self and the situation; (2) critical analysis and understanding of both self and the situation; and (3) development of new perspectives to inform future actions.<sup>[4-7]</sup>

### **WHY REFLECT: EMERGING PERSPECTIVES**

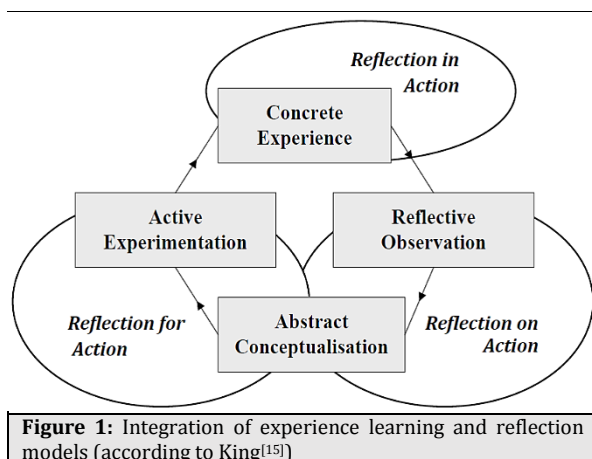
To reflect means to look back and consider something. A trainee who is trained to reflect upon his behavior can become his best critique. It enhances self-assessment, learning from the experience, and developing critical thinking skills. It not only moves beyond merely seeking a better plan for future experiences but also looks to identify reasons for the outcome of an event. Reflection comprehensively ponders about various contextual that were a part in clinical decision making, thereby bridge the gaps in knowledge and experience and formulate a road map for future development.<sup>[8]</sup>

### **MODES OF REFLECTION**

Reflective exercise can be done orally, a written journal, audio recording, blogs, storytelling, and digital storytelling. Discussing experiences and the reflective thoughts that accompany them is the key to bring an internal process and external information together. Boud et al. (2005) states that one of the ways to stimulate learning is to strengthen interrelationship of learning experience and reflective activity, which forms by dedicating some time for reflection in every learning activity. Multiple formats have been proposed such as critical friends, formative feedback from supervisors, and peer feedback.<sup>[9-11]</sup> However, effective interaction during reflection requires individuals to learn to verbalize their reflective thoughts. Although there are obvious activities that foster reflection in medical education such as keeping learning portfolios or writing reflective essays, other opportunities do exist, and not all reflective activities need to be completed individually. Recording daily reflection can help residents learn to self-assess. The contents of reflective log sheets are discussed with clinical supervisors, providing further opportunity for reflection. Residents can make reflective log sheets a part of their portfolios, which can be later referred for reflection and discussions with their educational supervisors and to plan future learning activities. Another approach can be practice-based small group learning program of the Foundation for Medical Practice Education, which is designed to facilitate reflection through case-based discussions of residents' cases and log sheets.<sup>[12]</sup> These log sheets resemble feedback sheets, which should have suggestions for future behavior and should be revisited to ensure whether planned alterations are followed. Students can also reflect through art and photography. Digital storytelling is one of the reflective methods suggested in literature for students who can depict their creativity but have issues expressing it in words. Simple and free software such as Windows Moviemaker, Movie, and Audacity are recommended to help students create an interesting digital story.

All these activities are even more effective if the facilitator or the educational supervisor uses thoughtful probing questions to help learners move along the reflection continuum, through the steps of noticing and processing, in order to inform future actions.<sup>[13]</sup> The scales can also be used to build tools

to assess the level of reflection in written work or during group discussions. What we reflect on, how we reflect, and what happens after reflection can vary. Reflection can occur when a learner reflects on an individual, a group, or an organizational aspect of clinical practice, education, policy, or research. It can also occur when a team reflects on how it functions as a group. When we talk of medical education, reflective activity usually occurs during the action, on the action, and for the action. Hence, the strategy adopted should specifically focus on these three events. The very-known concept of Kolb's model of learning from experience, the "learning cycle," suggests reflective observation as a major step, which can stimulate further experimentation, ultimately leading to a new experience.<sup>[14]</sup> Taking this a step forward, it is possible to identify three different types of reflection: reflection in action, reflection on action, and reflection for action (Figure 1) as put forth by King, in the cycle of learning from experience.<sup>[15]</sup>



**Figure 1:** Integration of experience learning and reflection models (according to King<sup>[15]</sup>)

Whatever be the method adopted, it is essential to create a supportive learning environment. In establishing a learning environment conducive to reflecting, it is important to communicate with the student beforehand if reflections are to be shared and with whom it will be shared. It is equally important for the teacher to model reflection, provide enough time for the reflective activity, and make it clear what the goals of the reflective activity is, who will assess the reflection, and how the assessment will take place. In group discussions, enough time should be allowed to explore multiple perspectives and clearly identify the lessons learned and how this would influence future behavior. The issue of confidentiality should be agreed upon before any reflective activity.

## ROLE OF FEEDBACK IN REFLECTION

Reflection promotes critical thinking and offers more opportunities for feedback, including feedback from different sources. Feedback can act as a double-edged sword, wherein it can initiate reflection and the reflective activity paves the way for feedback. Qualitative studies by Sargeant et al.<sup>[16,17]</sup> contemplated that reflection helps learners to accept feedback and use it in their future clinical practice. In fact, the value of feedback is diluted if the trainee and the trainer do not come to consensus upon the trainee's performance after a feedback. Feedback about reflection is essential to promote learning. It can be given individually or in a group. It is important to provide feedback not just on the content of the reflection but also on the student's reflective skill. Feedback should not be overwhelming; rather, it should have two to three learning points about whether the student has done well and offer a short advice on how to improve their next reflection. The concept is becoming increasingly important as the idea of reflection as a strictly individual internal process is changing into a notion of a thinking process that needs to be complemented with external feedback.<sup>[18]</sup>

When done well, feedback provides multiple perspectives on the experience and supports integration of affective and cognitive experience. It is equally important to review the reflective technique of the student, suggest ways of improving the depth of reflection by exploring their emotions and beliefs, and apply it to their future behavior. It is helpful also to have someone give feedback on your own reflections and then apply what you have learned to your next reflective teaching exercise.

## THE SCOPE

Reflections have been a part of our training since childhood. Only lately, the benefits are realized with regard to formal health professions education, particularly medical education. The inculcation of proper reflective techniques goes a long way in guiding an individual for overall development. Education in medical professions is largely driven by achievement of desired competencies and lifelong learning skills. Learners should be trained in the process of analyzing and reframing an experience for the purpose of learning and improving practice. The benefits hitherto have to be appreciated by the

learner himself so that it becomes a voluntary effort in all the phases of professional development. Reflection activates learning, self-analysis, and capability for solving the problems. It is important and valuable both at the beginning of experience gathering and later, i.e., when obtained information is being systemized. The process enables learner to introspect and acquire new understanding of the performed action and develop insights, which improves subsequent performances.

A well-thought incorporation of simple reflective techniques should be considered in all the phases of medical curriculum, which are essentially aimed in not only attainment of specified competencies but also inculcating lifelong learning skills. Equally vital is the training of trainers regarding these reflective techniques so that they can appropriately guide and mentor the learners.

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