The Use of Reflection in Teaching Medical Students

“Let us emancipate the student and give him time and opportunity for the cultivation of his mind, so that in his pupilage he shall not be a puppet in the hands of others, but rather a self-relying and reflective being.”

Sir William Osler

“By three methods may we learn wisdom. First, by reflection, which is the noblest, second by imitation, which is the easiest, and third, by experience, which is the most bitter.”

Confucius

1. What is Reflection?

The word “reflection” comes from the latin word “reflectere” which means “to bend” or “to turn back”. In education we can therefore define reflection as a process in which our thoughts are “turned back” to a certain event or situation; we analyse 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: “Reflection is a meta cognitive 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.” ¹

Key points in this definition:

1. A cognitive process is involved “thinking about thinking” and it can be enhanced and controlled.
2. Reflection can occur at any time – even before an event or situation to challenge a particular perception and enhance learning.
3. Understanding one’s own personal values and beliefs and its Influence on a particular situation or event is a crucial part of critical reflection and becoming a lifelong learner.

4. Reflection has a purpose – it must change future responses and improve practice.

2. **What are the benefits of Reflection?**

Possible benefits of reflection are

- Enhancing self-assessment and learning from experience
- Developing critical thinking skills
- Developing Can Meds roles: especially:
  - Communicator – improved communication skills
  - Health advocate
  - Scholar
  - Professional

3. **Models of Reflection**

There are many models of reflection, the aim of these models are to help students move from lower levels to higher levels of reflection and application. The teacher can choose one model and then use it to build reflective activities.

Examples of reflective models

A Schön 1. Knowing-in-action
(1978) 2. Surprise
3. Reflection-in-action: thinking ahead
   - Analyzing
   - Experiencing
   - Critically responding
4. Experimentation

5. Reflection-on-action:
   - thinking through subsequent to situation
   - discussing
   - reflective journal

B  Kolb (1975) 1. Experience
   2. Observation and reflection
   3. Conceptualization
   4. Action

C  Boud et al 1. Returning to experience
   2. Attending to feeling
   3. Re-evaluation of experience
   4. Outcome or resolution

D  Gibbs (1988) 1. Description – what happened?
   2. Feelings – what were you thinking and feeling?
   3. Evaluation – what was good and bad about the experience?
   4. Analysis (general) – what sense can you make of the situation?
   5. Analysis (specific) – what else could you have done?
   6. Action plan – if arose again what would you do?
2. So what? – leading to
3. What next?

4. **Tips for Teaching Reflection**

1. **Make the objectives of reflection clear**

Many students will admit that they reflect all the time but the process of critical reflection should be defined and stressed – the process of analyzing and reframing an experience for the purpose of learning and improving practice. It moves beyond merely seeking a better plan for future experiences but also looks to identify reasons for the outcome of an event and very importantly also questioning underlying belief systems and values.

The literature suggests that reflection is most effective as a learning strategy when dealing with complex rather than simple clinical challenges. It is therefore important for the teacher to define what the learning goal for a specific reflective exercise will be.

2. **Choose an appropriate instructional method for reflection**

Reflective exercise can be done individually or in a group. Reflective exercise can be done orally, a written journal, audio recording, blogs and also storytelling and digital storytelling.

Students can also reflect through art and photography. Being creative can liberate many learners, especially if they have difficulty putting thoughts into words. Digital storytelling is an innovative and effective way to help students reflect.

Simple and free software such as Windows Moviemaker, Movie and Audacity make creating a digital story easy for students. Social media sites also allow publication of student work and feedback.

3. **Create a supportive learning environment**

In establishing a learning environment conducive to reflecting, it is important to communicate with the student beforehand if reflections will be shared and with whom it will be shared. It is possible that a student might make concerning
revelations during a reflection and it is crucial to establish an action plan to ensure the safety of the learner, teacher and others. If reflection takes place in a group, guidelines also have to be in place to support students in a professional and caring way.

It is also important for the teacher to model reflection, to provide enough time for the reflective activity, to also 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, clearly identify the lessons learned and how this would influence future behavior.

Skills in facilitation are needed to keep reflection on a higher level. It is important to listen to the students and pick up on clues as to their thoughts and feelings. One can use open-ended questions such as “what did you mean by that?”, or “say more about that”. One can also reflect thoughts back to the student like “you learned something, it was meaningful”.

It is imperative in a group setting also to acknowledge emotion in someone not participating in the conversation and to provide opportunity to the student who is eager to add to the discussion. The teacher needs to know his students and match the setting for reflection with their needs and clinical experience.

4. Assess the reflection

Different tools can be used to assess the student’s ability to reflect. One tool that is often used is the REFLECT (Reflection Evaluation For Learner’s Enhanced Competencies Tool) Rubric (appendix 1). This tool can be helpful in giving the student some feedback on the adequacy of his/her reflection. It is also however important to review with the student what was well done and to suggest ways of improving the depth of reflection by asking the student questions leading them from superficial reflection to helping them explore their emotions and belief system, reframing that, helping them find meaning in what they have learned and applying it to future behavior. It is more difficult to use a tool like this when students use an alternate way of reflection like storytelling or painting, but still important to have that critical discussion with the student to establish what the student has learned during the reflection process.

A drawback of providing a tool like the REFLECT Rubric to the student, is that the student might feel pressured to reflect in a certain way to pass or get good marks but might not be completely honest in his/her narrative. It is therefore also crucial
to have a safe environment where the student can be honest about his experience and feel comfortable to convey what he/she has learned

5. Provide feedback

Evaluation of reflection is essential to promote learning. Feedback can be given individually or in a group. It is important not just to provide feedback on the content of the reflection but also on the student’s reflective skill. Feedback should not be overwhelming – aim for two to three learning points, note what the student has done well and then offer short advice on how to improve their next reflection.

6. Practice the skills you are teaching

Make reflective practice a central part of your clinical activities. 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. It is important to integrate critical reflection in the medical curriculum and enough opportunity should be given to students and teachers to develop their reflective ability.

Conclusion

Reflection is an essential component of medical education. It leads to growth of the individual – morally, emotionally and cognitively. It enhances learning and self-understanding and ultimately improved patient care and we as teachers can play an important role in teaching critical reflective practice.

References


## Appendix 1
**The REFLECT (Reflection Evaluation For Learners' Enhanced Competencies Tool) Rubric**

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Habitual action (Nonreflective)</th>
<th>Thoughtful action or introspection</th>
<th>Reflection</th>
<th>Critical reflection</th>
<th>Axis II for critical reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing spectrum</td>
<td>Superficial descriptive writing approach (fact reporting, vague impressions) without reflection or introspection</td>
<td>Elaborated descriptive writing approach and impressions without reflection</td>
<td>Movement beyond reporting or descriptive writing to reflecting (i.e., attempting to understand, question, or analyze the event)</td>
<td>Exploration and critique of assumptions, values, beliefs, and/or biases, and the consequences of action (present and future)</td>
<td>Frames of reference or meaning structures are transformed. Requires critical reflection. Integration of new learning into one’s identity, informing future perceptions, emotions, attitudes, insights, meanings, and actions. Conveys a clear sense of a breakthrough</td>
</tr>
<tr>
<td>Presence</td>
<td>Sense of writer being partially present</td>
<td>Sense of writer being partially present</td>
<td>Sense of writer being largely or fully present</td>
<td>Sense of writer being fully present</td>
<td>Frames of reference or meaning structures are confirmed. Requires critical reflection</td>
</tr>
<tr>
<td>Description of conflict or disorienting dilemma</td>
<td>No description of the disorienting dilemma, conflict, challenge, or issue of concern</td>
<td>Absent or weak description of the disorienting dilemma, conflict, challenge, or issue of concern</td>
<td>Description of the disorienting dilemma, conflict, challenge, or issue of concern</td>
<td>Full description of the disorienting dilemma, conflict, challenge, or issue of concern that includes multiple perspectives, exploring alternative explanations, and challenging assumptions</td>
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<tr>
<td>Attending to emotions</td>
<td>Little or no recognition or attention to emotions</td>
<td>Recognition but no exploration or attention to emotions</td>
<td>Recognition, exploration, and attention to emotions</td>
<td>Recognition, exploration, attention to emotions, and gain of emotional insight</td>
<td></td>
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<tr>
<td>Analysis and meaning making</td>
<td>No analysis or meaning making</td>
<td>Little or unclear analysis or meaning making</td>
<td>Some analysis and meaning making</td>
<td>Comprehensive analysis and meaning making</td>
<td></td>
</tr>
<tr>
<td>Optional minor criterion: Attention to assignment (when relevant)</td>
<td>Poorly addresses the assignment question and does not provide a compelling rationale for choosing an alternative</td>
<td>Partially addressing the assignment question, does not provide a compelling rationale for choosing an alternative</td>
<td>Clearly answers the assignment question or, if relevant, provides a compelling rationale for choosing an alternative</td>
<td>Clearly answers the assignment question or, if relevant, provides a compelling rationale for choosing an alternative</td>
<td></td>
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