

Review Article

Reflective practice as a method of learning in medical education: history and review of literature

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ABSTRACT

Modern medical education and profession needs innovative methods to improve learning among the students. Reflective practice is one of the time-tested tool to improve students' learning following a teaching encounter. Reflective practice is an analytical practice in which an individual adds a personal reflection about the action, incident, situation or thought. Purpose of this article is to review the literature to find out history, various models, genesis and application of reflective practice in medical education. Through the present paper, attempt has been made to focus on role of reflective practice in present medical education and profession.

Keywords: Reflection, Reflective practice, Reflective writing, Role of reflection in education

INTRODUCTION

Reflective writing is an analytical practice in which an individual adds a personal reflection about the action, incident, situation or thought. Following questions are asked by an individual to him/herself: What did I notice? How has this changed me? What might I have done differently?

Reflection writing provides a thorough insight to an individual about the day today experiences. Reflective practice is an ability of an individual [Student] to reflect on an action so as to engage in the process of continuous learning.¹ Rationale behind using reflective practice is that experience alone doesn't necessarily lead to learning but deliberate reflection on the experience is an essential tool to assure deep understanding and learning.^{2,3} It is paying attention to the practical values and theories which involve everyday actions, by examining practice reflectively and reflexively.⁴

DISCUSSION

'Reflective Practitioner' as one who uses reflection as a tool for revisiting experience both to learn from it and for the framing of murky, complex problems of professional practice. Reflective practice concept is practice based professional learning in which people learn from their own professional experience rather than just knowledge transfer. Reflective practice has been seen as an important way to bring theory and practice together. Reflective practice is not merely looking back to past action or experience but taking conscious look at emotions, actions, experiences and responses and using that information to add to his/her existing knowledge base and reach higher level of understanding. That it is a conscious and systematic approach to thinking about experiences with the aim of learning and changing behaviors. Reflection should challenge a person's understanding of themselves, their attitudes and behaviors so that any biases are unearthed, thus allowing that individual to

become more critical about their views of practice and the world.

The consequences of integrating reflective practice into one's own practice can include enhancement of patient care, the bridging of the theory-practice gap, the resolution of practice-related problems and the stimulation of critical thinking to foster changes in practice.⁵

The history of reflective practice dates to Buddhist era. Reflective practice was used in meditation teachings. Reflective meditation involves repeatedly turning your attention to a theme but being open to whatever arises from the experience. Marcus Aurelius, a Roman Emperor from 161 to 180AD, wrote book on meditation which highlights classical example of art of reflective practice. Donald Schon is the pioneer of reflective practice. John Dewey also wrote about reflective practice. Kurt Lewin and Jean Peaget wrote about human learning theories and used reflective practice as one of the important steps in action research.⁶ Professor David Boud explained that reflection is an activity in which people recapture their experience, think about it and evaluate it.⁷ Various models have been described which shows genesis of concept of reflective practice over the centuries. In 1970, Terry Borton described model of learning cycle in his book 'Reach and Teach' which was inspired by Gestalt therapy.⁸ Model consists of three questions like what? So, what? What next? These questions would be generated in the mind of learner at the end of teaching encounter (Figure 1).

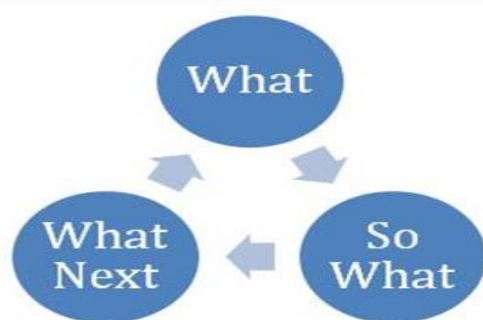


Figure 1: Borton model.

Kolb et al suggested a model of experiential learning. Concrete experience about action or situation is a sequence of events which starts with proper observations, reflections followed by formation of abstract concepts and generalizations and testing of concepts in a new situation (Figure 2).⁹

Argyris et al suggested two ways of reflective practice. Reflection in action consists of thinking ahead, analyzing, experiencing and critically responding. Reflection on action consists of thinking through subsequent to situation, discussing and reflective journal (Figure 3)¹⁰

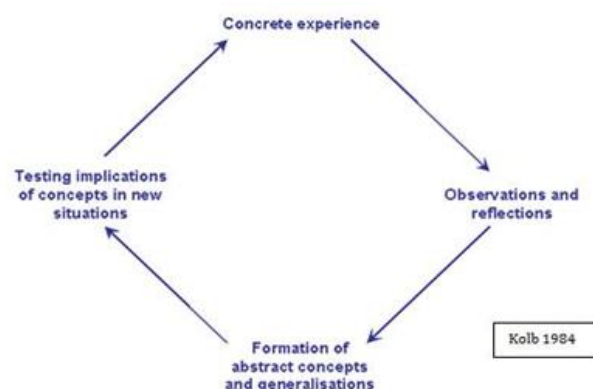


Figure 2: Kolb model.

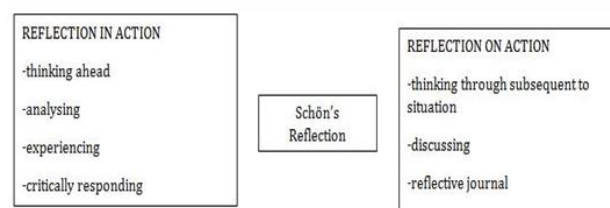


Figure 3: Adaptation from Schon reflective model.

Gibbs described a structured model to facilitate learning cycle given by Kolb. Model is known as Gibb's reflective cycle is useful for the students who are new to reflecting (Figure 4).¹¹



Figure 4: Gibb's reflective model.

Description: What Happened? Don't make judgments yet or try to draw conclusions; simply describe.

Feeling: What were you thinking and Feeling? Again don't move on to analyzing these yet.

Evaluation: What was good and bad about the experience? Make value judgments.

Analysis: What sense can you make of the situation? Bring in ideas from outside the experience to help you.

What was really going on? Were different people's experiences similar or different in important ways?

Conclusions (general): What can be concluded, in a general sense, from these experiences and the analyses you have undertaken?

Conclusions (specific): What can be concluded about your own specific, unique, personal situation or way of working?

Personal action plans: What are you going to do differently in this type of situation next time? What steps are you going to take on the basis of what you have learnt?

Johns described structured model of reflective practice for the practitioners. Reflective practice is unstructured or semi structured approach directing learning. It is a learning process that can be taught to professionals. In many of the professional institutes, professional are required to keep reflection portfolios as a license criteria.¹²

Reflective practice is an important part of teacher education and advancement programs. For better learning, the students must be engaged in reflective practice. Adding reflection to learning fosters the clinical thinking and decision making ability. In the present era of modern medical education, reflective practice can have pivotal importance. When students are engaged in reflection, they are thinking about how their work meets established criteria; they analyze the effectiveness of their efforts, and plan for improvement. Reflection is linked to elements that are fundamental to meaningful learning and cognitive development.¹³

Reflective practice assures development of Metacognition amongst the students. Metacognition is capacity of the students to improve their ability to think about their thinking; ability to self-evaluate; the capacity for students to judge the quality of their work based on evidence and explicit criteria for doing better work; development of critical thinking, problem-solving, and decision-making; and an enhancement of teacher understanding of the learner.

Reflective practice has a major role in healthcare profession. Due to ever changing context and growth of medical knowledge, there is high level of demand on professional expertise. Reflective practice can be the way of developing an autonomous and self-directed learning. Medical professionals and students can combine reflective practice with checklist to reduce diagnostic errors in patient care. It can be incorporated in UG, PG and CME programs.¹⁴

Experience can offer the student teacher opportunities to live through alternative ways of approaching the practice setting, but there is little doubt that the initial framing

inevitably impacts on what is seen, the nature of the risks taken, and the diversity in learning through action. Hence, it seems reasonable to assert that how a student teacher engages with his or her actions within the practice setting, through reflection on those actions, must shape the possibilities for seeing as a result of experience. Reflection on experience enhances learning through experience such that divergent rather than convergent learning outcomes are encouraged. Clinical reasoning skill has utmost importance in overall development of competent clinician. Clinical reasoning is the thinking and decision making associated with clinical practice so that the best-judged action is undertaken. Clinical reasoning becomes increasingly sophisticated with advancing experience, leading to easily accessed patterns of in-depth knowledge.¹⁵

King et al discussed the importance of critical self-appraisal and reflection in developing advanced knowledge structures, and why experience alone is insufficient to develop diagnostic reasoning.¹⁶

Reflection-on-action is predominantly performed by more novice practitioners. It occurs after the event when thinking about what happened, what was done and whether there was anything that would change next time that could have changed the outcome. Reflection-on-action transforms experience into knowledge. Reflection-in-action is concerned with reflecting on practice while it is happening. According to Schön, reflection-in action, thinking about practice whilst actually doing it, is considered the distinguishing feature of expert practitioners. Schön considered reflection-in-action as a way of doing 'on the spot' research, action research; being able to both generate a new understanding of the situation and change the situation.¹⁷ Therefore, the first key concept of reflection-in-action is the conscious attention to the task in hand. The second key concept is meta-reflection on the reflection. This is a form of internal supervision whereby the practitioner is acting as their own supervisor and questioning whether they are dealing with the situation effectively.¹⁸

Apart from healthcare professions, reflective practice does have benefits in adaptive management. Use of reflective practice can form one of the important parameter of sustainable development projects in which participants can reflect on their performance so as to improve it in future. Reflective practice provides development opportunity to people in leadership positions. They can critically review what has been successful in the past and how future performance can be improved.¹⁹ Reflective practice assures increased learning from an experience or situation. It leads to deeper understanding which is important to convert a short-term memory into long term memory. It enables us to understand our personal and professional strengths. It enables us to identify the educational needs and acquire more knowledge, skills, attitude and values which have been defined for Indian Medical Graduate (IMG) by

Medical Council of India (MCI). Use of reflection can lead to motivation and develop a habit of self-directed learning which is a key aspect of adult learning in present medical education. Using reflection and keeping record could act as a source of feedback which is lacking in the present medical education. Reflection enables us avoid mistakes done in the past. Reflection maximizes our opportunity of the learning. It makes us use of available knowledge and challenge as well as develop the present knowledge base. Certain disadvantages can affect the process of reflection like inability to understand the reflective process, feeling uncomfortable in challenging and evaluation own practice through reflection, fear of time constraint, confusion about to which situation to reflect on and may not be adequate to resolve clinical skills.²⁰

Study done on medical students represent direct and beneficial effects of reflection on students' promotion was their positive responses, for example: effects of reflection on deepening their learning, better doctor-patient relationship, more responsibility, reduced medical errors and better understanding of educational issues. The sum of all these, encourage the students to continue this method in other educational fields during academic course and in future career. Reflection is very helpful educational strategy and helps the students in communication and increase their skill and knowledge. It also helps to organize and integrate students' learning by guiding them in clinical situations.²¹

Illustration of reflection writing with example [Borton Model]

What happened?

As a resource person in medical education unit of my institute, I must be actively involved in the teacher's training workshops. One of the big challenges is to keep active involvement of the participants. Instead of using didactic lecture, one must engage the participants in the active discussion being all are adult learners. I was assigned topic of One Minute Preceptor (OMP) which is an innovative teaching learning method. I prepared a PowerPoint presentation with video demonstration about OMP. All the participants appreciated the lecture and they were interested as video was included. I was reading about adult learning principles, I realized that adults learn best by doing. Suddenly, I was reminded about mistake made by me during mentioned activity. Instead of doing (Role play), I used to show (Video). Then, I prepared and demonstrated a role play on OMP which was very well appreciated and deeply learned by all the participants.

So what?

Due to proper use of reflecting and relating it to the present practice, I could correct my mistake within time and do the justice to the job given to me.

What next?

Henceforth, I am going to include role play in the workshops for the demonstration of newer teaching and learning methods.

In the review of 29 studies of reflective practice by Mann K et al stated that while the literature is early in its development, certain findings were quite consistent across professions and levels of learners. The very nature of reflective practice makes its quantification challenging. Yet, as understanding of reflection develops and the field matures, there will be a need for studies with rigorous designs that will allow us to evaluate the effect of different educational strategies to promote its development. Creative and disciplined application of a range of study designs and methods will be required to affect this next stage of understanding this element of practice.²²

Present day's medical education needs major reforms in the direction of new defined attitudinal and behavioral competencies which is recognized and felt by the regulatory bodies like medical council. To imbibe culture of proper attitude and communication among future graduate, present medical education needs to include methods which can assure it. If we refer back to what has been discussed about reflective practice and reflective writing, I think that use of it can do justice with what we want our medical graduate to learn. But, certainly we need to more research so as to decide exact utility of reflective practice in the current medical education.

CONCLUSION

Reflective practice is based on the principles of adult and experiential learning and can ensure deeper understanding. Exact role of reflective practice in present day's medical education needs further application and research.

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