Reflection is a crucial process in the transforming of experience into knowledge, skills and attitudes. As such it is at the core of both learning and continually evolving professional practice. This article draws on literature from adult learning and medical education fields to present a theoretical framework for reflection and practical techniques for its application in general practice. It is directed toward the training of medical students and registrars on clinical rotations, but also for the established general practitioner.

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Reflection in professional practice and education

Reflection is crucial in learning through experience; it is not enough that all experiences are genuinely or equally educative.

While experience forms the basis of deep learning, a balance is needed between learning by experience and learning from experience. The former involves 'learning by doing', while the latter refers to the process of thinking and reflecting on events. Learning by doing can be a slow process without reflection and an inaccurate process if mistakes are uncritically repeated. ‘Learning from experience’ through reflection contributes to human adaptability. Lessons learned in one context can be adapted for another.

Reflection forms the essential bridge between practice and theory. The teaching of theory, for example in lectures or textbooks, deals with generalisations and idealised models. Reflection on the ‘real world’ where these theories apply enables the practitioner to integrate new knowledge and experience within the existing cognitive frameworks and skills.

So what exactly is meant by reflection? 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’.

The process of reflection

Reflection is often triggered by a mismatch in existing knowledge, skills or attitudes and their application to current experience. This causes what Schön, in his book The reflective practitioner, calls an ‘experience of surprise’. The second phase involves a constructive, critical analysis of the experience, including an examination of knowledge and feelings.

The third phase involves the development of new perspectives on the situation, or the individual’s relationship to the situation, or even the restructuring of an underlying schemata. Schön referred to this as ‘reframing’. Mazirow suggested that this process could either occur through a sudden ‘blinding flash’ of insight, or more slowly through a series of step wise transitions.

Although considering reflection as occurring in stages can suggest a linear process, the phases are actually integrated. In fact, reflection does not only occur after experience, but can commence with anticipation and planning for the experience, continue throughout the experience, and follow the experience. It is both a looking forward and a looking back. Unconscious reflection does occur naturally, but tends to be unfocussed and unsystematic. It is only when we can bring these processes into consciousness that we can evaluate them and make active decisions based on them.

Reflection in planning

Reflection in the planning stage may include the practitioner anticipating what might be required of them, and what resources they might be called upon to provide. It may incorporate rehearsal. Prior reflection may reveal gaps in knowledge and abilities that will need to be addressed. An example would be the medical practitioner reviewing the content of their doctor’s bag by anticipating possible uses, ensuring they have
the necessary equipment and medications, and reviewing their application skills.

Knowing-in-action

Schön described the concept of ‘knowing-in-action’.\textsuperscript{9} This type of knowledge does not involve a series of conscious steps in the decision making process. The knowledge is inherent in the action, may be context specific and includes recognitions, judgments and skills. The interaction with the situation call forth this tacit knowledge within the individual which is not consciously articulated.\textsuperscript{9,13–15} This knowing-in-action is the process so impressive to medical students sitting in on a consultation. They often comment on how the doctor ‘just knew’ the right question to ask.

Reflection-in-action

Professionals do not only perform by knowing-in-action, they clearly think about what they are doing. Schön calls this ‘reflection-in-action’ and drew an analogy with jazz musicians improvising together. They make on-the-spot adjustments as they listen to and make sense of the music that they play. The adjustments are based on ‘a feeling of where the music is going’, a theoretical framework and a repertoire of musical figures based on experience, not mere trial and error.\textsuperscript{9,14,15}

Reflection-in-action may involve a process of pattern recognition – and be triggered by a recognition that ‘something doesn’t seem right’.\textsuperscript{9,16,17} It is usually a subliminal process, like knowing-in-action, of which the practitioner is only partially, or not at all aware. If it can be expressed, for example for the benefit of a student, the tacit knowledge becomes explicit and available.\textsuperscript{4,14,17}

This process matches the hypotheticoc deductive model of clinical problem solving which is a tacit process made explicit.

Reflection-on-action

Most simply, reflection-on-action occurs after the activity rather than during it. It most often commences with reconstructing the activity rather than during it. It most often commences with reconstructing the activity rather than during it. It requires that the practitioner is not only aware of the situation, but can define it in an explicit, nonjudgmental way, and usually includes identifying the similarities and differences with previous experiences. Thus, reflection-on-action may involve making connections with internal prior knowledge, or external sources of information, to mediate action or aid deliberation.\textsuperscript{3,17,18,19}

Techniques for reflection

Ideally, conscious, purposeful reflection should be an integral part of professional practice, not an ‘add-on’ or self indulgent luxury. There are some specific techniques to aid reflection, either initially, or as an ongoing routine (Table 1).

Allocating time

Rather than adding to the busy and demanding day of the typical general practitioner, taking reflective time can involve reframing the time that is already available. For example, writing up the notes or finalising the paperwork when the patient has left the room is often a time when doctors will reflect on the consultation, and perhaps take the opportunity to stand back from the immediate concerns to consider the broader context for the patient, the doctor, the practice or wider community. Often at this time, the underlying issues crystalise and become more apparent.

Taking a short time at the end of the day to review the session overall – acknowledging the successes, identifying any lingering concerns and exploring solutions – can be a liberating and energising process, when compared with carrying the nagging worries and doubts which otherwise tend to build up day-by-day.

Debriefing

Debriefing is not counselling or therapy, nor is it simply ‘having a chat’. As with other forms of reflection it is purposeful and benefits from an underlying structure. It requires a facilitator whose role encompasses providing a stimulus to reflection, support in the process, and assistance in trying to extract the maximum benefit from the experience. Debriefing is best left unfinished or open ended, so that further ongoing reflection is encouraged.\textsuperscript{3,11,12,14,20}

The GP supervisor is ideally placed to fulfil this facilitating role by guiding the registrar or medical student through the processes of reflection. Supervisors also present a powerful role model of a reflective approach to professional practice.

The use of a group

One of the most valuable resources of an educational program is the group of participants themselves.\textsuperscript{13} Through interaction, they can ‘leap frog’ their learning, each contributing to the others’ progress. They can provide support, acknowledgement, challenge, identify ‘blind spots’ and offer alternative perspectives, knowledge or skills. To be effective, group environments need to be safe, respectful, tolerate diversity and allow free participation, so that the learning needs of all group members are attended to.\textsuperscript{21,22} Fully functional groups assist their participants to develop a range of professional behaviours, including self awareness.\textsuperscript{22,23}

The telling of anecdotes

Although the use of anecdotes is dismissed in most academic and professional communities, it can be a means of reflection that involves the use of selection, organisation and interpretation of experience. Its subjectivity, which is the basis for its dismissal, actually reveals the key dilemmas and lessons of the experience for the individual.\textsuperscript{24}

Focus on the routine

There is a natural tendency to reflect on memorable events, either good or bad, and to ignore the larger part of experience that may offer many useful learning opportunities. We tend to select critical incidents that are, by their nature, extraordinary, and thus less relevant to our usual lives. An alternative would be to deliberately select a more routine event to consider.\textsuperscript{24}
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Table 1. Setting up a reflective session with a registrar

This is not a step-by-step guide, but an indication of the types of approaches that can encourage reflection.

- An effective teaching relationship is founded on mutual trust, respect and acceptance, and values prior experience and knowledge
- Establish a mutually convenient, dedicated, uninterrupted time and place
- Negotiate an area for consideration – this may be general or specific; this begins the reflective process in the planning stage. You might ask the registrar if there are any areas they would like to focus on. This does not necessarily mean the areas they are finding difficult – it can be valuable to spend teaching time on identifying the characteristics of areas the registrar enjoys or is curious about
- Negotiate how first hand information will be gathered. This might involve reviewing one or more consultations either directly or pre-recorded. It might involve reviewing case records or referrals, depending on the area under consideration
- Begin by asking the registrar to describe what occurred at both intellectual and emotional levels. Use communication skills such as probing, clarification and active listening to understand the experience as deeply as possible. Explore underlying interpretations, assumptions, beliefs and expectations. In helping you to reach this understanding, the registrar will be deepening their own
- Together review the same situation from as many different perspectives as possible or helpful. For example, how might the patient have been feeling, what might they have understood by the end of the consultation? How might the patient explain their illness to their family? What are the possible effects on the family? Are there broader implications for the clinic, the community, health care system? The purpose is not to be able predict these factors accurately, but to hypothesise, and perhaps to identify when this understanding does need to be accurate and therefore should be sought as part of the consultation. Sometimes the different perspective required is to shift the registrar from a search for the right answer, to exploring the potential outcomes of a number of different, equally valid approaches
- Move from reflecting on a specific event to identifying general concepts. Explore if and how this deeper understanding might impact on similar situations in the future
- Summarise and agree on any actions to be taken, and when and how these will be followed up

Conclusion

Reflection is an essential activity in the learning process. Professional practice requires the development of tacit knowledge, and the skills of reflection-in-action and reflection-on-action. These confer the ability to conceptualise general principles from experience, which pre-adapts the practitioner to new situations.

This preparedness for the unexpected is one of the key requirements for general practice, perhaps more than any other medical specialty. A reflective approach to practice is a crucial requirement for life-long learning.

Conflict of interest: none declared.

References