SEAUK

administrator@seauk.org www.seauk.org

Reflection

Dr J Barrie, Consultant Anaesthetist, Pennine Acute NHS Trust, Council Member, SEA UK
Mr J Barrie, Consultant Orthopaedic Surgeon, East Lancashire NHS Trust

Introduction

Reflection is seen as a key part of personal development both as a clinician and an educator. It is an important component of the process of learning, as outlined in the first article in this series.[1] The GMC requires evidence of reflective practice for clinical revalidation[2] and it will be important for recognition as a trainer.[3] In this article we will assume that clinical educators have some experience of thinking about their clinical and educational practice in order to understand it better and to change or reinforce it for the future. We aim to encourage educators to develop their reflective practice further, and to think about how to teach it to their trainees and support trainees' reflective practice in turn.

What do we mean by 'reflection'?

While reflection is a familiar part of practice for most clinicians,[4,5] they may understand it in different ways. Sandars' systematic review[6] quotes three definitions from the literature and offers one of his own. Common to all of these is thoughtful consideration of a situation, experience or idea in order to gain better understanding.

Sandars also notes that this is intended to inform future encounters with similar situations. Structured consideration and orientation towards learning for the future, distinguish reflection from mere thought.[7]

One of the major aims of reflection is to effect change in understanding or practice. Dewey[8] thought that reflection begins with a problem or 'perplexity'. In his view, reflection is about gathering information, reviewing possible explanations and testing these. Mamede and Schmidt[9,10] showed that these ideas can be developed to improve medical decision-making.

Schon[11] retained Dewey's ideas about gathering information and testing explanations. However, he argued that in reflection professionals should go deeper and rethink the way they 'frame' practice situations – not only 'Why do I do this?' but 'Why do I choose to think about it this way?' Mezirow also suggested that reflection should lead to a change in the way we understand our situation, and so to a transformation in the assumptions and expectations underlying our thoughts and behaviour.[12] Writers such as Habermas,[13] Brookfield[14] and Fook[15] see such transformative reflection as growing out of a critical understanding of the social forces that influence our beliefs and expectations.

Studies of anaesthetists' approach to their work suggested that this is either reactive or interpretative in nature.[16,17] Those taking an interpretative approach were said to demonstrate a greater awareness of the patient as an individual and of the inherent uncertainties of anaesthetic practice than those taking a reactive approach. The latter viewed anaesthesia more in terms of patterns of patients and responses, and had a mechanistic view of the information received and expected responses. The authors[16,17] argue that routine reflection may lead to an increased awareness of the subtle interplays between the patient and anaesthetic perioperatively. This may lead to a more nuanced anaesthetic with an assumption of improved patient experience. Reflection on the ordinary may encourage recognition of uncertainty in practice and development of responses to this.[18]

Triggers for reflection

A major trigger for reflection is when the need for change is apparent, when our usual ways of viewing or dealing with a problem do not work. This leads to a gap between expectation and outcome, which should lead the practitioner to question the premises on which he approaches the problem.[12] In this model of reflection, typical triggers include Serious Untoward Incidents and 'difficult' cases which did not progress as expected. Such 'disorientating crises' [6,12,19] are thankfully rare in clinical practice, although well devised simulation may have a role in increasing the number and range of such 'crises' to which the trainee is exposed.

Because such incidents are rare, our models are not often challenged in this way. This may result in patient care which is 'good enough' but falls short of 'best', yet these episodes may not ordinarily act as triggers for reflection – they are just 'the job'. This may be countered by developing a practice of 'reflecting on the ordinary'. This approach is advocated by the tradition of mindfulness[20] or examen[21] and is a component of many worldviews. Reflection on the ordinary requires what Cowan describes as a 'commitment to reflect'[22] which implies a similar commitment to notice.[6] Within this, triggers may come from a patient, from the intervention of another or from a comment from a colleague.

SEAUK

administrator@seauk.org www.seauk.org

There are a variety of formal triggers to reflection. These range from the portfolio requirements for ARCP or revalidation, to learning journals and activities incorporated into educational activities. Evidence that these improve the depth of reflection is weak.[18,23] Compulsory portfolio reflections are often of poor quality[24,25,26] and may be resented by trainees, but may not represent the true extent or depth of a practitioner's reflection.[5,27] Some trainees who decry portfolio reflection still use written reflective techniques[28] and there is some evidence that the act of writing reflections encourages sense-making and emotional release.[6]

The process of reflection

Having identified an experience, incident or idea to reflect about, how can we best go about it? Schon[11] suggested that professionals often reflect while they are actually 'in action', that is, while they can still change what they are doing. Realistically, there is often not enough time for true 'reflection-in-action' and reflection normally happens after the event.

Reflective frameworks

Once triggered, reflection may include cognitive, emotional and social aspects. Most reflection in medical practice concentrates on the cognitive aspects: the content of a situation or the process of resolving it.[19] Many people find it helpful to use a framework of prompts or questions to make sure they don't miss important things out. In fact, we are using a simple version of Driscoll's framework to structure this article:

- **What?** – What shall I reflect about? This was the basis of the previous section on stimuli to reflection.
- **So what?** – What does this mean, what conclusions shall I draw? This is the present section, which one might call analysis.
- **Now what?** – What shall I do about what I have learned? This is the basis of the final section, on implications of reflection.

We suggest you explore a number of recognised frameworks to see which helps you most (see box). You could try out reflections, guided by a particular framework, on a range of experiences or events. You might decide different frameworks are helpful to you in different reflective scenarios. Most frameworks cover similar ground, and there are no comparative studies showing which are most effective.

The trainee is gradually exposed to aspects of practice other than providing anaesthesia. These include alleviating patient anxiety and suffering, providing optimal preoperative preparation and surgical conditions, and organising the team and list management.[30] Using this as a structure for reflection may help the trainee develop in all areas. Guidance from the supervisor may encourage development in areas in which the trainee is weaker or which he has not considered. Similar lists could be constructed for critical care and pain medicine.

Reflective frameworks

Driscoll[29]	Johns	Gibbs
1. What?	1. Description of the experience	1. Description of the event
2. So what?	2. Reflection	2. Feelings and thoughts – self-awareness
3. Now what?	3. Influencing factors	3. Evaluation
	4. Evaluation: Could I have dealt with the situation better?	4. Analysis
	5. Learning	5. Conclusion – synthesis
		6. Action plan

Different viewpoints

One mark of mature reflectors is that they try to get many different perspectives on the subject they reflect about. Brookfield[14] describes four 'lenses' to get different perspectives:

- Your own history – how does this incident, idea or experience fit into your previous experience, beliefs and value system?
- Your students – what feedback did you get from your students on the experience? (If you were reflecting on a clinical incident, this would be the patient/carers.)
- Your peers – did you get peer review, or discuss the incident with peers?
- The literature – what educational research or theory bear on the experience?

Deeper reflection includes consideration of the biases and premises underlying the situation ('Why do I view it like this?'), the lenses through which it is viewed (How does it look or feel to others?') and the socio-political culture in which it took place ('Why do we conceive of it this way?').[12,20,31] This may lead to change in culture as well as understanding.

Emotion

A few people feel that emotion has no place in reflection. Boud[32] considered that strong emotions could get in the way of reflective thought, and that they needed to be discharged to allow reflection to proceed. Sandars, on

SEAUK

administrator@seauk.org www.seauk.org

the other hand, felt that 'The most significant experiences that result in the greatest challenge and change are usually those that are associated with the presence of strong emotions.'[6] Emotional responses could be generated by a clinical situation or by a patient or colleague whose personal belief systems may differ from that of the anaesthetist.[31] Moon described three ways in which emotion could interact with reflection:[7]

- It could be part of the process of reflection.
- It could provide the content of reflection.
- It could impinge on the process of reflection.

We would encourage you to evaluate your emotional reaction as you would what you did or said.

Understanding your own thinking – metacognition

Dewey's early descriptions involved critical awareness of one's own thought processes. Mamede and Schmidt applied this insight and showed that this could improve some aspects of diagnosis.[10] However, the reflection in their studies was mainly aimed at solving specific clinical problems. Epstein described 'mindful practice', which involves a deeper degree of critical awareness of one's mental processes than Mamede and Schmidt's concepts.[20] Schon and Mezirow, among others, focus on reflectively questioning the way we frame our understanding – 'Why do I think about it this way'?[11,12] Trainees have described metacognition using metaphors such as exploration, viewing a video, processing and comparison with an idealised self-portrait.[28]

Implications

What are the implications of this for anaesthetists as practitioners and as educators?

Firstly, failure to achieve deeper levels of reflection may result from unexamined negative emotion (avoidance), from lack of imagination or literal-mindedness leading to lack of curiosity or limiting responses.[20]

Second, we could benefit from viewing reflection as a social activity. Discussion helps us identify the reasoning behind a course of action and articulating these makes them explicit. It can also help us question these assumptions and re-frame our approach to problem solving.[33] Case presentations may have a role here. Much social reflection is undertaken informally, introduced by: 'What do you think about this one then…?', but the formal input of a colleague or facilitator may guide the reflection into new or deeper areas.[19]

One important educational task is to facilitate and develop reflection in our students and trainees to promote their own personal and professional development. Some have advocated a structured approach to aid this, others feel this might itself be constraining.[34] The facilitator needs to draw upon a range of attributes:[7, 31, 33]

- Offering role models of reflection that students can relate to and ask advice from.
- Feedback on trainee reflection, with guidance on further development.
- Offering resources to your students that contain examples of sophisticated reflection. Moon[7] offers several resources you can copy freely to use with your own students
- Challenge assumptions whilst maintaining support and encouragement.
- Handle the potentially strong emotions which such a challenge can arouse.
- Work with ambiguity as they help their colleagues deconstruct and refashion reality.[31,33] It can be an untidy process with the temptation to rush to a premature conclusion.

Although there has been no research on the effect of the educational environment on reflection, we suggest that an environment in which reflection is valued and encouraged probably improves the chances that trainees will develop as reflectors.

This begs the question as to who is best placed to facilitate such reflection, particularly with trainees – it may not be the educational supervisor. There is emerging evidence that reflection in practice differs from reflection for portfolio with the latter being limited by its being submitted for the ARCP.[24,27,35] Deep or critical reflection includes a degree of openness and vulnerability. There is inevitably a power differential between trainee and educational supervisor, and the trainee may not be willing to be vulnerable within this relationship. Any hint of evaluation[34] or surveillance[31] based on reflection may exacerbate this. The skill set is similar to that required of mentors, and it may not be seen in people who are otherwise excellent trainers or educational supervisors.

Not all trainees find reflective writing easy. Students comment that they frequently reflect but find it difficult to record their reflections. Alternative methods of recording to formal reflective writing include audio or video recording or blogging.[6] Reluctant trainees may prefer one of these media.

Conclusion

Both significant and everyday events may act as triggers for reflection. If followed through, reflection has the potential to challenge and change both our understanding and our practice, culture and systems which lead to its development and continuation.

SEAUK

administrator@seauk.org www.seauk.org

Reflection should include a wide variety of viewpoints and a number of frameworks exist to encourage this. It may benefit from being conducted as a more social activity than is traditional. Supporting reflection draws upon a wide range of skills. Most of us do this routinely; we hope that this article has suggested ideas to make reflection more productive.

Further reading

Moon's book gives an excellent overview of the development of our understanding of reflection, and contains lots of practical ideas for helping your trainees reflect more effectively.[7] For a brief overview, Sandars' review for AMEE is a good place to start.[6]

1 Dorman T, Cooper A. Anaesthetists as adult learners. RCoA *Bulletin* 2014;**84**:17–19.

2 Ready for Revalidation: Supporting Information for Appraisal and Revalidation. *GMC*, 2012.

3 Browne J, Bullock A, Gallen DD. The Essential User Guide to Recognition of Trainers in Secondary Care. Academy of Medical Educators on behalf of Health Education England and the General Medical Council. Cardiff 2013.

4 Mann, K., Gordon, J & MacLeod A. Reflection and reflective practice in health professions education: a systematic review. *Adv in Health Sci Educ* 2009;**14**:595–621.

5 Barrie J L, McNeill H, Hallett F. How do specialist trainees experience reflection? A phenomenographic study. Poster presentation, Faculty of Surgical Trainers' Annual Conference, Birmingham, 2013.

6 Sandars J. The use of reflection in medical education: AMEE Guide No. 44. *Medical Teacher* 2009;**31**:685–695.

7 Moon J A. Reflection in Learning and Professional Development. Theory and Practice. *Routledge Falmer,* Abingdon 1999.

8 Dewey J. How We Think. *D.C. Heath & Co*, Boston 1910.

9 Mamede S, Schmidt H.G. The structure of reflective practice in medicine. *Med Ed*, 2004;**38**:1302–1308.

10 Mamede S, Schmidt, H.G. Effects of reflective practice on the accuracy of medical diagnoses. *Med Ed*, 2008;**42**:468–475.

11 Schon, D A The Reflective Practitioner. How professionals think in action. *Ashgate*, Farnham, 1983.

12 Mezirow J. An overview of transformative learning. In: Illeris (Ed) Contemporary theories of learning: learning theorists... in their own words. *Routledge*, Abingdon, 2009.

13 Habermas J (trans Shapiro J J). Knowledge and Human Interests. *Heinemann*, London, 1971.

14 Brookfield S. Becoming a critically reflective teacher. Jossey-Bass, San Francisco, 1995.

15 Fook J. Beyond reflective practice. Reworking the 'critical' in critical reflection. (In: Bradbury H et al). Beyond Reflective Practice: new approaches to professional lifelong learning. *Routledge*, Abingdon 2010:37–51.

16 Klemola U-M, Norros L. Analysis of the clinical behaviour of anaesthetists: recognition of uncertainty as a basis for practice. *Medical Education* 1997;**31**:449456.

17 Klemola U-M, Norros L. Practice-based criteria for assessing anaesthetists' habits of action: outline for a reflexive turn in practice. *Medical Education* 2001;**35**:455–464.

18 Taylor C. Narrating practice: reflective accounts and the textual construction of reality. *Journal of Advanced Nursing* 2003;**42**:244–251.

19 Kaisu M. Rethinking Disorientating Dilemmas Within Real-Life Crises: the Role of Reflection in Negotiating Experiences. *Adult Education Quarterly* 2012;**62**:207–229.

20 Epstein, R.M. Mindful Practice. *Journal of the American Medical Association*, 1999;**282**,833–839.

21 Ganss G E, SJ (Trans). The Spiritual Exercises of Saint Ignatius. *Loyola Press*, Chicago 1992.

22 Cowan J. On Becoming an Innovative University Teacher. *Open University Press*, Buckingham; 2006 (2nd edition).

23 Verpoorten D. Using reflection triggers while learning in an online course. *British Journal of Educational Technology* 2012;**43**:1030–1040.

24 Goodyear H M, Bindal T, Wall D. How useful are structured electronic portfolio templates to encourage reflective practice? *Medical Teacher* 2013;**35**:71–73.

25 Tochel C et al. The effectiveness of portfolios for post-graduate assessment and education: BEME Guide No 12. *Med Teach* 2009;**31**:299–318.

26 Pearson D J & Heywood P. Portfolio use in general practice vocational training: a survey of GP registrars. *Med Educ*, 2004;**38**,87–95.

27 Brown J M, McNeill H, Shaw N J. Triggers for reflection: exploring the act of written reflection and the hidden art of reflective practice in postgraduate medicine. *Reflective Practice*, 2013;**14**:755–765.

28 Barrie JL. Unpublished MA dissertation, Edge Hill University, 2013.

29 Driscoll J. Practising Clinical Supervision: A Reflective Approach for Healthcare Professionals (2nd ed). *Bailliere Tindall Elsevier*, Edinburgh 2007.

30 Larsson J et al. Trainee anaesthetists understand their work in different ways: implications for specialist education. *BJA* 2004;**92**:381–387.

31 Boerboom T et al. Peer group reflection helps clinical teachers to critically reflect on their teaching. *Medical Teacher* 2011;**33**:e615-e623.

32 Boud D, Keogh R, Walker D. Promoting reflection in learning: a model. In: Boud, D., Keogh, R., Walker, D. (eds) Reflection: Turning Experience into Learning. *Routledge Falmer,* London 1985;18–40.

33 Friedman V J. Paper 1: Reflective practice: taking the mystery out of the mastery (www.lupinworks.com/ar/Schon/Paper1.html) (accessed 5 August 2014).

34 Aronson L. Twelve tips for teaching reflection at all levels of medical education. *Medical Teacher*, 2011;**33**:200–205.

35 Hrisos S, Illing J C, Burford BC. Portfolio learning for foundation doctors: early feedback on its use in the clinical workplace. *Medical Education*, 2008;**42**,214–223.