By reading this article and writing a practice profile, you can gain a certificate of learning. You have up to a year to send in your practice profile. Guidelines on how to write and submit a profile are featured at the end of this article.

Encouraging reflection and critical thinking in practice

NS253 Price A (2004) Encouraging reflection and critical thinking in practice. *Nursing Standard*. 18, 47, 46-52. Date of acceptance: October 13 2003.

In brief

Author
Adrienne Price RGN, RM, ADM BSc(Hons), PGCEA, DMS, is central delivery suite manager, Frimley Park Hospital, Surrey. Email: adrienne.price@fph-tr.nhs.uk

Summary
For reflection to become a transferable skill that is used in practice, practitioners need to learn how to combine this skill with critical thinking. This article provides practical guidance to mentors, clinical supervisors and preceptors on how this might be encouraged.

Keywords
- Clinical supervision
- Critical thinking
- Mentoring
- Reflective practice

These key words are based on subject headings from the British Nursing Index. This article has been subject to double-blind review.

Online archive

For related articles visit our online archive at: www.nursing-standard.co.uk and search using the key words above.

Aim and intended learning outcomes

Much has been written about the theory of reflection and critical thinking, the majority of which has been applied to the university setting (Ham 2004). However, reflection and critical thinking are transferable skills which learners are expected to develop in clinical practice. Such skills enable practitioners to understand themselves and others and to solve problems. Clinical supervisors, preceptors and mentors are charged with aiding reflection and critical thinking. In this article the term 'mentor' is used to refer to all individuals who help others learn and develop in the clinical setting. The aim of this article is to assist such people to help learners use and combine the skills of critical thinking and reflective practice to constructive ends. After reading this article you should be able to:

- Discriminate between reflection and critical thinking and discuss why it is beneficial to combine these in practice.
- Describe what is characteristic about learning in the practice setting.
- Use an exercise to help learners reflect and think in innovative ways.
- Initiate local discussions on practice-sensitive approaches to developing transferable skills among learners.

Introduction

Practitioners are able to transform their practice through insight and reason. Without an inquiring and insightful workforce, health improvements will not be achieved. Yet change involves discomfort and there might be doubts about the wisdom of particular strategies. Healthcare practitioners may be wary of change even when it is labelled as evidence based and dedicate significant effort to sustaining a status quo (Le May *et al* 1998). It therefore seems unsurprising that some of the means of change – reflection and critical thinking – are difficult to foster in the practice setting.

Reflective practice is an approach to learning and practice development which is patient-centred and which acknowledges the untidiness and confusion of the practice environment (Burns and Bulman 2000, Johns 2000) (Table 1). That which seems straightforward in the science laboratory or textbook is not so clear at the bedside (Benner *et al* 1996). Practitioners deal with illness rather than disease – they work with the perceptions of others and the ways in which they ascribe meanings to signs, symptoms, treatment and health promotion. Even normal events such as childbirth offer a range of different definitions of the situation that might prompt practitioners to recommend different actions (Cioffi 1997).

Critical thinking is the ability to deconstruct events and to reason the origins of situations (Brookfield 1987). Like reflection it involves considering what has gone before and what may yet happen (Clark and Holt 2001). There is a retrospective and a prospective or creative dimension to it (Daly 1998). Critical thinking involves considering the relationship between events – whether this is cause and effect or whether there is a more general process under way.

What is difficult about encouraging reflection and critical thinking, and especially helping learners to combine them practically, is that both skills involve different premises to those employed in health care (Taylor 2003) (Figure 1). To reflect or think critically involves investigating and imagining alternative sce-

narios. The individual is an explorer and there are few constraints on the possible discoveries to be made. Learning is portrayed as an individual endeavour, albeit with the guidance of a mentor. This is in sharp contrast with the ethos that often exists in practice that emphasises collective learning and change (Seymour *et al* 2003).

Practice environments involve managing risk, clarifying what is safe and acceptable to others, and what will promote the collective reputation of the team – be it the ward, department, division or hospital. In these circumstances reflection and critical thinking only become transferable skills when the mentor can help the learner to use them flexibly – choosing when and how far to employ each – and share the discovery process with others. Practitioners and managers welcome learners in the practice environment. It is the most authentic context in which to learn. Nevertheless, learning needs to be managed with due regard for the primacy of risk management and the delivery of effective and sensitive care.

TIME OUT 1

Pause now to reflect on the different assumptions that exist about learning in your clinical environment and in college. Contact colleagues in your setting to review accounts of why this might pose difficulties for students joining clinical placements.

The reflective practice approach

To develop reflection and critical thinking successfully, it is important to draw some distinctions between them. While there is considerable debate about whether they overlap in some way, mentors may find it helpful to consider how each can be used. Both reflection and critical thinking are useful in practice and there are benefits in combining them. Whatever protagonists argue about their favoured approach, neither seems completely adequate as a basis for the development of practice wisdom – neither gives a formula for interpreting events that will enable practitioners to respond as flexibly as they may have to. Practitioners usually need to combine reflection and critical thinking when addressing practice issues (Figure 2). Taylor (2003) provides a summary of the characteristics of reflective practice. She observes that the premise of reflective practice is that nurses use a narrative about care, specifically of their own experiences which enables them to appreciate episodes in a sensitive way. The purpose of reflection is threefold:

- To understand yourself, your motives, perceptions, attitudes, values and feelings associated with the conduct of care. Educationalists describe this as becoming metacognitive (White 1999). Practitioners understand themselves and in so doing become more open to understanding the different perceptions of others (Heath and Freshwater 2000).
- To see practice afresh and challenge the assumptions nurses bring to practice episodes (Rolfe *et al* 2001). Reflective practice is based on the notion that we all construct meanings for and explanations about events, and some of these might be misguided.

Table 1. Characteristics of reflective practice and critical thinking

Reflective practice	Critical thinking
Emphasises the instinctive or intuitive	Emphasises explicit reasoning and debate
Is expressive and inquisitive and explores nursing as an art or craft	Is analytical and strategic, linking knowledge bases to practice strategies
Emphasises learning through practice episode experience	Emphasises deconstructing practice examining processes, strategies and supporting information
Appreciates the world as a place of constructed meanings that practitioners need to understand as the basis of behaviour	Understands the difference between empirical information (fact) and attributed meanings (perceptions)
The classic challenge: seeming sensitive to patient care	The classic challenge: defending practice when decisions or expertise are questioned

Figure 1. Distinctions between practice and academic-based inquiry

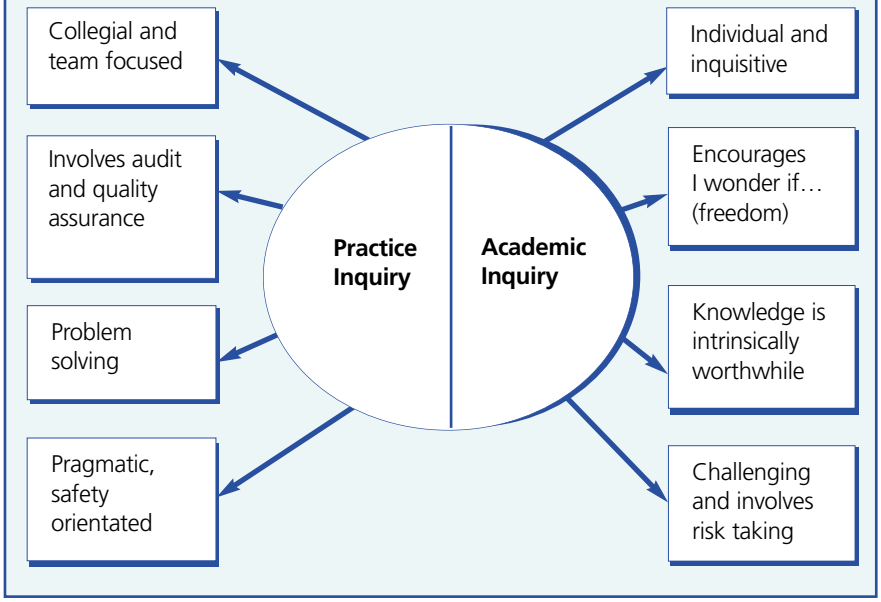
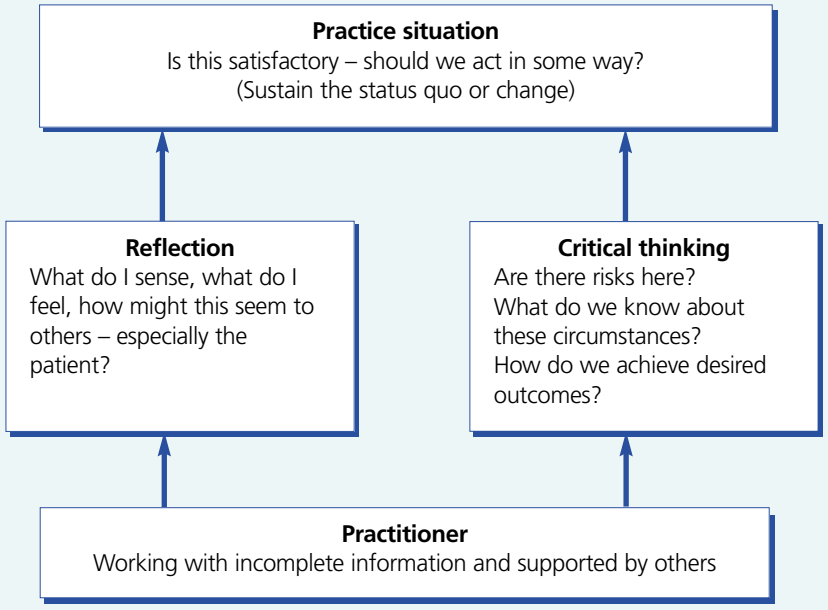


Figure 2. Practice challenges and cognitive skills



- To discuss with others how the episode might be approached differently (Johns and Freshwater 1998). Learners are taught to reflect on the possible consequences of their actions.

Taylor (2003) observes a number of limitations to reflective practice. There is a confessional nature to reflection, specifically in the way thoughts, motives and misgivings are shared with the mentor. In health care we need to examine practice and what is problematic about it, such as near miss incidents, but it is questionable whether individual reflection is adequate to resolve collective problems. It is also debatable whether mentors are adequately prepared to help the learner resolve the 'ifs, buts and maybes' of reflection. In reality, the reflective learner confides perceptions that may or may not represent a fair account of how others saw the episode (Taylor and White 2001). At best, the learner surveys the situation, without verifying better ways of intervening.

TIME OUT 2

Do you agree with these criticisms of reflective practice? Think back to situations that could be reflected on by a student, in consultation with a clinical supervisor or other reflective partner. Do you agree that something significant is lost unless there is a collective evaluation of what happened?

The critical thinking approach

The competing account of learning and practice development is associated with critical thinking and evidence-based practice. Thompson (2003) and colleagues at the Centre for Evidence-Based Nursing in York point to the importance of clinical reason and critical analysis if practice is to be understood and developed.

In an ideal world practitioners would draw on the best evidence, combining research findings, clinical expertise and patient preference (Di Censo *et al* 1998). Practitioners would have access to and command over a range of data that would enable them to select the best possible approaches to clinical care.

However, Thompson (2003) observes that practitioners work with a less than complete evidence base and experience is often used to judge how best to proceed. He describes how we develop heuristic devices – shorthand accounts that enable us, accurately or otherwise, to choose what to do next. For example, we may draw on a series of practice experiences to predict how a patient will respond to news of the need for particular investigations. We assume that the reactions of other patients predict the range, if not the detail, of reactions that the next patient might demonstrate.

To think critically about practice is to challenge assumptions, not by a private exploration of human experience but by reference to models or competing explanations of behaviour (Thompson and Dowding 2002). The practitioner acknowledges his or her experience of practice but still refers to research and theory that set out to explain the probability of events happening in a particular way. For example, a nurse may examine a range of factors that influence the experience of hearing about the need for an investigation. This will include experience of working with previous patients in similar situations but may also extend further to examine the nature of the investigation, what it signifies about the patient's situation and the emotional states patients may suffer while awaiting diagnosis. In contrast to reflective practice, critical thinking emphasises overt reasoning and encourages the practitioner to think about what is notionally objective in practice contexts.

TIME OUT 3

Return to the practice situations that you considered in Time Out 2. What would be involved in analysing those situations using critical thinking? What do you think are the limitations?

Beyond separate approaches to learning

Both reflection and critical thinking pose problems for the mentor. Reflection risks casting the mentor as a witness to confessions, some of which do not appear to further practice directly. Mentors may question whether they agree with the reflection and wonder to what extent their own perception of it is superior to that of the learner.

If we accept that both evaluations are partial and represent only a limited 'take' on the episode,

how far do we pursue the reflection with others? Mentors frequently wonder when to use reflection as a means of challenging or changing practice and when to confine it to helping the student gain insight into his or her own philosophy or approach to care.

Conversely, in the author's experience critical thinking can be viewed as a cold and dispassionate exercise when conducted alone. While there are objective realities, for example, the risks of side effects associated with a treatment, focusing on these alone seems to lose something en route, for example, how do patients think about risk taking and what do they consider an acceptable risk?

Nurses are interested in human experience, especially that of patients and lay carers. It may be reassuring to examine the likelihood of future events by reviewing factors that influence the situation, perhaps even to talk about the probability of different outcomes, but this is usually a complex, lengthy and resource-intensive exercise. Specialist practitioners, who have more specific and research evidence-based knowledge, are better placed to weigh practice matters than those working in general surgical or medical divisions where there is a wider spectrum of care needs.

It is usually unproductive for the mentor to work using only one approach to practice learning. While encouraging and aiding reflection seem easier than critical thinking, what have they achieved? There is value in helping the learner to investigate problems in more objective terms, even if the mentor can focus on just a few of these.

If learners try to critically analyse all practice issues or episodes during a placement they will suffer information overload and may exhaust the mentor. A compromise could be to combine elements of both types of work. The mentor would continue to encourage reflection and self-insight in the learner – this is an important skill, especially when ethical practice is the focus of concern. Beyond that, however, the mentor could help the learner connect these perceptions to alternative accounts of practice and understanding of issues or problems.

The mentor could encourage the learner to discuss such matters with other professional colleagues and devise exercises to this end. The mentor is cast not as the expert but as a liaising practitioner, who helps the learner to work with others to understand practice.

TIME OUT 4

Identify common episodes of care that might benefit from individual reflection in the first instance, but which might then be better understood through a wider consultation with other practitioners. What sort of skills will the mentor need to help the learner get the most from both of these learning activities?

Facilitating learning

For the purposes of this article, the author has assumed the following role for the mentor – while the list is not exhaustive it relates to the facilitation of learning. A mentor is someone who:

- Acknowledges that learning can be stressful, especially when the learner questions his or her ability or approach to care.
- Helps the learner to translate individual learning into collective learning, working with the local ethos of care.
- Assists the learner to develop confidence in his or her decisions, enabling the practitioner to play an active role in the healthcare team.

The next section details an exercise that can be used to combine reflection and critical thinking in practice areas. This has the benefit of encouraging colleagues to share collective learning with students. Its use in high stress areas of practice, for example, midwifery, high dependency care or emergency departments, might be especially apt because it helps learners and practitioners to discuss what is happening. In the author's experience in these areas practitioners welcome the way this exercise acknowledges local practice and the decision-making processes important there.

The context transporter

Stage one The context transporter is an exercise designed to help learners combine reflection and critical thinking and to appreciate the ways in which changing health contexts influence practice decisions and outcomes. It is an exercise based on a practice episode, similar to those employed in problem-based learning (Price 2003). It differs from traditional reflective practice in that the learner works with a care episode prepared by the mentor – in traditional reflective practice the learner focuses predominantly on his or her own experiences of a practice episode and tries to make sense of them.

In this exercise the learner views the practice reflection of a colleague (Box 1). This has several benefits. Learners are encouraged to explore the colleague's perceptions described in the episode. Instead of asking, 'what do I make of this situation?' the learner addresses an additional question, 'to what extent do I agree with, understand, or relate to, the perspective taken by the colleague described here?' While this approach may seem less immediate because it is not based on the learner's own clinical encounter, it does foster a concern for collective understanding of practice issues. Students might feel more comfortable examining a practice episode where another perspective is shown. As with many practice problems, analysis happens collegially and with reference to the opinion of others. While discussion is less confessional it retains opportunities to explore how the learner feels and views practice.

Box 1. Example of practice episode (modified framework adapted from Johns 2000)

Description
The following happened while I was on duty on the labour ward. I received a telephone call from the husband of a woman who had previously been admitted as possibly being in labour and who had returned home when this did not progress. He was anxious about leaving his wife at home during the day and argued that she should have remained on the maternity unit

My goals
I had three goals:
- To ascertain whether there had been any change in the woman's condition or comfort – risk assessment
- To reassure the husband that we took concerns seriously and respected the needs of his wife and his own worries
- To manage resources effectively, supporting the woman in the community until such time as labour was established or other concerns arose

My actions
Initially, I listened to his concerns, before asking for some details of his wife and writing these down on the telephone messages pad. I noted the date and time of the call, checked whether there were any signs that labour had recommenced, and whether his wife seemed in any discomfort or was reporting personal anxiety about the impending labour. I reassured the husband that I would liaise with the community midwife to check on his wife's situation later in the day. In the interim, I ascertained that the woman had a mobile phone so she could call us immediately with any new worries

After the call I consulted the woman's notes to check for possible complications or needs not detailed during the telephone call. I then arranged for the community midwife to call on her that afternoon

How I think this situation seemed to others
To the husband Possibly evasive or bureaucratic because his goal of immediate readmission for his wife had not been achieved. The detailed questions about his wife's current condition and the arrangement for the community midwife to visit might have reassured him, but I sensed that he was dealing with considerable anxiety and did not feel able to control this situation

The outcomes for me
Initial anxiety. I questioned myself about whether I had assessed the risks adequately. I was not speaking to the woman and it was important to check her notes to ensure that my responses were sufficient. Later I was reassured by the community midwife who confirmed that all was stable when she had visited. I was struck by the risk decisions that we all take and pondered what other outcomes might be probable

The outcomes for others
That evening the pregnant woman was able to reassure her husband about what the community midwife had done and said. All seemed to be progressing well. However, the husband reported relief when his wife established labour that evening and was admitted to hospital. He confided that he could not face another day at work wondering what might happen at home

TIME OUT 5

Turn to Box 1 and consider the merits and limitations of using a practice episode such as this one to prompt reflection with a learner. If you were drawing up a practice episode, how could you ensure that it was authentic to the practice issues that arise in your local setting?

Practice episodes need to reflect the nature of practice issues, patients, processes, challenges, or concerns frequently encountered on the ward or other practice environment. It is important not to assume that episodes need to indicate a problem with care. It is enough that they prompt the learner to reflect on questions such as, 'what do I know', 'what would I do' and 'how might I feel'. The episode that the mentor prepares may describe interaction over a short period of time, for example one hour, or a more protracted episode. If a longer time period is chosen it is better to limit the complexity of issues discussed, at least with new learners. While practice is complex, it is easier to begin by learning to reflect on fewer variables.

The practice episode is written down and given to the learner to take away and read. This might be overnight, during the course of a shift or simply for half an hour during a rest break. The mentor then asks the learner to rehearse aloud his or her understanding of the practice episode. Learners are encouraged to ask questions about what is not apparent in the episode description, but the mentor only provides descriptive answers. That is, the mentor defines terms or expands on the detail of events, but does not venture an opinion about the perceptions, motives, values or beliefs of the participants described.

As with traditional reflective practice, the mentor applauds the student's exploration of his or her own understanding and attitudes towards the episode. However, the learner is encouraged not to make instant judgements about the adequacy or otherwise of actions chosen, those described or those that the learner might choose. Instead, the learner is encouraged to think about differences and similarities in how he or she understands the episode and how decisions might be arrived at.

TIME OUT 6

At this stage, learners are engaged in reflection and critical thinking. Can you indicate in what ways they are using reflection and in what ways they are exercising critical thought? To help you with this, think about the possible reference points that the learner might use to explain why they might approach the episode differently.

Typically, at this stage learners ask a number of questions:
- To what extent do they think like a particular practitioner?
- Do they know as much as him or her?
- Are they as skilful?

It is important to move beyond such comparisons however, and to explore what the learner might do. If practice episodes are chosen well, learners will already have practice experiences on which to

Box 2. Contexts that might adjust practice

Context 1

When you consult the woman's notes you discover that she is a diabetic and that previously she delivered a very large baby with difficulty. The notes indicate that she manages her diabetes in a rather *ad hoc* manner and that her husband has expressed concern about this

Context 2

The husband has made another telephone call to the head of midwifery expressing his frustration about his wife having been discharged home. She is unaware of the telephone conversation that you have just had, but calls you to check your assessment of the situation

draw. There might have been similar episodes of care and the learner might have proceeded more cautiously or abruptly. The episode represents a tool to help discussion of the events described and personal experiences of care work.

In this approach:

- The mentor is not cast solely as a confessional witness. The student has other reference points available when thinking about practice.
- The student is likely to appreciate that there is often no single formula for care. Patients do influence the manner and style of care delivery and this is entirely appropriate.
- The student starts to relate ideas about what has been read in the episode, to what has been observed or felt in practice. Ideas start to transfer between situations and the mentor should encourage this.

Stage two A point is reached where reflection is exhausted. The learner has explored what happened in the episode and compared this with what he or she might have done. The learner might have remembered care episodes from practice that seemed to offer lessons. Some of the discussion might have been conducted as 'think aloud' discussion during the course of practice conducted together.

Provided this does not impede or interrupt sensitive care delivery, or imply that another patient is being discussed, such debate helps to cement a good working relationship between mentor and student. If support has been skilfully handled the learner will not have seen the episode in terms of personal success or failure, but will have begun to examine options available. Reflection is exhausted when the learner falls silent and the mentor is satisfied that the episode has enabled useful inferences to be made about practice.

Stage two of the exercise begins when the mentor arranges a short meeting with one or two other practitioners and the student. Colleagues should have been issued copies of the practice episode description (Box 1), and all are then issued with a new context card, describing how the circumstances of the episode have changed (Box 2). Care is transported into a new context and the group is invited to consider the episode and practice decisions in a new light. The pressure of other commitments means this meeting is usually a short one, but arrangements could be made for the student to work with colleagues so that the changed episode context can be discussed during the process of care delivery. The caveat of not discussing the episode in front of patients applies here. It is easy for patients or their carers to misconstrue such discussion as gossip about other patients.

TIME OUT 7

Look at the information presented in Box 2 and answer the following questions.

- What happens to practice episodes when the contexts are changed?
- What does discussion of this teach the learner?
- In what ways does this exercise mimic the changing circumstances of practice?

This exercise reflects the ways in which teams frequently discuss healthcare issues and problems. Students sometimes witness this during report handover, in case conferences or in association with medical consultations. It also establishes the principle that practice is amenable to analysis and that collective discussion is likely to bring a greater variety of evidence to bear on the situation. Learners hear colleagues 'think aloud' their understanding of a practice situation and are encouraged to contribute based on their own learning. The discussions reflect the fact that health care is often dynamic and practitioners must respond to changing circumstances. Discussion of the episode is rehearsed in the context of local protocols and practice and could prompt discussion of the rationale for these. In this way learners are helped to understand practice in the organisational and service contexts as well as the educational.

This stage of the exercise encourages critical thinking because, as well as drawing on personal experience and perceptions, there is the opportunity to employ other resources. The episode might have been chosen as one relevant not only to clinical practice, but also to a module of learning and available research evidence. The group might draw on evidence-based standards, and the policies and protocols of the unit and also refer to one or more research articles selected in advance.

There is an opportunity to challenge the heuristic short cuts that Thompson (2003) refers to. To what extent is this episode understood in terms of experience and, equally importantly, to what extent is this episode typical of a wider population of patients or series of outcomes that we have not encountered but which are reported in the literature? The net effect of such discussion is that reflection and critical thinking are combined to modify thinking about the practice episode. Transporting that episode to a new context has prompted debate about options, priorities, decisions and emphases of care.

It is in the interests of practice, and certainly mentors, to find ways of encouraging learning that are relevant to clinical practice and which do not require unduly tortuous and ideological debate about the merits of reflective practice versus critical thinking. Practitioners are pragmatic. Practice is frequently situational, working with available information but benefiting from discussion about what new evidence could be brought to bear. However, because complacency needs to be avoided mechanisms to discuss and facilitate change are always needed.

Preparing an exercise in reflection and critical thinking takes a little time but it could be used with other learners and updated so as to reflect changes in practice. The exercise material might be included in clinical placement induction packs and provide an opportunity for mentors to be more strategic when encouraging learning. Importantly, the exercises cast the mentor as someone who helps the student to discover and learn, rather than requiring them to be the sole source of all knowledge or an expert in counselling.

TIME OUT 8

Prepare a short practice episode or reflection of your own. Select a context adjustment that relates authentically to the episode and enables you to include discussion of protocols, policies and research evidence that you are aware of. Conduct the exercise with a learner and write up your observations as part of a continuing professional development reflection.

Conclusion

If learners are to make the transition from classroom to clinical practice-based learning and to appreciate why it is different, they need help to discover new ways of combining experience, observation and thought. There is a need to move beyond the purely confessional aspects of reflective practice and to combine what has been experienced with what might be constructively argued. The use of exercises, such as the context transporter, helps learners to develop more collegial forms of learning and may contribute to a more rounded appreciation of practice and its methods or conventions

TIME OUT 9

Now that you have finished the article, you might like to write a practice profile. Guidelines to help you are on page 54.

REFERENCES

Benner P *et al* (1996) *Expertise in Nursing: Caring, Clinical Judgement and Ethics*. New York, Springer.

Brookfield S (1987) *Developing Critical Thinkers: Challenging Adults To Explore Alternative Ways of Thinking and Acting*. Milton Keynes, Open University Press.

Burns S, Bulman C (2000) *Reflective Practice in Nursing: The Growth of the Professional Practitioner*. Second edition. Oxford, Blackwell Science.

Cioffi J (1997) Heuristics, servants to intuition, in clinical decision making. *Journal of Advanced Nursing*. 26, 1, 203-208.

Clark D, Holt J (2001) Philosophy: a key to open the door to critical thinking. *Nurse Education Today*. 21, 1, 71-78.

Daly W (1998) Critical thinking as an outcome of nursing education. What is it? Why is it important to nursing practice? *Journal of Advanced Nursing*. 28, 2, 323-331.

Di Censo A *et al* (1998) Implementing evidence-based nursing: some misconceptions. *Evidence-Based Nursing*. 1, 2, 38-40.

Ham K (2004) Principled thinking: a comparison of nursing students and experienced nurses. *Journal of Continuing Education in Nursing*. 35, 2, 66-73.

Heath H, Freshwater D (2000) Clinical supervision as an emancipatory process: avoiding inappropriate intent. *Journal of Advanced Nursing*. 32, 5, 1298-1306.

Johns C (2000) *Becoming a Reflective Practitioner: A Reflective Holistic Approach to Clinical Nursing, Practice Development and Clinical Supervision*. Oxford, Blackwell Science.

Johns C, Freshwater D (1998) *Transforming Nursing Through Reflective Practice*. Oxford, Blackwell Science.

Le May A *et al* (1998) Bridging the research-practice gap: exploring the research cultures of practitioners and managers. *Journal of Advanced Nursing*. 28, 2, 428-437.

Price B (2003) *Studying Nursing Using Problem-based and Enquiry-based Learning*. Basingstoke, Palgrave.

Rolfe G *et al* (2001) *Critical Reflection for Nursing and the Helper Professions: A User's Guide*. Basingstoke, Palgrave.

Seymour B *et al* (2003) Valuing both critical and creative thinking in clinical practice: narrowing the research-practice gap? *Journal of Advanced Nursing*. 42, 3, 288-296.

Taylor C (2003) Narrating practice: reflective accounts and the textual construction of reality. *Journal of Advanced Nursing*. 42, 3, 244-251.

Taylor C, White S (2001) Knowledge, truth and reflexivity: the problem of judgement in social work. *Journal of Social Work*. 1, 1, 37-59.

Thompson C (2003) Clinical experience as evidence in evidence-based practice. *Journal of Advanced Nursing*. 43, 3, 230-237.

Thompson C, Dowding D (2002) *Clinical Decision Making and Judgement in Nursing*. London, Churchill Livingstone.

White C (1999) The metacognitive knowledge of distance learners. *Open Learning*. 14, 3, 37-46.