

Reflective analysis: Techniques for facilitating reflection

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This paper describes a number of techniques for facilitating reflective critical analysis as a means of eliciting in-depth reflections on practice. The authors have previously used similar techniques in the research context, to assist practitioners to identify and analyse the basis of their work with clients. The techniques presented in this paper have been adapted for use in social work education, including in class-based and field education contexts, and to professional supervision.

Keywords

knowledge, reflection, techniques.

Introduction

Reflective practice has long been a core aspect of educational and supervisory practice in social work. The importance and value of utilising reflection has been discussed by a number of writers (Argyris & Schon 1974; Schon 1983; Papell & Skolnick 1992; Yelloly & Henkel 1995; Fook 1996, 1999; Gould & Taylor 1996; Brockbank & McGill 1998). Reflection has been used as a means of establishing and evaluating social work purpose, planning, assessment, intervention and evaluation processes (Harrison 1987; Papell &

Skolnick 1992; Yelloly & Henkel 1995; Fook 1996, 1999; Gould & Taylor 1996; Nathan 2002). One of the key benefits is its usefulness in uplifting a practitioner's implicit theories of action (Fook 1996). Recent directions in social work have seen reflection enfolded within a critical discourse, giving emphasis to power relations and social structures.

'A critically reflective approach therefore relies upon knowledge which is generated both empirically and self-reflectively, and in a process of interaction, in order to analyse, resist and change constructed power relations, structures and ways of thinking' (Fook 1999; p. 202).

One of the most valuable features of the critical reflective approach is its ability to transcend and engage with difference – in that different knowledge, ideas, speculations, feelings and theories can be ascertained reflectively from a range of positions. The approach we are taking in this paper is located within a broad critical approach, focusing on techniques that facilitate dialogue with self and others. We are explicitly concerned with both

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cognitive and affective dimensions of practice. While reflection is highly relevant to both macro and micro levels of practice, the techniques we describe are specifically relevant for students and practitioners in direct service delivery.

The specific techniques described here have been used by the authors in two research studies, as a means of eliciting in-depth reflections on practice. These studies were Darlington *et al.* (2002), an examination of child protection workers' understandings of physical child abuse and Osmond (2001), an investigation of social workers' use of knowledge in practice. Both of these studies were conducted with statutory child protection workers and used a number of qualitative reflective approaches to elicit and examine the knowledge and/or theories guiding participants' professional practice. We became interested in the application of these techniques to education and professional supervision when listening to research participants' spontaneous responses to the methods used. All the participants, to a greater or lesser extent, saw the importance and value of reflective approaches that helped them to understand more comprehensively what knowledge guided their practice.

Participants frequently stated that this level of analysis of their practice was not routine, and for some, attention to these issues was nonexistent. Participating in the research process was seen as a '*luxury*', '*something for me*', '*an opportunity to talk about and think about myself*', '*a time to think about what I do*' (Osmond 2001; p. 300). This is not to suggest that participants found the questions and level of enquiry easy. On many occasions,

participants would make statements such as '*this is really hard*', '*I'm finding it difficult answering that because I'm not used to thinking about my practice in this way*', and '*that's a hard question, never thought about that before*' (Osmond 2001; p. 300).

We have previously reported on the usefulness of including a reflective approach to case analysis as part of professional supervision (Darlington *et al.* 2002). Here we specifically describe a range of techniques that could be incorporated into supervision. These techniques are equally applicable to social work education, particularly in field placement supervision, and in university-based preparation for field placement, to assist students to develop critical, reflective practice. We aim to provide sufficient detail for supervisors to be able to adapt the techniques suggested to their own supervisory context.

Techniques for facilitating reflection

Approaches to facilitating reflective critical analysis have been discussed under different guises. For instance, Scott (1990) covers a number of the techniques reviewed here when identifying methods for acquiring practice wisdom. Likewise, some of the techniques have been recognised as strategies for articulating practice or alternatively seen as therapeutic tools (Fook, Ryan & Hawkins 2000; Osmond 2001). Our intention is to clarify how these different techniques can be employed in the

supervision and education context, so as to stimulate reflective critical analysis in practitioners and students.

The discussion commences with questions and prompts that we have found useful for stimulating reflection. Following this, a number of broader processes or techniques are described that invite a critical, reflective stance. These questions and techniques are not prescriptive, and we welcome suggestions for further refinement, modification and discussion. Facilitating reflection in oneself or another should be a flexible process. The danger of rigid adherence to any technique is that the reflective session may be experienced as an interrogation, rather than a facilitative enquiry of practice.

Reflective questions and prompts

Fook (1996) and Fook *et al.* (2000) have previously detailed a number of different questions that can be useful for facilitating reflection. For example: 'how does what happened in my incident compare with what I intended to do, or what I assumed I was doing; was the theory I claimed to be using, different from what was implied by my actions and interpretations? Did my actions fit my theory?; . . . what needs to be changed about my assumptions, theory, actions, interpretations, skills, as a result of these reflections?' (Fook *et al.* 2000; p. 233). In continuing with this theme and thereby offering supervisors additional choices, we have identified a number of other questions or prompts that are effective for facilitating reflective critical analysis, namely:

- Case analysis questions
- Exploring differences and presenting contingencies
- Before-and-after questions and prompts.

Case analysis questions

By case analysis questions we mean prompts that can assist a practitioner to critically reflect on a case. The questions provided below were specifically developed for child protection workers. However, these could easily be modified and adapted to different practice contexts and situations.

- Tell me briefly about the case
- Who is involved (generate a genogram)?
- How do you think 'x' felt about the incident/issue/situation?
- How do you think 'x' understood or explained the incident/issue/situation?
- Where do you think 'x' generated their ideas or explanations from?
- How do you feel about the specific incident/issue/situation?
- How do you understand or explain the incident/issue/situation?
- Where do you think you have generated your ideas and explanations from?

This set of questions can then be repeated for each of the persons involved in the case situation, including, for example, the worker, the parents, each of the children, or other professionals involved in the case who may have a different construction of what is happening.

Key aspects of these questions are first, attention to both affective and cognitive aspects of experience, and second,

specific attention to the feelings and thoughts of all people involved in the situation, including, for example, all members of a family as well as the worker. This sequence enables a systematic process that considers all the players and discourages quick decisions about who or what should be the primary focus.

Although relatively simple, these questions are valuable in the supervisory context in a number of ways. First, they assist workers to reflect and articulate their current knowledge of a case or situation. Second, they facilitate the identification of gaps or areas of minimal knowledge. For example, in Darlington *et al.*'s (2002) study a number of participants had not considered nor sought the perceptions or interpretations of particular family members. This had obvious implications for participants' assessments and subsequent interventions. Third, they facilitate the exploration of clients' and workers' sources or origins of knowledge and ideas. This proved to be a useful line of enquiry in our research as it stimulated the tracing of participants' knowledge. Workers could see for themselves where their ideas had originated. Interestingly, for a number of participants this led to a critical appraisal of particular ideas or opinions that were based on personal rather than empirical understandings. Finally, they provide the opportunity for practitioners to reflect and consider the cognitive and emotive dimension of their practice. A number of participants commented that very little opportunity was given in supervision to consider the emotional reactions that emerged from undertaking statutory work.

Exploring differences and other contingencies

By 'difference' questions we are referring to questions that provide alternative contingencies. These questions assist in identifying what factors practitioners may be primarily considering in a case. For instance, participants in Darlington *et al.*'s (2002) study were asked how their explanations of abuse would have differed if:

- The mother/father was the identified abuser?
- The child was younger/older?
- The family was more/less isolated?
- The family lived in a rural community?
- The abuse was less 'serious'?
- Only one/more children in the family had been abused?
- There had/had not been other forms of abuse identified?
- There had/had not been a previous history of abuse?
- If this was a one off/ongoing situation of abuse?

These questions are particularly useful for: (i) identifying how workers may dominantly see something (that is, are there common factors/issues that particular workers lean towards when making assessments?); (ii) assisting workers to see other possibilities; (iii) eliciting unformulated or speculative ideas that can be further tested (knowledge generation); (iv) challenging workers on firmly held ideas; and (v) assisting workers to broaden the insights gained through detailed analysis of one case to other situations they may be involved with.

Before and after questions

These types of questions are particularly useful for enquiring into practitioners' 'working' ideas and frames of reference, in the context of social work purpose, planning, assessment, intervention and evaluation. They can be used prior to seeing a client, just after, and in supervision sessions. They are particularly effective when incorporated as part of the think-aloud and reflective recall processes that are discussed later.

Before seeing a client

- What are your thoughts before seeing this client?
- What are your feelings before seeing this client?
- Do you have any plans or purposes for this interview?

After seeing a client

- What are your thoughts now?
- What did you make of that?
- How do you understand this client situation or issue?
- What does this interview, report, etc. suggest about what was influencing your understandings/practice?
- Were you having any internal thoughts, feelings or reactions during the interview that you did not share with the client? What were they?
- The idea that you have just expressed, how have you come to know that?
- What would you have liked to have seen happen?
- When you did 'x' what was that about? (e.g. touched the client, nonverbal behaviour)

- You said 'xyz' – can you tell me about that?
- Consider your language, what do you think that suggests?

The principal advantage of this type of questioning is that it taps into practitioners' on-the-spot and current understandings. Particularly if employed just prior to or after a practice event, it reduces the limitations of retrospective analysis and selective recall. This provides the opportunity to immediately challenge, extend, affirm or redirect practice behaviour. Once workers become familiar with using these questions in the supervision context, and convinced of their utility in their practice, they may also be encouraged to use the questions themselves, as part of their ongoing practice reflection and self-evaluation.

We now examine a number of broader processes that can stimulate reflective critical analysis. Many of the questions just described are core components of these techniques.

Pictorial representation

Gould (1996) with reference to Lakoff (1987) identifies how one characteristic of human reason is imaginative thought. 'Thought is *imaginative*, and it is through metaphor, metonymy and mental imagery that we transcend the limitations of direct experience to enable abstract thought and creativity' (Gould 1996; p. 64). Gould considered this premise in relation to reflective practice and subsequently argued that a key role for educators, and we add supervisors, is to assist practitioners to articulate and appraise personal and professional images that

are embedded with assumptions. 'The premise which underlies this argument is that linguistic and pictorial images are media through which our individual and collective senses of reality are constructed' (Gould 1996; p. 64).

We have used pictorial representation exercises to facilitate research participants' reflection on knowledge in practice. Specifically, Osmond (2001) requested participants to draw a picture of how their knowledge was organised and used in relation to a specific case. Similarly, Darlington *et al.* (2002) asked participants to visually represent how their theories about physical child abuse influenced their practice.

Although some participants initially expressed hesitation about having to visually represent their practice, this soon subsided as they commenced the task. Participants engaged easily in explaining and commenting on their pictorial representations. In both studies, participants commented on how enjoyable and informative the pictorial sessions were. This technique provided us with a unique level of insight about practice, as the diagrams were an excellent medium for stimulating discussion on knowledge or theory use in practice. As facilitators we were able to probe via reference to their diagrams notions of practice behaviour that may not have been identified from other techniques. For example, in Osmond's (2001) study it was first detected from analysing participants' pictorial representations that they had a 'core' set of knowledge that they applied to every practice encounter.

In the supervision context this technique is useful for two reasons. First, at times

practice ideas and knowing cannot always be fully expressed via written and spoken communication. Given this, strategies are required that can assist workers to explicitly express their implicit or tacit understandings (Polanyi 1967; Imre 1985; Osmond 2001). Although complete translation and/or conversion is never exhaustive or complete (Durrance 1998), attempts can be made to faithfully describe, express, portray and represent tacit understandings in an approximated or partial form (Molander 1992). Therefore, it is useful to incorporate techniques (such as pictorial representation) into supervisory practice so as to elicit and 'hear' the tacit dimension of practice, as critical analysis of practice understandings requires attention to both tacit and explicit understandings (Osmond 2001).

Second, pictorial representation is useful in the supervisory context because of its inherent novelty. Any activity that is undertaken regularly carries the risk that it becomes dull, repetitive and predictable. Pictorial representation can instantly 'liven up' a supervisory session that has become routine.

Think-aloud, observation and reflective recall

Three techniques found to be helpful for stimulating critical reflection on current, active practice are: think-aloud, observation of practice and reflective recall. We briefly review each technique before suggesting how they can be used together to facilitate critical reflection.

Think-aloud

Thinking aloud is a process that consists of requesting people to think-aloud while solving a problem and analysing the resulting verbal protocols (van Someren *et al.* 1994). The method aims to reveal the cognitive processes and accompanying knowledge utilised when problem-solving. Thinking aloud as a process has its basis in cognitive-behavioural theory, which assumes that 'affective and behavioural responses are mediated by thought processes, both conscious and unconscious' (Davison *et al.* 1997; p. 950).

In a standard think-aloud protocol approach, researchers or supervisors request that participants verbalise all of their thoughts and considerations while actually solving a problem (Ericsson & Simon 1984; Davison *et al.* 1997). In other words, the participant articulates their problem solving process concurrently with the solving of the problem. The limitations associated with retrospective analysis are reduced as participants provide a step-by-step demonstration of how they would address an issue or problem (Ericsson & Simon 1984). This technique has recently been used by Drury-Hudson (1999) to examine social workers' decision-making related to removing a child from home.

Observation

By observation, we are referring to the unobtrusive observation of practitioner–client interactions through having someone watch and note down what is occurring in a practice event. Osmond

(2001) observed practitioner–client interactions in her research. Specifically she noted the following dimensions:

- The questions and statements made by the practitioner during the observed session and associated contextual topic issues (i.e. a focus on what is said and what is happening at the time)
- The nonverbal behaviour of the practitioner during the sessions
- The practitioner's style and process during the interview (i.e. a focus on how topics/issues were discussed)
- Any impressions the observer had about knowing-in-action (Schon 1983).

These dimensions are not exhaustive but do offer a number of focus points for supervisors when observing practice with the aim of facilitating reflection and introspection following a practice event.

Reflective recall

Reflective recall involves using recorded observations (made during an observed session by a supervisor) as a stimulus for discussion (Osmond 2001). The use of information recorded in this manner has been influenced by Interpersonal Process Recall, a technique that has been used as a supervision tool for counsellors (Kagan & Krathwohl 1967; Kagan & Kagan 1990). Interpersonal Process Recall involves video-recording a practitioner–client session and using that recording as a stimulus for discussion. Its advocates contend that having an effective stimulus can assist an individual to 'relive' an experience and explore in-depth thoughts, feelings and meanings of their behaviour. Further, it is focused on stimulating recall rather than on critiquing performance.

It assumes that practitioners have a wealth of information that they may not have considered or made explicit.

If video-recording practitioner–client interactions is not possible or is seen as too invasive or obtrusive, we suggest modifying the Interpersonal Process Recall technique. For example, Osmond (2001) adapted this method and used her observation notes as prompts to explore the content of practitioners' understandings as events unfolded. At various points in the interview, portions of the recorded narrative would be read out loud and the practitioner questioned about what was influencing them at that practice point.

Think-aloud, observation of practice and reflective recall can be used together to facilitate critical reflection on current, active practice. They are particularly useful if integrated and sequenced in the following order:

- 1** Practitioner requested to share any specific plans or purposes prior to an interview (think-aloud).
- 2** Practitioner requested to share any thoughts or feelings prior to an interview with a client (think-aloud).
- 3** Observation of practitioner–client interaction by supervisor (observation).
- 4** Practitioner requested to share any thoughts, impressions and feelings immediately following an interview (think-aloud).
- 5** Segments of the interview raised by both practitioner and supervisor for discussion (reflective recall).
- 6** Observational field notes (recorded by supervisor) used as a stimulus for deeper discussion about practice understandings (reflective recall).

Sequencing these techniques in this order should provide useful insights into practice behaviour for both supervisor and supervisee. Many of the participants in Osmond's (2001) study commented very positively about this process, with some identifying that they had gained a level of awareness about their practice not previously achieved. Participants appeared to value the opportunity to reflect on current practice because of its immediacy in terms of case planning. They could see for themselves their knowledge strengths and knowledge gaps.

Knowledge mapping

Another technique that can facilitate reflective, critical analysis is knowledge mapping (Osmond 2001). This technique is particularly useful for identifying the knowledge a practitioner is drawing upon in a case. It is strongly based on concept mapping but with some distinct differences.

Concept mapping has been regarded as a useful educational tool for enhancing meaningful learning and critical thinking (Novak 1990; All & Haven 1997; Daley *et al.* 1999), and has been used in expert systems research as a knowledge acquisition technique (Zaff *et al.* 1993). Concept maps 'are graphic or pictorial arrangements of the key concepts that deal with a specific subject matter. These maps are useful tools that can be utilised to represent the structure of knowledge in a form that is psychologically compatible with the way human beings construct meaning' (All & Havens 1997; p. 1210). They provide a medium in which an individual can represent their knowledge

(formal and perceptual) about a particular subject domain.

Zaff *et al.* (1993) noted that the theoretical foundation of concept mapping can be traced to Quillian's (1968) work on semantic networks in which knowledge is seen to be 'represented by concepts, and that the acquisition of additional knowledge (i.e. learning) is based upon the ability to take the basic concepts already possessed, and combine them as needed to represent any additional information to be added to the network' (Zaff *et al.* 1993; p. 93). The underlying epistemology of concept mapping is that new knowledge is interpreted and acquired in the light of existing knowledge (All & Haven 1997).

The methodology of concept mapping involves requesting an individual to visually represent all the goals, purposes, issues, considerations, decisions and knowledge involved in solving or understanding a particular problem. This usually occurs via a number of sessions. The concept map is constructed on the first occasion, with further clarification or additional information being sought in subsequent sessions. The mapping process is regarded as a window into the dynamic process of what another is thinking in relation to a specific subject. It can be a valuable technique for: '(i) transferring information from one individual to another; (ii) identifying the key ideas within a given subject; (iii) providing a formalism that is closely analogous to the mental organisation of the individual being mapped; and (iv) summarising a given cognitive domain' (Zaff *et al.* 1993; p. 95).

The technique of concept mapping theoretically informs the knowledge map

process but differs in its span of focus. The knowledge map process focuses specifically on the types and sequence of knowledge used in a case, whereas with concept mapping, cognitive and decision-making processes are also obtained.

The knowledge map process involves requesting a participant to select a recent client interview that they are very familiar with. They are then requested to describe the client problem or issue of focus. Following this, two phases to the knowledge map exercise occur.

The first phase involves a participant detailing all of their thoughts, ideas, feelings, reactions and considerations that had occurred during the session of focus. This is concurrently recorded by the supervisor on a large piece of paper or a whiteboard so the participant can literally 'see' how the information is being represented and interpreted. This allows both the supervisor and the supervisee to seek clarification, make amendments or add additional information, and results in a chronology of how the event unfolded, with the participant's associated ideas, thoughts and feelings.

Once the session has been fully described by a participant, the second phase of the knowledge map session occurs. This involves using the scribed map as an 'external memory' in order to stimulate reflection by a participant on the forms of knowledge they have been using. This involves beginning at the start of the map and repeating back to the participant what they have been considering, thinking or feeling at that time and then requesting the knowledge underpinning their understandings at

that point. This occurs for every concept that has been recorded in Phase One of the mapping exercise. This approach is best used as an interactive process, with supervisor and supervisee both able to clarify any issues as they arise.

Besides being an effective supervision technique for facilitating the identification of knowledge being used in a case, this technique is useful for identifying knowledge imbalance. By knowledge imbalance, we are referring to situations where knowledge use becomes skewed. An example of this could be a practitioner who predominantly calls upon one type of knowledge as a basis for their practice decisions or actions. The knowledge map will show pictorially if particular forms of knowledge are dominating practice behaviour. For instance, in Osmond's (2001) study it became clear to one participant, via the knowledge map, that her personalised understandings were dominating her practice decisions at the expense of other types of knowledge (e.g. theory and empirical research).

Conclusion

The questions and techniques offered in this paper do not exhaust the possibilities for facilitating reflective, critical analysis. For example, repertory grid technique (see Gould 1996), critical incident technique (see Sadique 1996; Fook *et al.* 2000) and personal narratives (see Fook *et al.* 2000; Osmond 2001) are additional techniques that could be employed.

We recommend that supervisors and field educators become proficient in using

a number of reflective techniques, in order to facilitate and strengthen supervisees' capacities to examine their knowledge use in practice. If one technique is not meaningful to a supervisee, then other techniques are available. This means that the knowledge elicitation or reflective process is not constrained but open to individual difference. A wealth of insights may well be elicited that could not possibly be obtained from one method alone.

In conclusion, we have presented a number of processes and techniques that we have found useful in eliciting practitioners' critical reflection on their work. We have used these approaches in the child protection context but consider they have wider application. Supervisors in any practice setting play an important role in encouraging clear and accountable practice, and the use of tools for enhancing critical reflection can be an effective way of promoting such practice. Like others (Gould & Taylor 1996; Fook *et al.* 2000), we consider it important to continue to develop and explore different options for critical reflection.

Although it cannot be suggested that supervisory effort which focuses on knowledge justifications/explanations will necessarily lead to better practice, it seems fair to say that steps in this direction will heighten the probability of improved practice. If workers routinely consider why they are undertaking or suggesting the actions they are taking in knowledge terms, a level of reflective, critical thinking about client states can only be enhanced. Although resistance could be encountered from some practitioners, from our experience in

the field and from informal discussions with many practitioners, we would suggest that most workers eventually welcome processes that reduce professional and personal vulnerability. Child protection workers, and social workers more generally, do want to make the best possible decisions and will participate in processes that aid them in achieving this. It is for this reason that we thought it valuable to offer the different types of questions and techniques that were employed in the research projects as a template for facilitating reflective critical analysis in supervision.

References

- ALL A & HAVENS RL (1997), Cognitive/concept mapping: a teaching strategy for nursing. *Journal of Advanced Nursing*, 25 (6), 1210–1219.
- ARGYRIS C & SCHON DA (1974), *Theory in Practice*. Jossey-Bass Publishers, San Francisco.
- BROCKBANK A & MCGILL I (1998), *Facilitating Reflective Learning in Higher Education*. Society for Research into Higher Education and Open University Press, Buckingham.
- DALEY BJ, SHAW CR, BALISTRIERI T, GLASENAPP K & PIACENTINE L (1999), Concept maps: a strategy to teach and evaluate critical thinking. *Journal of Nursing Education*, 38 (1), 42–47.
- DARLINGTON Y, OSMOND JL & PEILE C (2002), Child welfare workers' use of theory in working with physical child abuse: implications for professional supervision. *Families in Society—The Journal of Contemporary Human Services*, 83 (1), 54–64.
- DAVISON GC, VOGEL RS & COFFMAN SG (1997), Think-aloud approaches to cognitive assessment and the articulated thoughts in simulated situations paradigm. *Journal of Consulting and Clinical Psychology*, 65 (6), 950–958.
- DRURY-HUDSON J (1999), Decision making in child protection: the use of theoretical. Empirical and procedural knowledge by novices and experts and implications for fieldwork placement. *British Journal of Social Work*, 29, 147–169.
- DURRANCE B (1998), Some explicit thoughts on tacit learning. *Training and Development*, December, 25–29.
- ERICSSON KA & SIMON HA (1984), *Protocol Analysis*. The MIT Press, Cambridge.
- FOOK J (ed.) (1996), *The Reflective Researcher*. Allen & Unwin, St Leonards.
- FOOK J (1999), Critical reflectivity in education and practice. In: Pease B & Fook J (eds), *Transforming Social Work*. Allen & Unwin, St Leonards.
- FOOK J, RYAN M & HAWKINS L (2000). *Professional Expertise*. Whiting & Birch, London.
- GOULD N (1996), *Using Imagery in Reflective Learning*. In: Gould N & Taylor I (eds), *Reflective Learning for Social Work*. Arena, Aldershot.
- GOULD N & TAYLOR I (eds) (1996), *Reflective Learning for Social Work*. Arena, Aldershot.
- HARRISON WD (1987), Reflective practice in social care. *Social Service Review*, 61 (3), 393–404.
- IMRE RW (1985), Tacit knowledge in social work practice. *Smith College Studies in Social Work*, 55, 137–149.
- KAGAN NI & KAGAN H (1990), IPR – a validated model for the 1990s and beyond. *The Counselling Psychologist*, 18 (3), 436–440.
- KAGAN N & KRATHWOHL DR (1967), *Studies in Human Interaction (Final Report)*. US Department of Health, Education & Welfare, Washington, DC.
- MOLANDER B (1992), Tacit knowledge and silenced knowledge: fundamental problems and controversies. In: Goranzon B & Florin M (eds), *Skill and Education: Reflection and Experience*. Springer-Verlag, London.
- NATHAN J (2002), The advanced practitioner: beyond reflective practice. *The Journal of Practice Teaching in Health and Social Work*, 4 (2), 59–84.
- NOVAK J (1990), Concept maps and vee diagrams: two metacognitive tools to facilitate meaningful learning. *Instructional Science*, 19, 29–52.
- OSMOND JL (2001), *The Practice of Knowledge Use: A Study of the Explicit and Tacit Understandings of Practitioners*. PhD Thesis, The University of Queensland.
- PAPELL C & SKOLNICK L (1992), The reflective practitioner: a contemporary paradigm's relevance for social work education. *Journal of Social Work Education*, 28 (1), 18–26.
- POLANYI M (1967), *The Tacit Dimension*. Doubleday & Co and Anchor Books, Garden City, IL.
- SADIQUE D (1996), Undertaking the challenge: using qualitative methods to identify social work competencies. In: Fook J (ed.) *The Reflective Researcher*. Allen & Unwin, St Leonards.

SCHON DA (1983), *The Reflective Practitioner: How Professionals Think in Action*. Basic Books, New York.

SCOTT D (1990), Practice wisdom: the neglected source of practice research. *Social Work*, 35 (6), 564–568.

VAN SOMEREN MW, BARNARD YF & SANDBERG JAC (1994), *The Think Aloud Method: A Practical Guide to Modelling Cognitive Processes*. Academic Press, London.

YELLOLY M & HENKEL M (eds) (1995), *Learning and Teaching in Social Work: Towards Reflective Practice*. Jessica Kingsley, London.

ZAFF B, MCNEESE M & SNYDER D (1993), Capturing multiple perspectives: a user-centred approach to knowledge and design acquisition. *Knowledge Acquisition*, 5, 79–116.

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