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Chapter 5

The reflective dimension in teacher education

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Abstract

The terms "reflection" and "reflective practitioner" are now common currency in articles about teacher education and teachers' professional development, especially in British and North American research. In this chapter, the term "reflection" as it relates to teachers and teacher education will be problematized, drawing particularly on Schön's (Educating the reflective practitioner. San Francisco: Jossey-Bass) terms "reflection-in-action" and "reflection-on-action." Differing definitions of reflection will be put forward, their inter-relationship explored, and how these relate to courses of initial teacher education in a variety of countries and cultural contexts. Questions about the value and purpose of reflection will also be raised, as well as to its practical relevance to teacher education.

The terms "reflection" and "reflective practitioner" are now common currency in articles about teacher education and teachers' professional development, especially in British and North American research. The usual reference given is Schön (1983), although his use of reflection in relation to teaching is pre-dated by Dewey (1933) and Stenhouse (1975) among others. By 1991, the Modes of Teacher Education Project in England and Wales (Barrett, Whitty, Furlong, Galvin, & Barton, 1992) revealed that over 70% of all courses of initial teacher education claimed to be underpinned by a philosophy of reflective practice. However, Calderhead (1989) and Zeichner (1994) both pointed out the number of different models of reflection used by courses of initial teacher education, and the confusion that this can foster. There is often a taken-for-granted, unproblematic usage of the term "reflection," and ironically, it has come to be used in many cases both uncritically and unreflectively.

In this chapter, the term "reflection" as it relates to teachers and teacher education will be problematized, drawing particularly on Schön's terms "reflection-in-action" and "reflection-on-action." Differing definitions of reflection will be put forward, their inter-relationship explored, and how these relate to courses of initial teacher education in a variety of countries and cultural contexts. Questions about the value and

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purpose of reflection will also be raised, as well as considerations as to its practical relevance to teacher education. As Furlong and Maynard (1995) have stressed, the conceptual models used to explain teachers' professional knowledge have largely been "ideologically rather than empirically derived", but, where possible, links will be made to empirical research and practical applications of reflection.

Two main types of reflection will be discussed in relation to teacher education: "reflection-in-action," and "reflection-on-action" or after action (Schön, 1987). Within each category there are differing definitions, so each term needs to be explored in terms of its different meanings and applications to initial teacher education. The categories also overlap to some extent; for instance, reflection-in-action may merge into reflection-on-action, and similar processes are evident both in and after action.

It is important to begin by considering the ideas of, and differences between, two of the central influences on reflection in teacher education, Dewey and Schön. A brief introduction is given at this point, and the concepts are elaborated on during the chapter, in connection with examples drawn from teacher education courses.

1. Dewey: reflective thought and transformative action

John Dewey, writing in the early part of the twentieth century (Dewey, 1910, 1933), drew a clear distinction between impulsive action, routine action, and reflective action. He characterized impulsive action as that based on trial and error, and routine action as that based largely on authority and tradition; both are undertaken in a passive, largely unthinking way. In contrast, reflective action is based on "the active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it" (Dewey, 1933, p. 9), and is motivated by the need to solve a particular problem. Reflective thought is a "chain (which) involves not simply a sequence of ideas but a *con*-sequence" (p. 4). At worst, routine action can lead to teachers basing their actions on preconception and prejudice; while conversely, reflective action should have an educational purpose, and can involve wider considerations of a moral and ethical nature. Dewey went on to argue that teachers need to develop particular skills, such as observation and reasoning, in order to reflect effectively, and should have qualities such as open-mindedness, wholeheartedness and responsibility.

Critics of Dewey, such as Furlong and Maynard (1995), argued that his idea of teaching as routine action is an over-simplification, and "does not capture the multi-facetedness, unpredictability and sheer complexity of teaching" (p. 45). Dewey was certainly a fierce critic of what he saw as the "mechanical" processes of much of the then current educational practice, with "its uniformity of curriculum and method" (Dewey in Garforth, 1966, p. 102). However, he stressed the importance of the teacher as a guide, a leader and, above all, an artist (Dewey, 1933), who had the potential to transform and enlarge the knowledge and understanding of pupils; and schools as the site of "social progress and reform" (Dewey in Garforth, 1966, p. 58). His critique of a narrow. technical approach to education, and his vision of a broader alternative, have much relevance today. Teacher education programs based on Dewey's ideas,

such as those at the University of Utrecht (Korthagen & Lagerwerf, 1996), will be considered later.

2. Schön: knowing-in-action and reflection-in-action

In contrast to Dewey, Schön presented a radically different picture of the professional teacher at work and consequently of reflection itself. Schön (1987) used the term "professional artistry to describe the kinds of competence practitioners display in unique, uncertain and conflicted situations of practice" (p. 22). He argued that, rather than simply applying preconceptions, knowledge or theory in a passive one-way process, experienced professionals draw on a "repertoire of examples, images, understanding and actions" (Schön, 1983, p. 138) to interpret situations in an immediate and interactive way. This kind of effective practice, which Schön called "knowing-in-action" (Schön, 1987, p. 25), may be largely intuitive and difficult to articulate. However, in contrast to Dewey's notion of routine action, Schön's concept of intuitive practice or knowing-in-action is by no means unthinking. His conception of teaching is a complex and sophisticated process, in which the teacher is actively engaged, and has a vital part in shaping, interpeting and changing situations.

Schön (1983) also identified reflection-in-action as central to professional practice. He explained that reflection-in-action takes place when professionals are faced with a situation which they experience as unique or containing an element of surprise. Rather than applying theory or past experience in a direct way, professionals draw on their repertoire of examples to reframe the situation and find new solutions. This in itself generates new reflection-in-action in a spiralling process. Schön (1987) highlighted three key features of the reflection-in-action process:

- conscious (though not necessarily articulated in words);
- critical, involving questioning and restructuring; and
- immediate, giving rise to on-the-spot experiment and new actions.

Schön argued that these features are not always distinct or separate, and can be compressed together depending on the time frame in operation; however, "the immediate significance for action" (p. 29) is central.

Schön (1987) also elaborated on the introduction of reflection-in-action into the practicum or preparation of professionals. Using examples drawn from architecture and other professions, he outlined the way in which a professional school might place "reflective practicum at the centre, as a bridge between the worlds of university and practice" (p. 309). He saw this as an experience of "high interpersonal intensity" (p. 171), in which the role of the "coach" (or what we might now call the "mentor") is central.

The term "reflection-in-action" and Schön's ideas about professional development have been enormously influential on teacher education, but his ideas and terms are often used rather loosely. Before considering examples of actual practices that illustrate reflection-in-action, we shall first consider Eraut's (1995) analysis and critique of

the term. Eraut pointed out that Schön's evidence was based on critical cases or incidents where teachers had to engage in problem-solving, rather than an analysis of normal everyday practice (i.e., where a "routine situation comes to be perceived as problematic" (Eraut, 1995, p. 13)), a distinction which is often overlooked. Eraut also argued that Schön failed to take sufficient account of the time frame involved, and that the processes he identified could not easily take place at the same time. Eraut distinguished between on-the-spot more intuitive aspects (conscious and immediate), where decision and action have to be rapid, and the more prolonged deliberative aspects (critical) of the process, which might take place when children are working quietly and the teacher can decide how to intervene. "Thus the more reflection assumes a critical function, the less appropriate it becomes to describe it as being in the action" (Eraut, 1995, p. 14).

Schön himself distinguished between reflection taking place in the midst of action without interrupting it, a "stop and think" process where there is a pause in the action, and reflection on or after action (Schön, 1987, p. 26). He also acknowledged that some types of professional action take place over an extended period of time, such as a lawyer in a court case (Schön, 1983). However, "in action" for teachers certainly implies in the classroom. As Eraut pointed out, the examples that Schön used were usually taken from individual tutorials in quiet contexts (such as an architectural studio), which are very different from busy, crowded contexts, and therefore more likely to contain a high level of reflection.

3. Reflection-in-action: intuitive responses

According to Schön, as explained above, intuitive decision-making or knowing-in-action is central to professional practice. The competent teacher would be able to react immediately in situations demanding instant response, when that situation fell within recognizable boundaries, but would need to employ reflection-in-action when faced with a situation that was problematic or unusual. Eraut (1995) used an analogy of riding a bicycle in heavy traffic, which is neither a calm nor routinized experience. Fast moving responses are also needed in a classroom situation, with its multitude of complex and ever-changing events.

Van Manen (1995) described this as the "immediate reflective awareness that characterizes the active and dynamic process of a … routine lesson" (p. 34). He called this kind of instantaneous response "tactful action," and argued that it involves perceptiveness, and is "governed by insight while relying on feeling" (p. 44). Given this complex, fast moving, and continually changing context, it is hard to imagine that a beginning teacher could operate effectively in the classroom, or use intuition in all but the most limited way. However, some research has begun to identify how pre-service teachers can already use intuition in the classroom, and can learn how to improve this further.

Atkinson (2000) stressed the need for explicit focus on routines in teacher education in order to provide a framework for novice teachers to work within. He argued that problematic incidents are often prioritized in discussion, thus neglecting those

routines that form the basis of core practice. Atkinson also emphasized the need for tutors and mentors to support the development of intuitive skills in pre-service teachers, based on what he calls "principled self-monitoring" (p. 78). Reflection both in and after action is important in order to evaluate and moderate intuitive practice.

In an empirical study of seventeen student teachers, John (2000) explored the nature of student teachers' thinking during lessons and how they used intuition in the classroom. Through the use of stimulated recall, he reconstructed lessons with the students and identified a variety of responses and actions, which give what he acknowledges to be "approximations" to the students' thinking. Five models of intuition related thinking are identified and analyzed through this method, which gives fascinating insights into the processes at work. The five models are:

- problem avoidance;
- teacher interpretation;
- opportunity creation;
- improvization; and
- mood assessment.

In problem avoidance, the student teachers chose between two or more alternative courses of action, often responding to the pupils' reactions and anticipating future problems. Teacher interpretation was drawn from interaction between the student teacher and the class, particularly interpreting verbal and non-verbal cues given by individual children. Opportunity creation occurred less often, but arose when the student teachers followed up ideas or class responses at key moments in order to extend the pupils' learning. This tended to arise when the lesson was going well, and the student could "go with the flow." In contrast, improvization tended to occur when the lesson was going badly, and the trainee needed to change tack or adapt the lesson to meet the perceived needs of pupils. Finally, mood assessment involved reading visual cues, such as pupil expression and body language, and adopting a tone suitable to the perceived mood of the class. This took place particularly at the beginning of lessons, but also during changes of activity.

John's analysis uncovered a resourceful and highly sophisticated use of intuition, even among novice teachers, and the use of routines, albeit at a basic level, to provide an overall framework for action. Although the student teachers talked about operating "at gut level" or "by the seat of their pants," it was clear that their awareness of cues and sensitivity to the immediate situation, often described as "following my nose," helped them make on-the-spot decisions. It was also evident that much reflection-in-action (i.e., rapid interpretation of events and monitoring of actions) was taking place, with thinking processes taking place alongside and virtually simultaneous to actions. John suggested in conclusion that an effective teacher needs "highly tuned and highly differentiated intuition for understanding and interpreting classroom life and … a wide repertoire of appropriate models for reacting to specific situations (John, 2000, p. 14). He argued that increased emphasis in teacher education on analyzing key moments, and identifying and encouraging the use of intuitive processes, can assist student teachers in developing these skills.

4. Reflection-in-action: deliberative responses

As mentioned earlier, it may sometimes be possible within a lesson for the teacher to pause for thought while the class is working, and consider in a more deliberative way what course of action to follow next (Eraut, 1995). Van Manen (1995) calls this "contemporaneous reflection in situations (which) allows for a 'stop and think' kind of action" (p. 34). This type of reflection-in-action is closer to the reflection-on-action which normally takes place after a lesson in review and evaluation. If it occurs during a lesson, it is normally carried out by the teacher alone, just as in instant or rapid decision-making. However, team-teaching situations may involve a degree of joint reflection and decision-making, and reflection-on-action, discussed later, is often a collective process.

A particularly interesting view of how the more deliberative form of reflection-in-action can be a joint process is given by Lucas (1996), in his analysis of a drama lesson. During the lesson the teacher, who had three years' experience, "froze" the drama in order to analyze it with the class, and then make improvements to it. Lucas described the process as a "form of reflective class teaching which placed importance on the collective responsibility of pupils and teachers, which involved their mutual understandings of what was happening and why" (Lucas, 1996, p. 26).

Lucas saw this as a deliberative measure which, while at one level bringing about an interruption to the action of the drama, at another level brought about an integration of the drama with the lesson as a whole. Thus, while the drama was suspended, the reflection was still very much within the action of the classroom. Drama teaching often involves this kind of dual level of operation, including such techniques as "freeze-frame," "hot-seating," or "narrative" (see Bolton, 1992; Neelands, 1992), all of which entail reflection in and on action by the pupils working collaboratively with the teacher (e.g. Griffiths, 1990). In some cases, the pupils take over the "mantle of the expert" (Heathcote, 1978) in order to solve a problem, and the teacher, correspondingly, may take on the role of learner in the drama.

Lucas argued that this kind of approach involves high levels of skill, self-confidence and "daring" and is therefore difficult for student teachers to undertake. However, he also argued that it is important for novice and experienced teachers to be aware of the elements involved in order to make teaching and learning a more transparent process that actively includes all the participants. In conclusion, he argued for the importance of such teaching as essentially ethical and democratic, in contrast to the more usual picture of reflection as a private and individual process.

5. Reflection-on-action

The deliberative end of the spectrum of reflection-in-action merges into reflection on or after action, which is perhaps the most common form of reflection to be found in courses of initial teacher education. It ranges from the reflection-on-action (Schön, 1987) in which teachers review actions in the recent past, to "reflective deliberation" (Dewey, 1933), in which they evaluate and make sense of past experience. Whereas

Schön focused on affecting current action, Dewey's sense of the term "reflection" involved a chain of thoughts or sequence of ideas, leading to a consequence or future course of action (i.e., reflection *for* action in the future). In this way, reflection after action can also be transformative (for example, see Penny, Harvey, & Jessop's (1996) study in South Africa), and hopefully improve practice. This is certainly an aspect that Dewey himself stressed as important, and will be discussed in more detail in the final section of this chapter.

The simplest forms of reflection that regularly occur in initial teacher education take place before, during, and after teaching, roughly equivalent to van Manen's (1995) anticipatory, contemporaneous, and retrospective types of reflection. A typical progression, taken from many pre-service courses, would go as follows. Before teaching student teachers are encouraged to think about what they want to teach and why, to plan lessons thoroughly and anticipate problems that may arise. With the help of tutors, the trainees are shown how to think about their teaching as they carry it out in the classroom, to monitor the class for potential problems and adapt their plans according to the needs of the pupils. After lessons, trainees are then helped to evaluate how the lesson went, to think about what the children learned and what they as teachers could have done better, and to consider how to learn from their experience in order to improve their practice next time.

This model gives the bare-bones of the kind of reflection which might take place within a time dimension, but it is over-simplified; the kind of reflection that is most appropriate depends on the stage the student teacher is at within their training. Some researchers argue that it is difficult for novice teachers to reflect because of lack of experience (Berliner, 1988; McIntyre, 1991) or learning orientation (Korthagen, 1988). However, Francis (1997), writing about teacher education in Australia, stressed that, while the process may be difficult, pre-service teachers can also effectively engage in reflection. For example, Kwo (1996), drawing on teacher education in Hong Kong, where students enter courses with a range of teaching experience, found that the conceptions of all the students were challenged through reflection, but in different ways. Inexperienced student teachers focused more on classroom management and self-image, whilst more experienced student teachers focused on pedagogy and learning. Other researchers (e.g., Griffiths, Robinson, & Willson, 1997) have also found a shift between these areas on courses of teacher education as part of the developmental process, as trainee teachers gain confidence in the classroom, and initial survival strategies are replaced by concerns about teaching and learning.

The different developmental stages that student teachers go through during their initial training have been identified by many teacher educators (e.g. Newton, 1995; Griffiths et al., 1997), and used as the basis for structuring courses and assessment of trainees' progress. For example, Fuller (1970), in a longitudinal study of beginning teachers at the University of Texas, identified six stages of development during which the concerns of novice teachers shifted from an emphasis on the self (stages 0–1) to concerns about classroom control and relationships with pupils (stages 2–3). Fuller found that these early stages could predominate for some time; however, as beginning teachers grew in confidence and competence, they would also develop concerns about pupils' learning and progression (stages 4–6).

Fuller's findings are very similar to those of Kwo (1996) and other researchers more than twenty years later. For example, Furlong and Maynard (1995), working with students on the Primary PGCE course at the University College, Swansea, identified five main stages which student teachers moved through as they grew in confidence and experience. In the first stage, trainee teachers often displayed idealistic views about teaching and their own role as a teacher; they wanted to be liked by pupils and to develop a happy, caring environment. Their views were often influenced by significant teachers from their own school experiences. Once the student teachers started their school experience, these early ideals were often challenged by immediate concerns for survival (stage 2), classroom control, and the desire to "fit in" with the school (Furlong & Maynard, 1996, p. 78). In the third stage, trainee teachers faced these difficulties by starting to establish their authority as a teacher, developing teaching strategies and, in some cases, adopting the teaching styles of the class teacher. By the fourth stage, some of these problems were overcome and there was a tendency for student teachers to reach a plateau, although concerns about control were now often replaced with those about pupils' learning. In the fifth stage, the trainee teachers needed moving on to develop a deeper understanding of teaching and learning. At each stage they benefited from reflection on practice in order to progress further, but the nature and content of the reflection differed according to their experience. This is a key point that will be elaborated further in relation to different forms of reflection-on-action used in teacher education.

6. Personal narrative and autobiography

Personal narratives and autobiographies are forms of self-exploration undertaken by student teachers through personal narrative and life history work (Clandinin & Connelly, 1985; Connelly & Clandinin, 1990), and seen as an important prerequisite to classroom experience. They draw heavily on psychoanalytic theory, using the study of personal biographies to enable pre-service teachers to understand their attitudes, beliefs, and orientations to learning (Carter & Doyle, 1996). For example, Knowles (1992) carried out a study of secondary student teachers' biographies at the University of Michigan and found that previous teachers and family experiences had influenced their conceptions of the teacher's role. This approach is particularly appropriate at early stages in teacher preparation, for instance at the idealistic stage identified by Furlong and Maynard (1995), when student teachers may be heavily influenced by their own past experience.

Richardson (1996) presented an overview of empirical research carried out in this area, stressing the importance of personal experience, including school experience, in affecting pre-service teachers' beliefs and preconceptions about education. Student teachers may have only vaguely formulated philosophies of education, but often hold strong images of teachers, influenced by prior positive or negative experiences, which in turn affect how they approach initial teacher education. The assumption is that "education is the construction and reconstruction of personal and social histories" (Connelly & Clandinin, 1990, p. 2), and that "personal, situated understanding is

fundamental to practice" (Carter & Doyle, 1996, p. 121). Many of the studies undertaken in this area indicate that making preconceptions explicit through a study of autobiographical accounts can enable pre-service teachers to begin the transformation of personal experience into personal and professional knowledge.

Most of this work in initial teacher education has been carried out in North America, and constitutes what Carter and Anders (1996) call the "personal orientation" (p. 559) in teacher education. The approach is quite heavily time dependent, and may only be possible on longer teacher preparation programs. However, variations on this approach are often found; for instance, many courses of teacher education use journal writing and reflective essays as a way of encouraging the students to reflect on their own experiences, as described in the overview by Carter and Anders (1996). For example, at the University of Wisconsin, Zeichner and Liston (1987) found that journals helped supervising tutors to trace their students' development as teachers, as well as providing information about their teaching practice experiences.

This kind of personal approach is no longer so common in the UK, partly because of lack of time on one-year postgraduate courses, and partly because of a shift to a more technicist model of initial teacher education that will be discussed later. Nevertheless, elements of this approach do exist in the UK; for example, similar influences to those identified by Knowles (1992) were also found in an analysis of educational autobiographies written by new entrants to the PGCE course at the University of Sussex (Griffiths, 1994). These accounts, often written with great feeling, revealed the extent to which even the earliest memories of schooling affected the students' educational progress and attitudes to teaching, and helped tutors to understand the students' starting points. This approach is also close to the more sociologically based life history work undertaken with experienced teachers in the UK (e.g., Nias, 1989; Goodson, 1994) and Switzerland (Huberman, 1989). These studies were intended to uncover shifts in personal concerns, patterns of development, and career cycles, related to changes in social conditions and educational policies.

7. Challenging gestalts

Closely allied to the above is the process discussed by the Dutch educationists Korthagen and Lagerwerf (1996), in relation to research carried out with students on the teacher education program at the University of Utrecht. Korthagen and Lagerwerf argued that all teachers bring preconceptions to teaching based on the early formation of Gestalts, which they explain as follows:

> Gestalt formation is the process in which a situation triggers a unity of needs, thoughts, feelings, values, meanings and action tendencies. A Gestalt is connected with concrete situations in a multi-faceted way because it is rooted in those situations. (Korthagen & Lagerwerf, 1996, p. 166)

Korthagen and Lagerwerf found that student teachers entering pre-service courses also possessed Gestalts about teaching and learning, based on previous experience; for

example, that teaching is the transmission of knowledge. They stressed that, in order to make these more explicit ("schematisation," p. 168) and to develop new Gestalts ("reframing," p. 184), student teachers needed suitable new experiences and opportunities for reflection, rather than the introduction of new theories which at this stage might only serve to reinforce existing Gestalts.

However, Korthagen and Lagerwerf also found that if classroom experience was introduced too early, it could be counter-productive because survival strategies were uppermost, and therefore "quick socialisation into established patterns of school practice" (Korthagen, 1993, p. 137) could occur, which might inhibit learning. Instead, they advocated a model of gradual introduction to practice through one-to-one experience, where a student teacher taught one pupil. In this non-threatening situation, their Gestalts could be tried out and then re-evaluated.

The approach developed by Korthagen and Lagerwerf was thus both protected and challenging. However, its potential success was related to the learning orientation of the student (Korthagen, 1988). Based on his experience with the students on the course in Utrecht, Korthagen argued that those with internal orientations based on reflection could benefit more than those with external orientations who needed more explicit training in how to reflect. This is similar to Dewey's (1933) suggestion that reflection requires special skills and that teachers need certain characteristics such as open-mindedness and responsibility in order to reflect. Korthagen's ideas about reflection also apply to student teachers at later stages in training, and to experienced teachers, and will be returned to later in the chapter.

As well as individual forms of reflection, many researchers (e.g. Korthagen, 1993; Furlong & Maynard, 1995; Carter & Anders, 1996), stress that beginning teachers' reflection is assisted by the involvement of others such as peers, tutors and school-based mentors. They also describe the processes and techniques involved (see also Senkowski Stengel & Tom, 1996; Francis, 1997; Thiessen, Chapter 4 in this volume). Eraut (1995) drew a distinction between reflection in the training context (university or other training institution) and reflection in the practice context (school). The following sections outline some of the processes and problems involved in these two main sites for reflection, while acknowledging that many processes can occur in both arenas. As mentioned earlier, Schön (1987) stressed the potential for reflection-in-action to act as a bridge between the university and the school or site of professional practice. It is also important to point out that, under the partnership model of teacher education currently operating in the UK, complementary and linked activities in schools and higher education institutions (HEIs) often take place.

8. Reflection and review in the university/HEI context

Korthagen (1993) stressed the need for teachers, at all stages from novice to expert, to review their experience in order to counteract the socializing processes of school. Traditionally, the university or HEI has been seen as the site for reflection-on-action for pre-service teachers, partly because it is at a physical distance from the school.

Furlong, Hirst, Poklington, and Miles (1988) identified four levels within teacher education that they characterized as follows:

- Level a — direct practice through first-hand school experience;
- Level b — indirect practice through 'detached' training in HEIs;
- Level c — practical principles: critical study of practice; and
- Level d — disciplinary theory: critical study of theories underlying practice.

Furlong and Maynard (1995) argued that all these dimensions should be included in initial teacher preparation, and that trainees needed to "subject their own developing professional knowledge to rigorous questioning" (p. 51). Critical and reflective aspects were particularly evident in levels "c" and "d," and could be seen as the traditional domain of HEIs, because of the more "systematised and abstract knowledge of university tutors" (McIntyre, 1991, p. 31).

These elements are evident in the kind of practice described by researchers in the North American context (Carter & Anders, 1996; Senkowski et al., 1996; Thiessen, Chapter 4 in this volume). Level "b" would involve such techniques as micro-teaching, use of videos and other simulated practice, with levels "c" and "d" in seminars and workshops. In many studies undertaken in the USA and elsewhere, the links between, and integration of, theory and practice are paramount. For example, Francis (1997) examined the responses of student teachers to the use of critical incident analysis on a pre-service course in Australia: "We work at making practical theory explicit and extend and constantly reconstruct it as we challenge taken-for-granted assumptions" (Francis, 1997, p. 171). An important dimension in Francis's study was the critiquing of practice (level "c"). Reflection was seen as a continuing process, leading to informed action as well as new understanding (p. 171).

Francis acknowledged that the process could be difficult and, as discussed earlier in relation to personal processes of reflection, may involve challenging deeply held attitudes and preconceptions. This was found in the South African context (Penny et al., 1996), where students at the University of Natal often blamed external social and political factors rather than seeing the possibility of their own agency in the school context. Taylor (1997), in a broad study of the training of professionals in the UK and further afield, stressed the need for a supportive environment in which to reflect on practice. She also drew attention to the tension that may exist between different educational philosophies and requirements:

> Employers and government … may be seeking to train newly qualified practitioners ready to implement quite instrumental knowledge and skills, whereas professional bodies may assign more value to the knowledge and skills of reflective learning and critical analysis (Taylor, 1997, p. 14).

The lack of reflection in teacher education in some countries may be due to just such a tension. In a study of primary teachers in Gambia and Kwa-Zulu Natal, Jessop and Penny (1998) found two main role definitions: instrumental and relational, but identified a "missing frame" including such dimensions as reflection, ownership, and

understanding. Pryor and Stuart (1997) identified a similar lack of agency in Malawi, South Africa, and Ghana, where a transmission model of teaching is still prevalent, and a severe lack of resources in schools may prevent anything other than a replication of traditional "chalk and talk" practice. The examination-oriented systems in many developing countries may also inhibit reflection or innovation.

Action research projects such as those carried out in Lesotho (Stuart, Morojele & Lefoka, 1997) and Malawi (Stuart & Kunje, 1998) demonstrated that, in spite of the kind of difficulties outlined above and some resistance by the participants, the introduction of reflective practices into in-service work with teachers can be both challenging and empowering, and can also have an impact on pre-service education. The new South African "Norms and Standards" now insist on a reflective dimension (Stuart & Tatto, Chapter 3 in this volume).

The tension outlined above is most evident in the UK at present, with the introduction of a National Curriculum for Initial Teacher Training (NCITT) (DfEE, 1998). The curriculum is highly prescriptive and, according to critics, has "the makings of a very useful detailed training manual for would-be technicians"(Richards, Harding & Webb, 1997, p. 6). It is interesting to compare the standards in the NCITT, which focus on subject knowledge and pedagogical skills, with the National Board for Professional Teaching Standards (NBPTS) in the USA, in which "professional values and commitments" are central (Feiman-Nemser & Remillard, 1996, p. 77). Critics of the UK standards stress the need for teacher educators to keep critical reflection at the heart of their practice (Richards 1999; McIntyre, 1999). It is perhaps ironic that, at the start of the twenty first century, teacher education in the UK seems to have returned full circle to the very features that Dewey criticized so vehemently in the early part of the twentieth century.

9. Evaluation and reflection in the school context

In a partnership model of initial teacher education, schools are important sites for reflection-on-action as well as reflection-in-action (Griffiths & Owen, 1995), and the role of the co-operating teacher or mentor is vital in the process. Calderhead (1996) made a distinction between the academic knowledge that an HEI tutor might bring to the process, and the "context-specific craft knowledge" (p. 717) that the professional practitioner can use. McIntyre (1991) also mentioned the "craft knowledge and practical wisdom of practising teachers" (p. 31) and their importance in the reflective process. Referring to Furlong et al.'s levels (1988), there has been a shift in the UK from seeing schools as only being able to contribute to level "a," to recognizing the value of the mentors' role in level "c" and possibly level "d" as well. This is sometimes referred to in terms of the "theorizing teacher" (Wilkin, 1990, p. 7) or the practical theories of teachers (Hirst, 1990).

The "personal practical knowledge" of teachers (Carter, 1990, p. 299) is most commonly drawn on in feedback sessions after observing students teach, during which joint evaluation takes place with the purpose of improving the beginning teachers' practice (see Griffiths & Owen, 1995). Triadic feedback may also take place, involving

the mentor, student, and college supervisor (Carter & Anders, 1996; Thiessen, Chapter 4 in this volume). Furlong and Maynard (1995), in their study at the University College, Swansea, identified different roles that the mentor might take in encouraging and enabling reflective practice, depending on the developmental stage of the trainee teacher. The roles ranged from "model" and "coach" in the beginning and supervised stages, to "critical friend" and "co-enquirer" as the trainee moved towards becoming an "autonomous teacher" (p. 191). In the later stages, the "mentor needs to be able to challenge the student to re-examine their teaching, while at the same time providing encouragement and support" (p. 190). At these stages the mentor would be operating at levels "c" and "d" (Furlong et al., 1988).

Just as problems and tensions may arise in HEI-based reflection, so there may be particular difficulties in engaging in school-based reflection. Taylor (1997) mentioned the difficulty of maintaining time for reflection in a crowded timetable, and the possible tension between concerns about assessment and the need for reflection (see also Griffiths et al., 1997). McLaughlin (1994) argued that this is a particularly demanding role for mentors, and his study of the University of Cambridge PGCE course identified a number of issues, including complex judgements around timing and prioritization of student teachers' needs. He also stressed that personal as well as intellectual or professional qualities are needed in order to carry out effective reflection. The range of skills needed by mentors in order to model and support reflective practice was also highlighted by Jones (1995). In his study of mentoring on the University of Sussex PGCE course, he stressed the importance of mentor training and action research to help mentors develop this expertise.

Resistance to reflection in the mentor-trainee relationship is discussed by Drake and Dart (1995), who identified a number of features of feedback sessions in a research project on subject mentoring at Sussex. These included trainees "avoiding the issue" (p. 128), when mentors attempted to challenge their ideas, and the forms of discourse which could inhibit effective dialogue between mentors and trainees. Resistance by mentors was also evident in Penny et al.'s (1996) South African study. The extent of the resistance depended on the attitudes and perspectives of mentors, and their relative power in the overall training process. However, in spite of initial problems in their own project, Penny et al. (1996) stressed that 'the site necessary for critical reflection is the school' (p. 66).

10. The value of reflection

Implicit in much of the discussion about reflection is the assumption that it is a valuable process because it brings about changes in teachers' professional practice; but this is often taken for granted rather than made explicit. Korthagen (1993) drew attention to the lack of empirical evidence that reflection is effective, citing Zeichner's (1987) overview of research on reflection which, he argued, contained little convincing evidence. In a longitudinal study of the teacher education program in Utrecht, Korthagen and Wubbels (1995) put forward their own findings, identifying the following characteristics of reflective student teachers. Reflective student teachers:

- are able to structure situations and problems;
- use a questioning approach when evaluating their experience (e.g., why did this happen?);
- are clear about what they want to learn (i.e., are independent learners);
- can describe and analyze experience and interaction well; and
- have strong feelings of personal security and self-efficacy (p. 66).

Following from this, Korhagen and Wubbels (1995) also suggested two main values of reflection to teachers who continued to use it in their practice. First, they had better interpersonal relationships with pupils and colleagues than other teachers. Second, they developed a higher degree of job satisfaction and were less likely to experience "burnout." However, Korthagen and Wubbels did not make further claims for reflection in terms of influencing practice, because they found no evidence of a link between reflection and innovation. What they identified, therefore, were largely personal benefits of reflection rather than professional ones.

Does this mean that the claims for reflection are inflated, and that it tends to be a self-centered process rather than one that brings about change? One reason for the lack of clear evidence of links between reflection and action may be because it is methodologically difficult to pin down. Another reason may be that the process of reflection is a complex one. Eraut (1999) drew a medical analogy, arguing that just as diagnosis does not automatically lead to treatment, so reflection does not necessarily lead directly to changes in practice. Schön (1987) talked about reflection "disturbing the equilibrium." Immediate effects may be minimal, but the process of reflection-on-action stays in the mind and adds to the store of teachers' professional knowledge that can be drawn on later. In this way, reflection can be seen as part of, and contributing to, teachers' personal and professional capability. However, Dewey (1933) argued for a more direct potential influence of reflection on future action.

Drawing on his own research, Korthagen (1993) suggested that longitudinal studies of teachers from their induction year onwards, rather than of student teachers during pre-service, may be necessary in order to see the full benefits of reflection. Such studies are needed because teachers may not be aware at first of how it has affected their practice. Many studies already cited identify the importance of reflection, not just in bringing new understanding to the individual teacher concerned, but also in helping to critique, challenge and ultimately transform practice (e.g. Penny et al., 1996; Francis, 1997; Stuart et al., 1997; Taylor, 1997).

Another important reason to engage in reflective practice that has concerns beyond the individual is the ethical and moral dimension stressed so strongly by Dewey (1933) and others (see Zeichner, 1987; Taylor, 1997; Elliott, 1998). Van Manen (1977) identified two main levels of reflection undertaken by teachers: critical and emancipatory (p. 264). The first level involves teachers asking questions about the educational aspects of their work, while the second involves raising more fundamental moral and ethical questions. Zeichner and Liston (1987) at the University of Wisconsin encouraged student teachers to engage in "systematic inquiry" (p. 24)) and reflection. The "topics" of the inquiry and reflection included the "origins, purposes, and consequences of their actions as well as on the material and ideological constraints and

encouragements embedded in classroom, school and societal contexts in which they work" (p. 23).

Eraut (1997) stressed the need for teachers to keep their practice under "critical control" (p. 20) as part of their wider responsibilities. He argued that maintaining critical review of one's practice is an important part of professional accountability and quality control.

Thus, an emphasis on reflection as part of initial teacher education can be seen as only a limited aspect of its wider role. In particular, reflection in and on action can form an important part of all teachers' professional development, with possible benefits to the school, community and beyond. It is important to remember that, whilst reflection may be taken for granted in the British and North American context, its empowering and emancipatory potential, demonstrated particularly strongly in projects in developing countries, should not be overlooked.

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