CHAPTER EIGHT

ISSUES AND IMPLICATIONS ARISING FROM THE STUDY

Every instance of making meaning implies the opportunity, power and liberty of a crossing, or some travelling from one place, condition or form of being to another. Transition and difference are part of the meaning of passage Buchmann (1993c, p.108)

The profiles presented in the previous three chapters highlighted the individuality of the participants, the diversity of their responses to their preservice program, the differences in the nature of their reflection and the extent to which they became more or less reflective as they progressed through the Guided Practice sequence. This chapter discusses the key issues arising from these findings. Following a summary of each issue and discussion of its relationship to findings from previous research reviewed in Chapters One and Two, implications for teacher educators seeking to foster reflection in student teachers and for those intending to undertake further research into reflection are considered.

ISSUE ONE: STUDENT TEACHERS' INDIVIDUALITY

As indicated in Chapter Four, the participants were selected, in part, for their potential to represent the diversity of student teachers enrolled in the program. Nevertheless, their individuality was striking. The following discussion focuses on several factors which encapsulated their individuality and appeared to have a profound effect on the development of their reflection during their enrolment in Guided Practice. These factors included their commitment (or otherwise) to teaching and reflection, their epistemological perspective and their perception of their learning environment. While referred to separately for convenience, in reality there was a complex interplay between them. Several issues and implications arising from these factors are discussed below while others are addressed in later sections of this chapter. These factors are revisited in the final section to integrate and conclude this discussion.

Commitment To Teaching

The participants varied enormously in their commitment to teaching. Some, like Jessica, regarded their decision to enrol in the program as "the best thing that could have happened" (20/11/95, 350). Others deeply regretted their career
choice, with five of the eighteen participants eventually deciding to withdraw from the program. As their profiles revealed, the majority of the thirteen participants who completed the program were excited about becoming a teacher. Some looked forward most to achieving a childhood ambition; some to attempting to implement what they saw as much needed reforms; others to making the transition from student to professional; and yet others to travelling overseas with a highly regarded qualification. Only one participant to eventually graduate from the program, Erica, was determined not to teach.

**Epistemological Perspective**

As their profiles illustrated, these student teachers also differed considerably in their receptivity to new ideas and possibilities; their willingness to challenge their previously held ideas and those of others; their sense of confidence and efficacy as learners and developing professionals; and their perceptions of their responsibilities in these roles. As such, there were notable differences in what Dewey would refer to as their wholeheartedness, openmindedness and sense of responsibility. Their appreciation of complexity, their tolerance of indeterminacy, and their expectations of their preservice program also varied greatly, further indicating their diverse epistemological perspectives. In many respects, though, this diversity was most evident in the their varying conceptualisations of teaching. As received knowers, Erica, Pamela and Marina, for example, continued to see teaching as an essentially technical process involving the transfer of knowledge. Constructed knowers such as Sarah, Jemima and Pia, on the other hand, recognised and appreciated the complex, ambiguous and problematic nature of teaching. To them, teaching involved supporting and empowering learners to construct their own understanding.

**Commitment To Reflection**

Only three participants (Erica, Pamela and Marina) acknowledged that reflection was not important to them. Notably, all three were received knowers. For several (including Kathleen, Heather and Josephine), however, there appeared a noticeable gap between their espoused and actual commitment to reflection. In contrast, some participants referred frequently and incidentally to engaging in reflection, suggesting that it had become inherent to their personal and professional lives, rather than undertaken specifically to fulfill Guided Practice requirements. Those student teachers profiled in Chapter Seven, especially, regarded reflection as the key to
personal and professional growth. They particularly valued its potential to add depth to their understanding and its contribution to their sense of personal and professional integrity.

**Perception Of The Program**

In general, those student teachers with an epistemological perspective of constructed knowing perceived the learning environment to be more supportive than those who were primarily received knowers. For the most part, the former found the expectations of the Guided Practice units complemented their epistemological outlook, while the latter found the lack of definitive answers and solutions frustrating and distressing. This is illustrated graphically by the metaphorical language in the following extracts. Nina, a constructed knower, welcomed what she saw as "the freedom to put yourself into it ... It wasn't cut and dried ... You were able to bring in your own colours" (5/12/95, 508). In contrast, Pamela, a received knower described herself as "a black and white sort of person, really ... I need to know that I'm either right or wrong" (21/7/94, B58). As her profile indicated, Pamela deeply resented the inability or unwillingness of the program to meet her need for certainty.

Yet disturbingly, Colin, arguably one of the most sophisticated of constructed knowers amongst the participants also found the program unsupportive. He referred to a hidden curriculum (Dobbins, 1994; Chickering & Reisser, 1993; Claxton, 1990) which contradicted the espoused goals of promoting empowered and independent learners. Likewise, Gerry, another constructed knower, was disturbed by what he perceived as some inconsistencies between teacher educators' rhetoric and practice. For this reason, he, too, found aspects of the program less than supportive at times.

**Nature Of Reflection**

Not surprisingly, most participants who engaged in reflection also engaged in processes commonly associated with reflection. These included revisiting experiences, reframing them in order to explore them from a range of perspectives, and considering alternative actions and options with the goal of improving their practice. Nevertheless, their reflection retained considerable individuality, differing not only in focus and content but also in medium. Typically, Sarah's reflection, was characterised by metaphor and images, frequently conveyed through drawing; Jessica's by balance and rhythm, extended through discussion; and Garry's by analytical argument informed by
his professional knowledge base and supported by writing. In addition, as several participants’ profiles illustrated, individuals experienced reflection differently at different times and in different contexts. Sarah’s drawings of the path through the forest (Photograph 4) and the jigsaw puzzle (Photographs 5a and 5b), for example, indicate how reflection, to her, was at times primarily analytical and, at other times, a more holistic process.

**IMPLICATIONS ARISING FROM ISSUE 1**

As there appears no reason to think that this group of student teachers was atypical, the enormous variation in their commitment to teaching and to reflection, their epistemological perspectives and their perceptions of the program illustrates the inappropriateness of viewing student teachers as an homogenous group (Calderhead, 1992). Similarly, the diverse nature of their reflection highlights the limitations of conceptualising reflection as a singular process. Implications of this individuality and diversity are introduced briefly below and developed more fully throughout the chapter.

**Recognising Individual Differences**

Recognising, appreciating and catering for differences in individual children’s development, strengths, needs and interests is a fundamental tenet of early childhood education (David, 1996; Siraj-Blatchford, 1993). Ironically, however, the profiles of some participants suggest that their early childhood preservice program was not particularly responsive to their individual differences. In a climate of growing institutional demands for increasing research productivity and worsening staff-student ratios (Candy, 1995; McNaught & Beattie, 1995), it could be argued that it is increasingly difficult for teacher educators to know student teachers as individuals. Yet, as this chapter will contend, knowledge of individuals seems essential if teacher educators are to promote student teacher reflection more successfully.

The current study suggests that a knowledge of student teachers’ prior experiences, interests and preferred learning styles might help teacher educators plan more effectively to promote reflection. Had Erica’s teacher educators been more aware of how much she valued physical activity, for instance, they might have referred her to accounts of connections between teaching, learning and physical expertise, such as La Porte’s (1996) comparison of good teaching and a perfect return in tennis, Sumison’s (1994) musings on similarities between postgraduate study and sailing, and
musings on similarities between postgraduate study and sailing, and Knowles' (1992) reflection on pedagogical insights arising from a canoeing trip. These accounts might have introduced Erica to more meaningful ways of reflecting on her teaching, and ultimately encouraged a greater interest in and commitment to reflection. More generally, awareness of individual student teachers' epistemological perspectives could provide a useful indication of their readiness to take responsibility for their own learning, to cope emotionally with the uncertainty of teaching, and to engage in reflection of more than a technical nature.

Favouring Broad Conceptualisations Of Reflection
The diversity of participants' approaches to reflection and the tendency for individuals to experience reflection variously at different times caution against oversimplifying or generalising the process of becoming more reflective (Johnston, 1994). The broad conceptualisation of reflection as a search for meaning, adopted in the present study, encompassed the wide variations in experiences of and approaches to reflection evident in participants' profiles. In turn, this supported a much richer investigation of reflection than the narrower views of reflection adopted in many previous studies. Future studies, therefore, might also consider avoiding narrow definitions so as not to disqualify or discount alternative or less well recognised forms or processes of reflection, especially those not traditionally associated with Western analytical thought (Houston & Clift, 1990).

ISSUE 2: THE EMOTIONAL INTENSITY OF LEARNING TO TEACH
Despite the student teachers' individuality and their diverse responses to the program, all found learning to teach an emotionally intense, often distressing experience. For Colin, Kathleen and Nina, for example, it brought back painful memories of their own childhood experiences; for Erica, Pamela and Marina, it undermined self confidence or exacerbated self doubt; for Sarah, Gerry and Jessica and others, it led to moments of despair as they struggled to reconcile their ideals and aspirations with their practices. That 13 of the 18 participants lost their composure on at least one occasion during the data collection process testified to the emotional impact of their experiences in the program. On the other hand, most participants also reported moments of intense satisfaction and exhilaration as they glimpsed their potential as teachers and the possibilities and joys of teaching.
IMPLICATIONS ARISING FROM ISSUE 2

The emotional intensity of the participants' experiences of the program and the power of emotions as a medium for making meaning (discussed in Chapter Three) strongly suggest that more attention needs to be given to the role of emotions in learning to teach and their contribution to reflection on learning to teach. These implications are discussed in more depth below.

Developing Sensitivity To The Emotional Impact Of Learning To Teach

From this perspective, it is encouraging to note that much of the teacher education literature increasingly appears to recognise that learning to teach is not simply a technical process in which emotions play little part (Hopkins, 1994; Moffet, 1994; Brookfield, 1990). Acknowledgment of this affective dimension is evident in, for example, the growing interest in narrative methodology (Beattie, 1995a; Olson, 1995; Clandinin, 1992) and the recognition by some writers (e.g., Dobbins, 1995; Hollingsworth, 1994; Britzman, 1991) that emotional discomfort is inherent in learning to teach. If teacher educators are to develop greater sensitivity to the emotional dimension of learning to teach, it seems that they must be prepared to listen to student teachers' voices and establish a climate of trust and acceptance in which student teachers feel able to share their concerns (Fletcher, 1997).

Unfortunately, a range of personal, professional and institutional factors could inhibit these prerequisites. Some teacher educators may find it difficult to accept that, as profiles of some participants suggest, their own practices contribute to student teachers' emotional turmoil (Thomas, 1993). Others who, in times of reduced face-to-face contact, poorer staff-student ratios and increased emphasis on the achievement of measurable competencies, prefer to focus on imparting knowledge and skills, might also find it difficult to listen to student teachers' voices (Barnett, 1994; Britzman, 1991). Yet others might be unable to resist implicit institutional messages that pastoral care of students is unlikely to be rewarded in decisions concerning tenure and promotion (Acker & Feuerverger, 1996).

Despite these potential difficulties, the present study indicates that teacher educators must recognise and respond to the emotional dimension of learning to teach if they are to be more effective in promoting reflection. As part of this process, they may need to revisit expectations and reconsider current practices. In particular, if teacher educators are to establish a climate
of trust, they may need to be more alert to possible inconsistencies between their rhetoric and practice. Journal writing, for example, can be a valuable tool for promoting reflection (Francis, 1995; Hoover, 1994). Yet the not uncommon expectation that journals be submitted for assessment may inhibit student teachers using them to share significant emotional experiences (Macrorie, 1985). Thus, this practice could give student teachers very mixed messages about the wisdom of candidly sharing emotional responses.

Recognising The Role Of Emotion In Reflection

As the participants' profiles emphasise, the emotional dimension of learning to teach cannot be divorced from reflection on learning to teach. Indeed, their profiles highlight how emotions can be a medium for reflection, rather than simply an accompaniment, or even a barrier to reflection as implied by Richert (1992), Boud et al. (1985) and others. Participants' passionate creeds (LaBoskey, 1994) and inner worlds (Yonemura, 1991), characterised by strong affective elements, for instance, appeared to assist in illuminating their search for meaning by providing "a growing sense of order, direction, and deepening meaning" (Buchmann, 1993b, p.166).

The participants' profiles also illustrate how emotions, as explained in Chapter Three, can link environments, experiences and identities. For example, empathy, by loosening the boundaries surrounding self and enabling attunement with others, can provide a medium for recognising and appreciating interconnections not necessarily accessible by analytical thought (Jordan, 1991). This capacity was evident in the profiles of several participants, particularly those showing more evidence of reflection, who developed strong empathetic bonds with children and cooperating teachers.

Indeed, for all student teachers who developed such bonds, including those whose reflection showed little consistent development overall, empathy constituted a medium for reflection. Kathleen's early experiences of having been labelled as a child with learning difficulties and her empathy with children similarly identified, for instance, prompted much more insightful reflection than any other aspect of her experience of her preservice program. Likewise, Josephine was at her most reflective when empathising with the children and teacher for whom the school curriculum seemed irrelevant. Conversely, those student teachers who displayed least evidence of empathy (Kel, Erica, Pamela and Marina) demonstrated little evidence of reflection at
any stage of the program. Their seeming disinterest or difficulty in establishing bonds with the children with whom they worked during practicum appeared typical of their disinterest or difficulties in establishing connections in general.

The current study also illustrated how a range of emotions, including those often thought of as negative (Fuller, 1990), have the potential to make meaningful connections. Kristy's initial fear and dislike of the thought of becoming a teacher, for instance, which emanated in part from her fear and dislike as a six year old of her own first class teacher, seemed to reverberate through the ensuing years (Conle, 1996) and intensified when she made the decision to enrol in the preservice program. This emotional intensity appeared to explain the emergence of her determination to make teaching fun. In turn, this passionate creed became the main interpretive frame through which she reflected on her experiences in the program. That reflection on her experiences appeared to assist her to recognise the emotions emanating from them also suggests a reflexive relationship between reflection and emotion.

The above examples of emotion playing a vital role in reflection are not intended to imply, though, that emotion necessarily leads to reflection, any more than analytical thought necessarily involves reflection. Although, as argued in Chapter Three, emotions can be seen as a powerful interpretive medium or frames through which to interpret experiences and construct meaning, other factors, including epistemological perspectives, also appear to play a major role. Pamela's and Marina's profiles illustrate an apparently reflexive relationship between the emotional frames of frustration and inadequacy through which they interpreted their experiences in the program and their epistemological perspective of received knowing. Their craving for clarity and predictability and the failure of the program to satisfy this craving intensified their sense of inadequacy and frustration and reinforced these emotional frames. Their interpretations, in turn, appeared to further shape and exacerbate their responses to the program, entrenching even more firmly their epistemological perspective of received knowing and inhibiting the development of their reflection.

This apparent interplay between emotion and epistemological perspective warrants further investigation. It might help to explain the different outcomes
in terms of the reflection evident in student teachers who experienced similar emotions. Nina (a constructed knower) and Josephine (a received knower) experienced considerable empathy for some children with whom they worked during practicums. Nina's ensuing reflection, however, was more sustained than Josephine's, possibly because she might have utilised more effectively the emotional energy emanating from these empathetic encounters to construct meaning (Hopkins, 1994). Josephine's preference for received knowledge and her dependence on the voice of authority, in contrast, might have dissipated this energy. This possibility must remain a matter of conjecture, however, until further investigation into the contribution of emotion to reflection.

**ISSUE 3: THE COMPLEXITY OF REFLECTION**

Although the current study has illuminated some of the links between emotion and reflection, many missing dimensions (Valli, 1992) remain. It could be argued that the fact that so much about reflection is still not fully understood testifies to its complexity. Moreover, as this thesis has asserted throughout, this complexity must be embraced, rather than ignored, if current understanding of reflection is to be enhanced.

The existing literature, nonetheless, makes a valuable contribution to informing understanding of reflection and provided many constructs which greatly assisted the interpretation of the data collected for the present study. Dewey's contention that "the solution of a perplexity" (p.14) is a typical goal of reflection, for example, explained Genni's determination to clarify her understanding of child-centredness. It also explicated Sarah's refusal to accept on face value a school's claim that it followed a policy of child-centredness and her subsequent investigation of what she understood by this term. Similarly, Dewey's assertion that reflection involves "active, persistent and careful consideration of any belief or supposed form of knowledge" (p.12) and "searching, hunting, inquiring, to find material that will resolve the doubt, settle and dispose of the perplexity" (p.13) drew attention to Jessica's commitment to discovering and understanding the diverse views of colleagues and Gerry's emphasis on exploring competing theories.

Likewise, Schon's notion of framing and reframing problems explicated Felicity's problem solving orientation, just as Boud et al.'s (1985) emphasis on returning to experiences explained Kasey's insistence on revisiting
personally significant events. Furthermore, Van Manen's levels of reflection, especially as adapted by Zeichner & Tabachnick (1991), and Hatton & Smith's (1995) types of reflection, assisted in differentiating between participants' responses. They were especially helpful in comparing different student teachers' responses to a similar situation and one student teacher's responses to a particular situation over time. Finally, LaBoskey's (1994) and Korthagen & Wubbels' (1995) characteristics of more and less reflective student teachers highlighted, in particular, the importance of passionate creeds and external/internal orientations.

Nevertheless, the findings of the present study reinforced the argument developed throughout this thesis that the existing literature about reflection is not fully attuned to its complexity. As foreshadowed in Chapters One and Two, reliance on the existing literature, alone, would have inhibited many of the understandings which eventually emerged from the study. It provided little guidance, for example, concerning how to interpret the flashes of intuitive understanding reported by several participants and, in general, contributed few insights into the holistic nature of many participants' reflection. Conversely, it could be argued that strengths of the current study include its recognition of the complexity of reflection, its awareness of the limitations of the current literature in fully illuminating this complexity and its willingness to explore alternative literature to further inform understanding.

IMPLICATIONS ARISING FROM ISSUE 3
The inherent complexity of reflection, illuminated by this study, has several implications for teacher educators and researchers. These are summarised below.

Appreciating The Complexity Of Reflection
As previously argued, a broad conceptualisation of reflection more readily recognises the complexity of reflection and reduces the risk of excluding aspects or approaches which might not conform to narrow definitions. It accommodates Jessica's search for rhythm and balance, Gerry's preference for interpreting theory through theoretical frameworks, Felicity's emphasis on practical problem solving, and Kel's seemingly sudden insights. On the other hand, broad interpretations of what constitutes reflection can make it more difficult for teacher educators to be explicit about what they mean by reflection and thus cause confusion and uncertainty for student teachers.
(Ecclestone, 1996; LaBoskey, 1994). Furthermore, as illustrated in Chapter Two, broad conceptualisations can further complicate and frustrate efforts to identify or measure reflection.

Yet, despite these difficulties, the current study strongly suggests that the inherent complexity of reflection must be acknowledged if understanding is to be enhanced. Should, for some reason, the nature of the teacher education program or the purpose of the study demand a narrow focus on a specific aspect of reflection then such constraints and consequent limitations must be made clear. Otherwise, the limitations of the parameters of the program or study might mistakenly be perceived as limitations of the participants or phenomenon under investigation.

**Acknowledging The Limitations Of Prior Research**

The volume of recent research into reflection could suggest that new developments abound or that saturation has been achieved and that little additional understanding is likely to arise from further investigation. This thesis contends that both impressions would be misleading. As argued in Chapter Two, many prior studies were marred by a poor or selectively narrow conceptual grasp of the seminal work from which they were supposedly derived; an excessively reductionistic approach; a willingness to leave partially developed ideas untouched; or an overly strong regard for pragmatic considerations and a consequent reluctance to take the necessary conceptual or methodological risks to investigate ways of making meaning not usually associated with mainstream Western traditions. Should these trends continue, it could be difficult to justify maintaining the current volume of research into reflection. By highlighting the holistic nature of reflection, however, the present study suggests that a sustained commitment to moving beyond current limitations might reveal exciting possibilities.

**Recognising Opportunities For Further Research**

In particular, this study contends that focusing on uncertainties and gaps in the existing literature could be of value. Exploring the "blind and opaque spots" (Dewey, p.139) of seminal literature and missing dimensions (Valli, 1992), hitherto mostly overlooked, might identify possibilities for developing a more holistic understanding of reflection. The apparent mismatch between Dewey's tacit recognition of the interplay between primarily intuitive and analytical processes in reflection and his arguably less than successful
attempts to represent these as a linear sequence, for instance, seem worthy of further investigation. Likewise, his tentative references to the possibility that reflection might be more usefully conceptualised as a process of transformation, another issue with which he appeared to grapple without coming to any conclusion, could well be addressed by future studies.

In the current study, the initial forays into other areas of literature with potential to inform such gaps appeared worthwhile. Exploration of theories of intuitive understanding, prompted by Dewey's uncertainty concerning the interplay between analytical and intuitive processes, drew attention to the deliberative aspects of intuition as a medium for making meaning. Likewise, the investigation of Eastern philosophical notions of transformation, instigated by Dewey's seemingly undeveloped references to transformation, suggested that future Western research might consider the role of meditation in reflection. Eastern notions of consciousness and enlightenment, in turn, generated interest in quantum notions of consciousness and connections.

In short, exploring possible connections with other literature created "endlessly interesting landscape of ideas and nuances of ideas" (Scharfstein, 1978b, p.127). Furthermore, the consequent conceptual enrichment such experiences enable potentially contribute to an appreciation and understanding of the complexity of reflection. For this reason, recent tentative moves by writers such as MacKinnon (1996) and Korthagen (1993) to explore possible connections with other literature warrant encouragement and emulation. The present study, for example, has indicated that relaxation and visualisation strategies might have the potential to promote a more contemplative mode of reflection than is typically associated with teacher education contexts. There appears considerable scope to explore this potential further through a more indepth exploration of relevant literature, including that associated with Eastern philosophical traditions.

ISSUE 4: THE CENTRALITY OF CONNECTIONS
Indeed, the current study suggests that it is difficult to overemphasise the importance of connections when conceptualising and investigating reflection. In this study, connections were significant in several ways. Links drawn between the diverse orientations to reflection identified in Chapter One illuminated the notion of reflection as a search for meaning as the main connecting thread. In addition, as outlined above, connections between the
literature about reflection and other potentially related literature helped to extend existing understandings. Finally, the connections made by participants themselves in their search for meaning became the focus for the interpretation of the data.

It is noteworthy that reflecting on the meaning of reflection, a process integral to this study, should involve seeking the connections referred to above. This could suggest that searching for connections is an integral aspect of reflection, regardless of the focus of that reflection. The data collected from participants supported this assertion. As their profiles indicate, the more reflective participants were clearly more interested and/or adept at making connections than their less reflective peers. Furthermore, changing trends in participants' reflection seemed determined by changes in their interest in making connections or their ability to do so.

Erica, for example, was quite explicit about her lack of interest in transcending her existing personal and professional boundaries. She frequently emphasised that she did not want to undertake a practicum in a socio-economic-cultural environment different to that to which she was accustomed. Moreover, when placed in a low socio-economic, culturally diverse setting she showed no interest in challenging or revising her beliefs, values, ideas or expectations. Her certainty precluded connections because it countenanced no inconsistencies, puzzles or surprises, in short, no loose threads or openings which might have allowed her to hook into new understandings. Her lack of tentativeness, the antithesis of Dewey's notion of openmindedness, resulted in premature closure to alternative possibilities and hence little reflection.

In contrast, the more reflective student teachers frequently referred explicitly to making connections. Colin's comment: "I see them [connections] in my mind, almost like a concept map" (1/9/93, 39), Jessica's reference to wanting "to touch out on what other people thought" (10/11/93, 222) and Sarah's jigsaw puzzle representations (Photographs 5a and 5b) were typical examples. Some, like Colin, reported that they had always consciously strived to make connections, "to question things ... to work out [things] out for myself" (29/3/93, 266-268), although sadly his ability to make connections appeared to decline in what he came to see as the unsupportive environment of his preservice program. Other student teachers came to increasingly value connections during their
enrolment in the program. Pia, for example, learnt to appreciate "keeping in contact with what you believe" (22/11/95, 367) while Kasey, and others, became determined "to integrate my beliefs and my practices" (13/10/95, 271). These comments illustrate how the more reflective participants actively sought to establish connections as a means "constantly extending ... [them]selves" (Willis & Schubert, 1991, p.6). To them, leaning to teach was "a process of incessant becoming" (Skolimowski, 1992, p.18), a process which appeared to have little appeal for the less reflective participants.

In this sense, a tendency to reflect or not to reflect seemed self-perpetuating. Metaphorically, this might be explained by regarding connections as multidimensional rather than linear and developing simultaneously in several dimensions and on several fronts (Moffett, 1992). As such, the more they develop, the more interfaces they present to new experiences, possibilities and ideas. In many ways, the present study suggests that recognition and receptivity to this fluidity and willingness to explore potential connections constitute the essence of reflection. In contrast, in the absence of reflection and in a context of certainty and closure, opportunities to make connections appear considerably fewer. This might help to explain why over time, the differences in the tendency of the participants in the current study became more marked.

**IMPLICATIONS ARISING FROM ISSUE 4**

If connections are as integral to reflection as the current study suggests, then several implications arise for teacher educators and researchers. These include the desirability of recognising and understanding the diversity of modes of making connections and their potential for enhancing holistic understanding; making structural changes to preservice programs to provide a learning environment more conducive to making connections; and assisting student teachers to develop a range of strategies for making connections, including detachment from conscious striving.

**Recognising And Understanding Diverse Modes Of Making Connections**

The various orientations to reflection and studies based on these (reviewed in Chapters One and Two) differ in their acknowledgment and appreciation of other than analytical ways of knowing. Proponents of a narrative orientation, for example, as well as writers such as Bullough & Stokes (1994), Griffiths & Tann (1992) and Russell (1989) emphasise metaphorical understanding as
an aspect of reflection. Their understanding of image as a medium for establishing connections far exceeds the level of understanding of those orientations (e.g., Boud et al., 1985) that see images only in terms of recalling past experiences as memories.

The apparent effectiveness of visualisation as a strategy for reflection for five of the 11 student teachers in the present study who participated in relaxation and visualisation sessions further demonstrates the potential of image as a medium for making connections. Moreover, it suggests that understandings emerging in some areas of the literature concerning the contribution of connections which are not necessarily analytical in nature warrant careful consideration, rather than the strident and sometimes seemingly gratuitous criticism that Schon's interest in the intuitive connections underpinning reflection-in-action has frequently attracted. In brief, a greater interest in and willingness to explore holistic understanding appears a desirable direction for future research into reflection.

Implementing Structural Changes To Promote Connections
Many argue that traditional teacher education programs have tended not to emphasise connections, apart from narrow, technical, "cause-effect" connections (Carr, 1997; Brooker & O'Donoghue, 1992; Bowers & Flinders, 1990). Critics also point to the problems associated with interpretations of hierarchical models of student teacher development (e.g., Fuller & Bown, 1975). In particular, they claim that emphasis on predetermined milestones has resulted in overly structured and prescriptive preservice programs which require modules or units to be completed in a set sequence (Barnett, 1994; Moffett, 1994; Buchmann & Floden, 1993). As Moffett (1992) notes, such rigid boundaries seem unlikely to suit all learners. For many student teachers, such programs can appear fragmented, making connections difficult to grasp (Barnett, 1994; Elbow, 1986). If professional growth is a process of establishing connections and expanding boundaries (Buchmann, 1993b) in "an ever-growing process of complexity, in ... which new layers of understanding emerge" (Skolimowski, 1992, p.18), then the linear structure of many preservice programs seems likely to impede student teachers' professional growth and inhibit the development of their reflection.

Although the widespread interest in reflective practice suggests that this technical paradigm of teacher education might be losing favour, teacher
education programs may not necessarily have kept pace with changes in rhetoric (Perry, 1997; Munby & Russell, 1993). It could be argued that unless the structural features of programs which were previously technical in orientation show commensurate change, student teachers are likely to continue to find connections difficult to establish. Teacher educators hoping to promote student teachers' reflection, therefore, might consider changes to program structures, delivery and assessment to enable an emphasis on interconnectedness rather than fragmentation.

Such changes might centre on softening artificial boundaries and rigidities to allow "more leeway for student timing and discovery" (Moffett, 1992, p.80) and space for negotiation between the requirements of the curriculum and learners' interests and needs. Instead of the "preplanned feeding of information" (Moffett, 1992, p.80) largely underpinning modular units, learning could be structured around generic themes associated with teaching and learning to teach. Possible themes suggested from the current study include interpersonal relationships, roles and responsibilities, beliefs and practices, dilemmas, difficulties, empowerment, and conflict and cooperation. Within this broad framework, student teachers could, for example, inquire into emerging interests, work on overcoming specific weaknesses, investigate problems or concerns, undertake and implement projects (Moffett, 1992), or extend and explore the implications of their passionate creeds. To ensure an appropriate balance of learning experiences, in consultation with teacher educators, student teachers could develop learning contracts (Anderson & Boud, 1996), document their learning through professional portfolios (Guillaume & Yop, 1995) and negotiate appropriate assessment tasks (Candy, Creber & O'Leary, 1994).

In far more depth than the current program would allow, for instance, Sarah could build on her passionate creed by exploring approaches to implementing child-centred practices within the constraints of school environments. Similarly, Nina might choose to consider implications of her passionate creed by investigating what would be involved in establishing an exemplary child care centre for children from economically disadvantaged or culturally diverse backgrounds. Indepth investigations of student teachers' own choosing, would require them to draw on knowledge, understandings and skills from across curriculum and disciplinary areas, and to make connections not necessarily demanded by a series of modular units (Moffet, 1992).
The current study suggests that student teachers who enter preservice programs as received rather than constructed knowers, might require considerable support in adopting an approach to learning which focuses on meaningful connections rather than a surface or strategic approach (Gibbs, 1992; Ramsden, 1992). As noted previously, for example, Erica, might have been encouraged to draw on her enthusiasm, expertise and experiences in teaching swimming to make connections with her teaching in other contexts. Enabling her to negotiate assignments which allowed her to investigate and demonstrate these connections might have made the assessment process more meaningful for her. This, in turn, might have encouraged her to take greater responsibility for her learning and helped to transcend her epistemological perspective of received knowledge. Moreover, as Garrigan (1997) argues, teacher educators’ acknowledgment of individual differences in epistemological perspectives, preferred learning styles (Kolb, 1984) and strengths as learners (Gardner, 1983) could provide student teachers with terminology which might better assist them to understand themselves as learners and take greater responsibility for their learning.

Given her strong preference for learning through practice, Erica might also have benefited from continuing with Guided Practice in an uninterrupted sequence, despite not having passed all prerequisite units. Had there been fewer structural rigidities in her preservice program, this option would have been possible. Furthermore, allowing her to undertake her practicum experiences earlier in her program, might have enhanced her sense of self-efficacy which, in turn, might have enabled her to move closer to constructed knowing. These possibilities are a matter for conjecture. For the most part, however, Erica’s profile suggests that she became increasingly entrenched in received knowing as she progressed through the program. As her profile indicates, her epistemological perspective considerably hindered the development of her reflection.

Changes to program structure, delivery and assessment such as those proposed above might encourage more student teachers to value connections rather than the accumulation of discrete knowledge.
So far, the suggested changes have centred on providing an environment which supports conscious striving for connections. The focus will now shift from striving to receptivity, from active engagement to detachment.

**Fostering Detachment From Conscious Striving**

Detachment is the ability to relinquish active involvement and to cultivate instead a more distanced perspective (Gallehr, 1994) and a state of "quietly receptive attention" (Buchmann, 1993b, p.159). Detachment provides a release from preoccupation with specific tasks, responsibilities, goals and concerns (Buchmann & Floden, 1993). Thus, it can assist in perceiving connections which prove elusive amid the pressures and demands of professional lives (Buchmann, 1993b; Fiumara, 1990).

Brand & Graves (1994) note that "the world is full of noise, full of loud and strident voices, each trying to drown out the other" (p.7) Although not directed specifically at teacher education programs, their statement aptly describes many participants' experiences of the program. As Colin noted: "There are a lot of mixed messages from academics about what is worthwhile. For example, one tutor will say that rotational activities are good and another will say they are really negative" (1/11/93, B162). Because of these conflicting viewpoints Kathleen found that "every time I walk into a lecture or a tutorial my ideas change (3/4/95, 14). Dispirited by this, she decided that "it would be pointless to write down what I thought because my ideas would be different the next day" (5/4/95, 17). Even the most reflective participants found making sense of conflicting views difficult. As Sarah commented "I find it really confusing ... It's so hard to bring it all together (31/3/95, 42). "I picture myself running in circles, confronting the same hurdles over and over again" (April, 1995). Hence, for student teachers trying to make sense of this complexity, periods of retreat might be essential.

Pauses for silence can offer much needed respite from the "dense cloud of theory, interpretation and explanation" (Fiumara, 1990, p.99). They can also provide a space for "centering, of witnessing ... feelings and thoughts" (Suhr, 1994, p.31). In addition, silence can loosen attachments to language and provide alternatives to linguistic connections (Elbow, 1994). As Van Manen (1991, p.113) explains:

> beyond the range of our ordinary speaking and writing there is the rich domain of the unspeakable that constantly beckons us ... We may have this knowledge on one level and yet this knowledge is not available to our linguistic competency.
Silence allows opportunities for consulting this tacit knowing (Elbow, 1994) and enables us to "perceive messages from within" which can "inspire, advise and direct us" (Fiumara, 1990, p.127). Without silence, such messages may be inaudible.

Moreover, temporarily bypassing words allows us to "return to them with a fullness and immediacy" (Worley, 1994, p.133) of understanding not experienced otherwise. As Moffett (1992) less elegantly asserts, those who "suspend discourse think and speak better when they turn it back on" (p.15). This suggests that, just as silence between the notes is frequently the most powerful part of music (Elbow, 1994), intervening pauses for silence might be the most powerful components of environments which seek to foster the development of reflection.

As their profiles illustrated, several participants' experience of the relaxation and visualisation sessions highlighted the potential power of silence to enhance understanding. Their sense of self acceptance and feelings of distance from pressures and concerns promoted feelings that enabled a clearer, focused and more balanced vision. Pia likened this to the ability to see through the "extra baggage that I carried in the back of my head" (13/3/95, 119). For silence to be optimally effective, though, it can be argued that student teachers would need to cultivate heightened concentration, contemplation or mindfulness as described by Tremmel (1993). The current study suggests that these attributes and skills would not be acquired easily and that considerable commitment and effort would be required. Indeed, one wonders whether student teachers like Erica who placed so much emphasis on physical activity, or those like Genni, who had no interest in attending the relaxation and visualisation sessions could be expected to benefit from, or pursue, contemplative techniques. These examples emphasise the need to recognise the diversity of student teachers and the importance of introducing them to a range of reflective strategies.

For student teachers uncomfortable with silence or uninterested in exploring its potential, or for those wanting to explore alternative techniques for holistic understanding, free writing or stream of consciousness writing, might be of value. As explained in Chapter Two, free writing can act as conduit between the conscious and unconscious - reaching "for the unspoken" (Elbow, 1994, p.19), fashioning "an emergent form from what was originally formless"
(Graves & Becker, 1994, p.53) and representing intuitively perceived patterns and connections (Brande, 1934). Like silence, free writing can provide “relief from logic and linearity” (Elbow, 1994, p.16) and a space for “waiting for ... [understanding] to arrive” (Elbow, 1994, p.16). Furthermore, because free writing uses the ubiquitous medium of written text, with which student teachers are familiar and comfortable, it might encourage those reluctant to move beyond writing to other forms of representation to explore more holistic approaches. Ironically, however, of the participants in the current study, Sarah showed by far the most interest in free writing, perhaps because she was already comfortable with a range of representational forms.

Free writing and silence represent a movement away from the type of connections typically associated with constructed knowing to the connections between tacit and conscious understanding, and between knower and known, typically associated with participatory consciousness (Heshusius, 1994; Heron, 1992). Although these connections have the potential to extend current Western understandings of reflection, the present study confirmed that, currently, there is little guidance concerning how they might be identified.

ISSUE 5: THE ONGOING DIFFICULTIES OF IDENTIFYING REFLECTION
Conceptualising reflection in broad terms as a search for meaning precluded proceduralising reflection as a linear or cyclical analytical process, an option taken in many prior studies (see Chapter Two). Subsequent efforts to identify and represent holistic processes of making meaning presented ongoing challenges and confirmed the methodological lag associated with the emerging holistic paradigm referred to in Chapter Four. No way was found, for example, to identify instances during teaching of what Schon referred to as reflection-in-action. Indeed, as might be expected of an exploratory investigation, in many respects this study raises more questions than it answers.

Furthermore, while the profiles portray ways in which participants created and reflected on their professional knowing, they are not intended to make definitive statements about student teachers’ reflection in general. Rather, they illustrate how key factors, discussed in more depth later in this chapter, contributed to or hindered these student teachers’ reflection. Whether these factors might be generalisable to student teachers in different contexts, as
noted in Chapter Four, is a matter for readers with knowledge of those contexts.

Finally, similarities between the beliefs in universal interconnectedness underpinning the study and the findings of the study concerning the centrality of connections in reflection illustrate the reflexive relationship between conceptualisations underpinning research studies and the findings of those studies (Smith, 1997). Yet, as argued in Chapter Four, research cannot be undertaken from within an epistemological and ontological vacuum. For this reason, like all researchers, I had a responsibility to explain my beliefs to assist the reader to evaluate the credibility of the study. I submit that these beliefs enriched, rather than detracted from, the study and contend that participants' emphatic verification of the interpretations presented in the profiles attest to the study's credibility.

**IMPLICATIONS ARISING FROM ISSUE 5**
The inherent complexities, uncertainties and constraints associated with identifying reflection, exacerbated in the current study by a determination to acknowledge the holistic aspects of reflection, raise several implications for teacher educators and researchers seeking evidence of reflection. These implications are outlined below.

**Recognising The Limitations Of Many Widely Used Strategies For Investigating Reflection**
The complexity of reflection, evident in the profiles presented in the previous chapters, highlights the inappropriateness of attempting to use simplistic, unidimensional measures to identify reflection (Goodman, 1992). Had the current study depended on conceptual frameworks such as those developed by MacKinnon (1987), Ross (1989) or Sparks-Langer et al. (1990), the emotional dimension evident in many student teachers' reflection would have been overlooked. Similarly, the other than analytical processes, such as rhythm, balance, image, and intuitive insights referred to by some participants, would have gone unrecognised. Likewise, uncritical adoption of Van Manen's levels of reflection in their original form would have further distorted interpretations of the data. Gerry's reflection on his difficulties with behaviour management, for example, is likely to have been one of many instances where technical reflection would have been categorised as low level reflection rather than recognised as entirely appropriate to the context.
In Gerry's case, especially, evidence of technical reflection was not in any sense indicative of a less well developed reflective ability.

These examples suggest that, to be effective, conceptual frameworks for identifying reflection require sensitivity to the complexity of reflection and to contextual influences. As well, they need the ability to represent the many ways in which connections might be made and the fluidity of these connections. It could be argued that their inherent rigidity makes this difficult. Mind mapping techniques (Oldfather et al., 1994) might prove a useful alternative. While they have been used to represent student teachers' responses and thinking (see, for example, Kwan, 1996; Oldfather et al., 1994; Morine-Dershimer, 1993), they do not appear to have been used by researchers to represent their interpretations of student teachers' reflection. Given that the above studies found mind maps useful in representing complexity, contextual factors, connections and change, they may have considerable potential for identifying and portraying reflection. They might be particularly useful when time and resource constraints preclude the development of profiles of the type presented in the previous chapters.

As well as emphasising the limitations of many conceptual frameworks, the current study highlights the danger of uncritical acceptance of supposed artefacts of reflection. As described in Chapter Two, many previous studies have relied heavily on reflective writing as a data source. Surprisingly few have questioned the authenticity of this source. Yet, as the data from many participants in the present study demonstrate, samples of even seemingly advanced reflective writing need not indicate necessarily that reflection has taken place. Erica's admission that, having mastered a genre of reflective writing (Hatton & Smith, 1995) to her University practicum advisers' satisfaction, she simply transferred the same pieces of reflective writing from one practicum folder to another as the situation demanded, graphically illustrates that it is possible to submit a convincing sample of reflective writing without any reflection whatsoever having taken place. The study revealed many other, albeit less blatant instances, where student teachers regarded their reflective writing as a mechanistic and tokenistic response to the expectation that they engage in reflection. Conversely, Genni's profile indicates that difficulty in using an accepted reflective writing genre (Hatton & Smith, 1995) need not imply a lack of reflection.
The above discrepancies caution against assuming a necessarily close relationship between reflective writing and reflection and add weight to warnings (Francis, 1995; Hatton & Smith, 1995) that product may not be indicative of process. The difficulties of authenticating reflective writing as an artefact of reflection supports Sumson & Fleet’s (1996) conclusion that it is unwise for teacher educators to attempt to assess student teachers’ reflective writing. These discrepancies also suggest that future research may need to distinguish willingness to reflect from ability to reflect.

Because reflective writing can be such a misleading source of data, future studies might also consider not relying only on reflective writing, or indeed, any sole source of data. Multiple sources of data provide opportunities for triangulation (Mathison, 1988) and crystallisation (Richardson, 1994) of meaning and thus can assist in gauging the authenticity of data sources. In the current study, the consistency between Pia’s spoken and written reflection, for example, suggested that her reflective writing was a more accurate representation of her reflection than was the case with many of the other participants.

The present study also demonstrates the advantages of a longitudinal as opposed to a cross sectional research design. In contrast to many previous studies, its four year duration enabled data to be gathered at many stages of the participants’ preservice program and in many contexts. Although the benefits of such prolonged data collection far outweighed the difficulties reported in Chapter Four, clearly longitudinal studies of this duration are not always feasible. Had a cross sectional study been undertaken at any one stage of the participants’ enrolment in Guided Practice, though, the snapshot images could have provided a misleading impression of many participants’ reflection. At several points in the current study, data collected from any of the student teachers who showed little development in reflection, could have suggested, in isolation, that these student teachers were reflective. Conversely, had data been collected at only one stage of the program, several of the most reflective participants could have been categorised as not particularly reflective. Gerry’s craving for support, taken out of the context of the longitudinal study, for instance, might have been interpreted as unwillingness to take responsibility for his own learning, which data collected over the longer term patently illustrated was not so.
The above examples highlight the potential for distortions in the data collected for cross sectional studies and the need for caution in interpretation of the data. Patterns emerging from the participants' profiles suggest a trend for some relatively unreflective student teachers to be somewhat more reflective in the middle stages of their program, perhaps because the gap between their perceptions of the complexity of teaching and their skills as teachers was at its greatest. As they began to develop greater confidence, their incentive to reflect, never particularly strong, seemed to dissipate. Cross sectional studies need to be alert to the possibility of such trends and cautious about projecting from data collected at a particular point in time.

The absence of strong developmental trends identified in the present study in terms of content, processes or structures of reflection, suggests that cross sectional studies might need to be especially cautious in assuming a specific developmental sequence through which student teachers might be expected to progress as they became more reflective. Generally, the focus of the participants' reflection was similar to that identified by Tsang & Wong (1995) and Guillaume & Rudney (1993). As a group, participants referred frequently to their relationships with children and adults; children's learning; their beliefs and practices as well as those of their cooperating teachers and children's parents; specific teaching skills including behaviour management strategies; relationships between theory and practice; their own professional development; the roles and responsibilities of early childhood educators; and cultural and organisational differences. Not all participants, however, reflected on each of these content areas, nor was there a discernible pattern distinguishing the general content area of the more reflective participants' reflection from that of their less reflective peers. Furthermore, there was no apparent trend for the more reflective participants to focus predominantly on a particular type (Hatton & Smith, 1995) or level of reflection (Van Manen, 1977). Rather, their reflection varied according to their purpose and the context in which they were reflecting.

As student teachers became more reflective, however, their connections became noticeably more wide ranging. As Pia explained:

*In the beginning, I think that you just look at you and the children. But as you progress, you realise that it's not just you and the children. The surroundings also matter because they influence you and you have to decide how much you will let them influence you. You realise the significance of things more.* 

(22/11/95, 555)
Her comments support Yinger & Hendricks-Lee's (1993) notion of learning to teach as an ecological process involving a developing awareness, appreciation and understanding of "complex systems interacting and affecting each other" (p.120) of which the individual is part, reminiscent in some ways of the Eastern traditions and quantum theory referred to in Chapter Three. Student teacher development, including the development of reflection, might be better identified, therefore, by "emergent and contingent, defining and defined by interactions with the surrounding medium" (Smith, 1996, p.7 citing Macy 1991), than the supposedly isolating fragments of reflection indicated by the graphs, charts and figures proposed by Loughran (1996) and Pultorak (1996).

Investigating Alternative Data Collection And Interpretation Strategies
As explained previously, because of the paucity of widely recognised strategies for investigating holistic understanding, the current study relied heavily on several strategies commonly associated with the constructivist paradigm (Guba & Lincoln, 1994), including indepth interviews and thematic interpretation of interview transcripts. Although highly dependent on language, and therefore limited in their ability to explore tacit understanding, these strategies were nevertheless invaluable in contributing to an understanding of the participants' search for meaning. At the same time, strategies selected specifically for their potential to explore tacit understanding, albeit eventually communicated through language, showed considerable promise and warrant further exploration. The following discussion focuses on four of those strategies - visual representations, relaxation and visualisation, kinaesthetic involvement with data, and contemplation of data.

While encouraged to use a range of visual representations in response to the questions underpinning the 1:1 interviews, many participants were reluctant to venture beyond words. Indeed, Sarah was the only participant to use drawings consistently. Approximately half the participants occasionally used drawings or mind maps, while a similar number relied totally on words. When asked why, the latter group referred to a lack of confidence in their drawing ability and their customary reliance on writing, which might be attributed, in part, to socialisation into an academic culture which does not traditionally value drawing (Weber & Mitchell, 1996). Their responses showed little understanding of the potential of visual representations to reveal hitherto tacit
knowledge. Those who did experiment with visual representations, however, found them helpful in bringing "a lot more to mind" (Pia, 24/3/95, 73) than purely written responses. From my perspective, the clarity and succinctness of their representations greatly assisted the process of interpretation.

An unexpected benefit of visual representations was their tendency to assist participants to recall more immediate and vivid memories of the thoughts, feelings and ideas they represented, than lists of words or prose. This was particularly noticeable when, in the final interview, student teachers were asked to reflect on their entire series of representations made throughout their participation in the study. These representations were displayed on my office wall which made it possible for student teachers, in a relatively short time, to review their representations and to note any patterns or changes in their responses during their participation in the project. In contrast, it was not practical to ask them to read through the complete sequence of their interview transcripts during the final interview because of the time consuming nature of this task. Where necessary, though, transcripts were available to remind student teachers of aspects of their representations which they may have forgotten or overlooked.

The ease with which visual representations could be used to encourage student teachers to reflect on previous reflection, a practice advocated by Smith (1997) and Clarke (1994), suggested that they could be useful tools for tutorials and studies involving larger numbers of participants than the present study. Student teachers could explain their representations to a partner who could make brief notes to assist recall when student teachers later reviewed their representations, as they did in the final interview for this study. For optimal effectiveness, however, student teachers would need to feel more comfortable with this medium than the participants in the present study. This might be achieved through discussion of holistic knowing and how it might be promoted. As well, it might help to share, with their permission, examples of other student teachers' visual representations. In addition, ample opportunity might need to be provided for student teachers to experiment with visual representations in tutorial sessions.

Interestingly, participants in the current study were much less resistant to using relaxation and visualisation strategies to explore holistic knowing than they were to use visual representations. Only 11 of the eighteen participants
attended the sessions, but in just one case was this because of an explicit lack of interest or unwillingness to be involved. Perhaps these student teachers were more prepared to explore relaxation and visualisation strategies because, unlike drawing, these had not been part of their previous formal curriculum experiences. Although a potentially sad indictment of the educational system, it might explain why student teachers had not developed negative connotations of these techniques. Unfortunately, because of the logistical difficulties and constraints referred to in Chapter Four, it was not possible to continue the relaxation and visualisation sessions for a sufficient period of time to allow student teachers to become particularly proficient with the techniques involved. Nevertheless, their responses, discussed in more detail later, suggest that these strategies have considerable potential for promoting detachment and reflection of a contemplative nature.

As explained in Chapter Four, strategies for promoting holistic understanding were also incorporated into the data interpretation process. Transcribing audio tapes, cutting and pasting the transcripts on to cards, and arranging the cards in many different formations enabled a great deal of kinaesthetic involvement with the data. This resulted in an intense familiarity with and closeness to the data which would have been difficult to achieve otherwise. Kinaesthetic involvement, in effect, seemed to promote a synergy of bodily and cognitive knowing.

Similarly, the interplay of analytical and contemplative processes, also outlined in Chapter Four, enhanced understanding of the data in a way which is difficult to describe but, nevertheless, was extremely valuable. In particular, by cultivating the detachment described earlier in the present chapter I was able to transcend my initial anxieties about the interpretive task. By entering a state of relaxed alertness (Smith, 1996; Heshusius, 1994,) I seemed to become far more receptive to connections of which I had been previously unaware. Accompanying this sensation of illumination was a sense of inner peace and certainty that I had understood what the data were trying to tell me at that particular time. The participants' positive responses to my early interpretations confirmed the value of these processes and encouraged me to explore them further with greater confidence.

Although the authenticity of my interpretations, as confirmed by participants, justified the interpretive processes adopted, a greater understanding of how
holistic processes assist data interpretation is needed. Indeed, exploring their potential would be a useful focus for future research. It might help to overcome the methodological lag hindering understanding of the emergent holistic paradigm described in Chapter Three and assist in overcoming the current apparent impasse into contemporary Western research into reflection referred to in Chapter Two.

**ISSUE 6: FACTORS INFLUENCING THE DEVELOPMENT OF REFLECTION**

The present study reaffirmed the findings of many previous studies (e.g., Smith, 1997; Korthagen & Wubbels, 1995; LaBoskey, 1994; Gore & Zeichner, 1991; Calderhead, 1987) that reflection, especially of a critical nature, is difficult to promote. Of the 18 participants, eight showed little consistent development in their reflection, four demonstrated some development and only six became considerably more reflective about their professional practice during their enrolment in Guided Practice. Of these six, all but one regarded themselves as already reflective when they first enrolled in the program.

Given that almost half the participants in the present study did not become more reflective and another third had been reflective on entry to the program, should attempting to promote reflection continue to be a priority for teacher educators? Instead might additional time and attention be devoted more effectively to other aspects of preservice programs? In addressing these questions, the following discussion assumes that preparing graduates who are willing and able to reflect on their professional practice is a worthwhile goal but acknowledges that there is little evidence, as yet, to indicate the validity or otherwise of this assumption (Hatton & Smith, 1995; Korthagen & Wubbels, 1995; Calderhead & Gates, 1993). The discussion focuses more on the achievability than the appropriateness of this goal, arguing that a reasonable chance of success is needed to even begin to warrant the current emphasis on reflection. It commences, however, by drawing on findings of the present study to refute several concerns about the appropriateness of attempting to promote reflection in student teachers.

First, the finding that slightly more than half of the participants became more, or considerably more, reflective during their enrolment in Guided Practice counters concerns that "by emphasizing reflection with student teachers [we
are] aiming too high" (Calderhead & Gates, 1993 p.3). Moreover, those student teachers who became more reflective, in general, reported considerably more professional satisfaction than those who did not. Although it could be argued that their satisfaction was related to a number of factors, their reflective stance seemed a significant contributor. Delaying an emphasis on reflection until the inservice years, as suggested by Calderhead & Gates, might deny these student teachers considerable professional satisfaction during their preservice years.

Second, concerns about possible social equity implications of an emphasis on reflection (Smith, 1997) are not supported by this study. Of the three participants who could be described as coming from other than middle class backgrounds, two appeared to become more reflective and one considerably more reflective during their enrolment in Guided Practice. Interestingly, all participants whose reflection showed little development were from middle class backgrounds (as indicated by family educational, employment and income levels). Only tentative conclusions can be drawn from these findings, however, given the small number of participants from diverse socio-economic backgrounds. The considerably greater cultural diversity amongst participants, though, similarly showed little relationship between reflectivity and cultural background. Nevertheless, it appears that further research is required before fears that an emphasis on reflection might disadvantage some social or cultural groups could be considered unfounded.

Third, there seemed little relationship between TER (Tertiary Entrance Ranking) and reflectivity. Of the three participants with TERs in the top percentile, one became considerably more reflective but two showed little development in their reflection during their enrolment in Guided Practice. Similarly, of the four participants whose TERs were too low to gain entry to the program through normal channels, two became more reflective and two considerably more reflective. Moreover, there was only a slight relationship between participants’ grade point average (GPA) during their enrolment in the program and the extent to which they became more reflective. The average GPA for those participants whose reflection showed little development was 2.5, compared to 1.8 for those who showed some development and 2.9 for those who showed considerable development. This indicates that there would be no justification for any return to technically orientated teacher education programs on the grounds that only the most
academically benefit from a reflective orientation to professional development. Indeed, apart from indicating that TERs are a poor predictor of success in this particular preservice program, the dramatically higher GPAs (than their TERs would have predicted) of two participants whose reflection showed considerable development suggests that for some student teachers, a reflective approach might enhance academic achievement.

In the current study, success in promoting reflection depended largely on four key factors. These factors, identified in the profiles presented in the preceding chapters and reintroduced at the beginning of this chapter were: a commitment to teaching, a commitment to reflection, an epistemological perspective of constructed knowing, and a perception of a supportive learning environment. Although all four factors were instrumental, the last was arguably most important, as Colin's profile, in particular, illustrates. The following discussion elaborates as to how these factors appear to enhance the development of reflection and considers how they might be promoted within a preservice program.

**Commitment To Teaching**

As their profiles showed, the participants who were committed to teaching were more likely than their less committed peers to be reflective. Their strong desire to teach provided an incentive to persevere when faced with the inherent challenges associated with learning to teach. Frequently, these challenges proved overwhelming for those less committed to teaching, including Marina and Pamela, and resulted in their withdrawal from the program. While Erica, on the other hand, completed the program her lack of interest in teaching provided little incentive to reflect.

Many participants who were committed to teaching were attracted to and excited by its complexity. They were keen to explore and make sense of this complexity and, for this reason, distrusted simplistic solutions and "overly certain conclusions" (LaBoskey, 1994, p.29). Rather, they envisaged that learning to teach would be an ongoing process, involving many challenges but also considerable personal and professional growth. These student teachers wanted to share their enjoyment of learning with children and to assist them to become similarly active, independent and empowered learners. For student teachers such as Colin, Jessica, Sarah and Pia, this determination developed into a passionate creed which underpinned and
further motivated their search for meaning as a teacher. Other student teachers, including Nina and Kristy were motivated by different passionate creeds which also provided an incentive and focus for their reflection.

Yet not all student teachers who were enthusiastic about teaching appreciated its complexity. Marcelle and Kathleen, for example, were attracted more by the unexpectedly positive impact of teaching on their sense of self-efficacy. Interestingly, these student teachers appeared less inclined to reflect than those attracted by complexity, perhaps because their focus was directed more to self, than to making connections which would help them make sense of complexity (LaBoskey 1994). Not surprisingly, they appeared more interested in “How to?” than “Why?” questions (LaBoskey, 1994). It could be argued that answers to the former would appear to contribute to a sense of mastery and thus further enhance their emerging sense of self-efficacy in a way which answers to the latter may not. In summary, therefore, although for most student teachers a commitment to teaching was a prerequisite for reflection, it did not guarantee reflection.

Epistemological Perspective
All student teachers who were excited by the complexity of teaching were, or became, constructed knowers. They valued exposure to different ideas and experiences as a means of assisting them to draw their own conclusions and deliberately sought challenges which would contribute to their learning. In short, they were determined to take responsibility for their development as teachers. Moreover, as constructed knowers, they recognised the problematic and ambiguous nature of teaching and did not expect clear cut solutions to the difficulties and dilemmas they encountered.

In contrast, those participants who were primarily received knowers, relied heavily on the voices of experts and had little confidence, or interest, in taking responsibility for their learning. They took few risks, asked few questions rarely reconsidered their own ideas, and looked for certainties rather than challenges. Because they viewed teaching as a technical process of transfer of information and knowledge, they resented efforts to encourage an awareness and appreciation of the complexity of teaching and the consequent emphasis on reflection. As their profiles indicated, for Erica, Marina and Pamela, in particular, reflection was discomforting and irrelevant.
Commitment To Reflection
Not surprisingly, those student teachers who saw reflection as irrelevant demonstrated little commitment to and little convincing evidence of reflection. Yet even those committed to reflection found it a difficult and painful process at times. Sarah, for example, noted that it could have a negative impact on self esteem "because there are so many changing aspects to think about, you realise that nothing is stable, and so that makes you feel insecure" (31/3/95,99). Their commitment, despite its drawbacks, meant that they were willing to experiment with a range of reflective strategies which enabled them to develop "a new perspective and a new dimension" (Jessica, 20/11/95, 435) to their reflection. Those participants less committed to reflection, on the other hand, were generally more reluctant to broaden their range of reflective strategies. Indeed, like Erica, several focused more on developing strategies for avoiding, rather than engaging in, reflection.

An Environment Perceived As Supportive
Not all student teachers who were committed to teaching and to reflection and who had an epistemological perspective of constructed knowing became more reflective. Colin's profile illustrated that, although clearly reflective when he entered the program, his perception that the learning environment of the program was unsupportive seemed to hinder further development of his reflection. Not surprisingly, his perception that his ideas were not valued by his teacher educators had an adverse effect on his self esteem. His consequent sense of loss of efficacy seemed to result in his attention turning inwards, in a similar way to several of the less reflective participants. With his focus so firmly fixed on self and survival (Fuller & Bown, 1975), Colin seemed less able to continue making the wide-ranging connections which he had made prior to entering the program. Gerry's reflection, too, showed a similar, if less pronounced, trend towards an unduly narrow focus when he encountered a series of practicum environments which he perceived as unsupportive and which consequently had a negative impact on his self esteem. Their experience suggests, as Korthagen & Wubbels (1995) and LaBoskey (1994) also imply, that self-efficacy should be added to the qualities of wholeheartedness, openmindness and responsibility which, according to Dewey, are essential to reflection.
IMPLICATIONS ARISING FROM ISSUE 6
Further research is required to determine whether the above factors might be similarly instrumental in other contexts. The following discussion of how teacher educators might provide an environment conducive to the development of student teacher reflection, however, is likely to be of general relevance.

Encouraging A Commitment To Teaching
The current study suggests that a climate in which a commitment to teaching is highly valued might be conducive to promoting student teacher reflection. Short of basing entry to teacher education programs on interviews, often a problematic practice in itself (Malvern, 1991), teacher educators have limited options in attempting to ensure that only those committed to teaching enrol in preservice programs. Given that all four participants in the current study who showed little commitment to teaching were school leavers who entered the program for dubious reasons, greater efforts might be made to inform school leavers and their parents, career counsellors and influential others of the demanding nature of preservice teacher education programs and, indeed, teaching as a profession. Investigating reasons for attrition from teacher education programs and sharing these findings with the broader community might dissuade those with little interest in teaching from entering preservice programs.

For student teachers, like Kel, who unexpectedly find themselves ambivalent about teaching, scheduling practicums in the early stages of the program appears to assist in making decisions about whether to continue in the program. For those, like Erica, who decide to persevere with the program despite their lack of interest in teaching, an alternative path leading to a degree but not a teaching qualification would appear appropriate. Hopefully, this would enable a more rewarding university experience for such student teachers and preserve the practicum for those genuinely interested in teaching. Indeed, at the time of writing, such an alternative was about to be introduced to the program in which the participants were enrolled.

Options such as these might result in a higher proportion of student teachers strongly committed to teaching enrolled in the program. In turn, this could create a climate of enthusiasm for reflection as a means of personal and professional growth. In such a climate, Erica's strategy for transferring
reflective writing from one practicum folder to another which, according to her, was supposedly commonplace amongst the cohort, might then be perceived as unethical professional practice, rather than a strategic response to demands for reflection. Moreover, with presumably fewer reluctant prospective teachers enrolled in the program, teacher educators might be able to focus more effectively on assisting those who are committed to teaching to become reflective practitioners. The profiles of many of the participants (including Josephine, Kathleen and Genni) indicated that they struggled with the affective and cognitive demands of reflection and highlighted the need for such support.

Such support might include familiarising student teachers with metacognitive skills typically associated with reflection and facilitating their development (Smith, 1997). This would assist student teachers like Genni who were hampered by poorly developed analytical skills. As discussed previously, it might also include acknowledging student teachers’ passionate creeds and encouraging student teachers to fully articulate these and to undertake indepth exploration of their potential application, implementation, implications and limitations. This would require more flexible course offerings and evaluation options such as individual portfolios also described earlier in this chapter. Encouraging student teachers to develop and reflect on their passionate creeds might enable Kristy and others to move beyond an unnecessarily narrow focus and overcome other potential disadvantages of passionate creeds identified by LaBoskey (1994). An awareness of their peers’ aspirations, ideals, and struggles might encourage student teachers like Felicity to recognise the more problematic aspects of teaching. Moreover, a general focus on passionate creeds and the possibilities of teaching might create an atmosphere of excitement and commitment about teaching. In brief, it might generate the wholeheartedness that, according to Dewey, is so necessary for reflection and which was so noticeably missing in several of the participants in the current study.

**Supporting Epistemological Perspectives**

The current study also suggests that encouraging and assisting student teachers to become constructed knowers should be a high priority for teacher educators seeking to foster reflection (Smith & Cusworth, 1996). The profiles presented in the preceding chapters highlight the importance of a sense of self-efficacy in making the transition from received to constructed knowing.
Received knowers like Marina and Pamela, therefore, might require in the initial stages of their preservice program reassuring "quick fixes and tricks of the trade" (Kagan, 1992, p.162). As they developed greater confidence, they would eventually be expected to embrace the complexities of teaching. Allowing received knowers to do so at a slower rate, however, might alleviate some of the distress evident in several profiles. An environment which encourages risk taking but does not demand it prematurely (Leat, 1995; Chickering & Reisser, 1993) might be more conducive to assisting received knowers make the epistemological transition to constructed knowing, seemingly so important to the promotion of reflection in the present study.

Conversely, Colin's and Gerry's profiles suggest that, despite their rhetoric, some teacher educators might be discomforted by the challenges of working with constructed knowers who might not concur with, or be prepared to accept, their teacher educators' views. That Colin and Gerry found few opportunities to debate different conceptualisations and ideologies of teaching suggests that there might be some substance to claims that teacher educators tend to limit the plurality of views to which they expose student teachers (Moffett, 1992) and also to accusations that early childhood teacher educators tend to encourage a non critical socio-political outlook (Lubeck, 1996; Battersby, 1989). If so, this might explain, in part, why the current study, like many others, found little evidence of critical reflection. Teacher educators wanting to promote critical reflection, therefore, may need to be more encouraging of vigorous critical debate. They might also need to be more accepting of the epistemological independence of constructed knowers such as Colin and Gerry (Hollingsworth, 1994), and guard against espousing the need for reflection while simultaneously attempting to retain control over that reflection.

**Encouraging A Commitment To Reflection**

The profiles of the participants in the present study indicate that constructed knowers who are committed to teaching require little encouragement to reflect on their teaching. Rather, they require an environment which supports rather than hinders their reflection and assists them to broaden their range of reflective strategies. Student teachers who are less committed to reflection, on the other hand, in addition to the above, may also need to be assisted to see the relevance of reflection and to develop strategies for reflection. For student teachers like Erica, who have little interest in teaching, reflection
could still be promoted as a generic attribute of professional practice, as proposed by Schon (1983; 1987).

As previously argued, the variation in the participants' approaches to reflection evident in their profiles highlights the importance of appreciating individual differences. It also reinforces the need to guard against what Moffett (1994) refers to as the unfortunate tendency for innovations in education to be "proceduralized almost beyond recognition" (p.85). This stance is validated by the findings of the current study that, for the group as a whole, there appeared little relationship between the reflective strategy used and the reflection generated. In other words, there was little indication that any particular strategy was especially effective (or ineffective) in promoting reflection for all student teachers.

On the other hand, where individuals expressed preferences for a particular strategy, their reflection using that strategy was generally more in depth. Most student teachers who preferred discussion to written reflection, for example, typically demonstrated more evidence of reflection in 1:1 interviews or small group discussions than in their reflective writing. The exceptions were those student teachers who had mastered a reflective writing genre but placed little value on reflection.

Generally, the more reflective student teachers found both discussion and reflective writing beneficial, suggesting that, in response to Calderhead & Gates (1993), reflection can be both a collaborative and individual pursuit. With the exception of Jessica, who had a strong preference for discussion, and whose subsequent reflection was noticeably more developed than her written reflection, there was no discernible difference in the depth of their reflection when using either of these strategies. Interestingly, as student teachers other than Jessica became more reflective, they tended to find written reflection increasingly more valuable. Felicity, for example, commented: "I find writing ideas down hard, but definitely beneficial ... Putting ideas down in words, rather than just having them as thoughts floating around - well, it's just one step further on. You see concrete evidence of what your thoughts are" (18/11/96, 162). Most emphasised, however, that they would not have engaged in reflective writing had it not been required and thus would not have discovered its potential.
These findings suggest that teacher educators might be advised to introduce student teachers to a range of reflective strategies, encourage them to use those which they find most useful, but also expect them to explore alternatives. An appropriate balance might be to require participation in group or critical pair discussion (Hatton & Smith, 1995), some form of reflective writing, and some attempt to explore tacit understanding, for example by visual representations or involvement in some form of contemplation. More specific requirements than these, though, might be self defeating if they engender the strategic responses demonstrated by several participants in the present study. Rather, it might be more appropriate for teacher educators to focus on ways to help these student teachers appreciate the relevance of reflection. Assisting all student teachers to find a personally meaningful mode of reflective writing, therefore, might be a more appropriate goal than expecting all student teachers to demonstrate skills and commitment to a particular mode.

Moreover, as previously mentioned, encouraging student teachers to share strategies which they have found helpful might also interest them in experimenting with a wider range of strategies. The power of Sarah's visual images, and Nina's positive experience of relaxation and visualisation sessions, for example, might persuade more student teachers to explore these strategies. Sharing strategies in this manner might also enable student teachers like Kathleen, who struggle to see the relevance of reflection, to develop more understanding of how it might contribute to their teaching, and in turn lead to a greater commitment to reflection.

If teacher educators were to explicitly model the metacognitive strategies which they use to reflect on their professional practice, they might assist student teachers like Kathleen to see how reflection might enhance professional practice (Loughran, 1996; Martinez, 1990). They would need to monitor, though, that their use of modelling, in itself a metacognitive strategy (Loughran, 1996; Smith, 1997) did not inadvertently give student teachers the impression that there is any one particular way to reflect (Fletcher, 1997). Modelling might also help student teachers who feel overwhelmed by the complexities of teaching to realise that teacher educators, too, can be beset at times by uncertainty and feelings of inadequacy associated with teaching (Loughran, 1996). By presenting a less polished veneer of professional competence to student teachers, teacher educators might set the scene for
open and frank discussions of the dilemmas of teaching (Mullin, 1994) and, in turn, promote reflection amongst student teachers.

Establishing A Supportive Environment
As the above discussion indicates, a complex array of factors appeared to affect whether or not the student teachers participating in the current study were likely to become more reflective. Some of these factors, such as commitment (or otherwise) to teaching, are likely to be related, at least in part, to personality, background and past experiences far beyond the scope of preservice programs to influence (Johnston, 1994). Nevertheless, the powerful impact of the learning environment, evident in many participants' profiles but particularly Colin's, suggests that teacher educators might have some sway over the likelihood of student teachers becoming more reflective. In any case, it could be argued that teacher educators, have a responsibility to provide an environment supportive of all student teachers who have the potential to become effective teachers, whether or not they are oriented towards reflection.

Although a majority of participants in the present study perceived their preservice program overall as supportive of their personal and professional development, all considered that there was room for it to become more responsive to their needs as developing teachers. Gerry and Colin, especially, considered that in many respects they had been constrained, rather than empowered, by aspects of the program. The following discussion draws on the participants' perceptions of the program and on the data as a whole, to suggest changes that might lead to preservice programs, generally, being seen by student teachers as more supportive than current environments and thus more conducive to the development of their reflection.

Many of the proposed changes have been discussed elsewhere in this chapter. They include loosening current structural and organisational binds to enable the adoption of a more flexible and holistic, as opposed to a rigid and fragmented curriculum; recognising and catering more effectively for student teachers' individual differences; and promoting deep, rather than surface or strategic learning to facilitate student teachers making connections. Issues not dealt with thus far, but which appear important to address if preservice programs are to foster more effectively the development of reflection in their student teachers form the basis of the following discussion.
The current study suggests that, essentially, a supportive environment is one which fosters student teachers' personal and professional empowerment. In the following discussion, empowerment is assumed to involve student teachers developing a stronger greater sense of identity, purpose and self-efficacy; taking greater responsibility for their actions, their learning, and ongoing development; and finding a coherent, considered and compassionate voice. In short, empowerment is seen as the ability to "rupture the boundaries" (Fielding, 1996, p.412) of former constraints.

Some contend, like Hogan & Flather (1993), that power cannot be "given" or "taken" but develops within the context of a relationship and that, consequently, the quality of the relationship determines the potential for empowerment. Others, like Griffin (1992), argue that empowerment inevitably involves a realignment of power. Given the power differential between teacher educators and student teachers, it could be argued that the former might need to concede some power to provide sufficient initial impetus for a process which might then have the potential to become mutually beneficial.

Conceding power might involve relinquishing any assumptions that learning essentially "means learning to adhere to given practices and standards" (Buchmann & Schwille, 1993, p.25) and acknowledging that requiring student teachers to accept predetermined patterns and imposed connections is likely to interfere with the establishment of their own patterns and connections (Moffett, 1994). Conceding power may also require some teacher educators reconceptualising their role from experts committed to passing on what they see as essential knowledge and skills for effective teaching (Hollingsworth, 1994; Heron, 1992; Britzman, 1991) to facilitators of environments which encourage student teachers to make their own connections. As well as accepting that preparing reflective teachers might be more a matter of internal shaping than external moulding, some teacher educators may need to realise that "the suggestion that reflection can be limited once it is encouraged is mistaken" (McLaughlin, 1994, p.156).

If empowerment is about expanding boundaries, as Fielding (1996) suggests, it might be more useful to conceptualise student teachers' professional development as systemic, or possibly concentric, rather than hierarchical in nature. As noted earlier in this chapter, in the current study, the reflection of
those student teachers who became more reflective was characterised by connections which flowed outwards, moving beyond a focus on self, widening in scope and becoming considerably more complex and interrelated. To assist student teachers to make these connections and expand their boundaries, therefore, it seems that teacher educators should provide space not imposed structures (Hopkins, 1994; Buchmann & Floden, 1993). In Barnett’s (1994) words, an environment supportive of reflection "requires that students be given ... space in which to form their own insights ... ideas and judgments and take up their own stances" (p.118). As Moffett (1994) more poetically writes "each life weaves its own web" (p.338). It could be argued, therefore, that teacher educators who leave insufficient scope for student teachers to weave their webs should hold some responsibility for any ensuing distortion.

The present study also suggests that, as well as space, student teachers require time to establish connections. Many participants were perturbed by lack of time for reflection, with Gerry, for example, commenting:

As I said before, there are lots of things that I’m constantly reflecting on. There are so many decisions to make and so much to sift through. But I honestly feel that my reflections could be much more insightful and broad ranging, but I just don’t have the time to do that. (17/12/96, B117)

His comments suggest that teacher educators might need to rethink use of time and to assume more responsibility for ensuring that the environment enables student teachers to focus on more than simply strategic responses to survival concerns (Martinez, 1990). While more time, in itself, would not have made student teachers like Erica more reflective, it might have contributed to an environment in which they were more likely to become more reflective.

To make use of space (and presumably time) requires confidence (Barnett, 1994). The sense of self-efficacy of the more reflective participants in the present study, far less apparent in those who were less reflective, supports this assertion. As noted previously, confidence appeared to provide the former with courage to explore new ideas and possibilities and the inner strength to live with the inevitable uncertainties and incoherencies arising from these explorations. In contrast, like Josephine, many of the less reflective participants lacked the confidence to explore possible connections. Constrained by what they perceived as “the intimidating weight of authority” (Barnett, p.118), their focus was survival rather than growth. Inevitably, as Mayer & Goldsberry (1993) also noted, survival was at the expense of
reflection, or as Gerry put it: "Self esteem lets you move out of survival mode and into the more creative parts of teaching" (17/12/96, B72).

The perceptions of vulnerability held by many student teachers highlighted the need for an environment perceived by student teachers as nurturing. On the other hand, for growth to occur, tension is also essential (Leat, 1995; Buchmann & Floden, 1993; Day, 1993; Mayer & Goldsberry, 1993). Finding an appropriate balance can be difficult (Chickering & Reisser, 1993), especially given individual differences in tolerance of tension and need for nurture. Kasey, for instance, resented a cooperating teacher setting tight parameters for her practicum whereas Marina, in a similar situation, was equally resentful about what she perceived as lack of parameters. Like most other less reflective participants, Marina seemed to find it difficult to accept that some confusion, discomfort and risk-taking is inherent to professional development (Hollingsworth, 1994). As argued previously, preservice programs must find ways to support received knowers such as these while encouraging them to embrace uncertainty and challenge. That is, they must strike a balance "between chaos in which all is lost in confusion, and order in which all is lost through calcification" (Reason, 1993, p.281).

The current study identified many instances of seemingly well meaning but misguided support. Several of the most reflective participants, for example, reported that some teacher educators insisted that they adopt specific formats for reflective writing that these student teachers had used previously and found unhelpful. Their teacher educators' lack of flexibility suggests that they saw reflection more as a procedure than a process. Moreover, Gerry's perception that his willingness to reflect on his difficulties was interpreted as an admission of his inadequacies, if accurate, suggests considerable misunderstanding about the purpose of reflection. These participants' experiences highlight the need for teacher educators to be well informed about reflection and sensitive to individual differences in approaches to reflection (O'Donoghue & Brooker, 1996; Calderhead, 1992). They also highlight the difficulties teacher educators encounter in reconciling their responsibilities as gate keepers to the profession while attempting to promote student teacher reflection (Calderhead & Gates, 1993).

The experiences of several participants suggest that cooperating teachers, too, may need a greater understanding of the purposes and processes of
reflection if they are to support student teachers' reflection in practicum contexts. Given that traditionally schools and, by implication early childhood settings, are often considered places of action rather than reflection (Smith, 1997; Calderhead & Gates, 1993) and teaching is frequently seen as "a profession that prizes answers rather than questions" Richert (1995, p.5), this expectation might be unrealistic. If practicum contexts are unlikely to support reflection, it could be argued that teacher educators must be particularly careful to provide an oncampus environment which supports student teachers' reflection.

CONCLUDING COMMENTS
This chapter has identified and discussed six key issues arising from the present study: namely the individuality of student teachers; the emotional intensity of learning to teach; the complexity of reflection; the centrality of establishing connections; and the ongoing difficulties of identifying reflection. Factors identified in the previous three chapters as instrumental in influencing the development of reflection were also discussed in depth. Two broad categories of implications for teacher educators and researchers into reflection emerge from this discussion.

First, teacher educators may need to provide an environment which is more conducive than current preservice programs to reflection if they are to be more effective in promoting reflection in student teachers. The findings indicate that such an environment would acknowledge, value and attempt to cater for student teachers' individuality; recognise the complexities and uncertainties of learning to teach; establish an appropriate balance of security and risk, nurture and challenge; provide time and space to learn from and reflect on experience; and seek to enhance student teachers' holistic "meaning-making capabilities" (Kalamaras, 1994, p.29).

Second, the complexity of reflection highlights the need for a conceptualisation of reflection which encompasses a diversity approaches; recognises reflection as a holistic process; and does not disallow aspects which cannot be discretely identified and measured. Future studies might also be advised to focus more on the connections inherent to reflection, rather than on the fragments which have preoccupied many previous studies.