A CASE STUDY OF THE IMPLEMENTATION OF A
CONSTRUCTIVIST PROFESSIONAL DEVELOPMENT PROGRAM

By

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ABSTRACT

This study begins with a perceived crisis of confidence in professional knowledge. The traditional, positivist, "theory into practice" approach to the development of a professional knowledge base has been found to be unable to satisfactorily explain expert action—especially in situations of complexity and ambiguity such as those routinely found in teaching. Much recent literature, however, has taken the approach that professional knowledge must be constructed by the practitioner in the context of the practice. In this view, theory is developed from practice by reflecting on one's action-related knowledge. Unfortunately, because they tend to be intellectually isolated and routinely having to deal with many clients at once, teachers have few opportunities to use this approach.

The problem addressed in this study is how to provide a professional development experience which fosters reflective activity and the personal construction of knowledge by teachers within the context of their classroom practice. The primary theoretical perspectives which underpin this study are those of "constructivism", in which learning is viewed as an active process of constructing concepts by connecting new information with prior knowledge, and "reflection as reconstruction of experience" in which reflective activity is seen as a way of reconstructing understandings within the context of practice.
These perspectives, together with a brief review of related literature regarding reflection within the teaching profession, provide the theoretical framework of the study.

The study consists of a case analysis of a professional development activity which was designed to promote the reflective activity of teachers. The activity gave two participant teachers an opportunity to observe and discuss videotaped recordings of each other's practice over a period of several months. The resultant discussions were audiotaped by the investigator and transcribed for analysis. Informal examination of transcripts and analysis of metaphor were used to identify elements of teacher knowledge. Instances of reflective activity were identified using a "clue structure" or set of criteria. The study concludes that elements of teacher knowledge can be identified in a such a discussion of teaching practice, that instances of reflective activity were evident during the time period of the study, and that the professional development activity was perceived by the teachers as being of personal benefit.
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FOCUS OF THE STUDY

Introduction

According to Schon (1983), there is presently a crisis of confidence in professional knowledge. The positivist "theory into practice" approach to the development of a professional knowledge base has been unable to satisfactorily explain expert action, has seen many failures in situations of complexity and has contributed to professional pluralism. Schon, along with others (see Kuhn, 1970; Novak, 1984) suggests that practitioner knowledge is intimately tied to the professional action itself and that a knowledge base must be constructed by the practitioner in the context of the practice. Previous action provides examples or "exemplars" which can be used to frame or make sense of new situations, and the competent practitioner seeks to develop an ever-increasing repertoire of exemplars to guide subsequent actions. In other words, we must develop theory from practice, rather than practice from theory. To do so, the practitioner's action-related knowledge must be made explicit, reflected upon and shared with others.
Unfortunately, teaching, a profession which routinely involves a single practitioner interacting with dozens of clients at once, is not one which lends itself to the activities of self-observation and reflection, nor does it provide ready opportunities for the articulation of personal knowledge and the sharing of that knowledge with other practitioners (N. Garman, 1986). Indeed, Gilliss (1988) states that the time and energy constraints on the classroom teacher (and support persons such as administrators and supervisors) are such that reflection must "apparently await some more enlightened future, when there is time as well as intention".

What may be needed are professional development activities which are specifically designed to facilitate the development of theory from practice, and which supports the personal construction of knowledge by the participant practitioners. It is the intention of this study to document the implementation of such an activity (which I will call a Peer Study Program) and, in the process, to reveal elements of the knowledge base and reflective activities of two participant practitioners.

Rationale For The Study

The problem is how to provide a professional development activity for teachers which focusses on the knowledge which a teacher already has, the sharing of that knowledge with others, and the reflective process which is fundamental to the construction of knowledge. As outlined later in this chapter and
more fully in chapter two, Schon (1983, 1987) suggests that professional knowledge is largely tacit and that it is embedded in the process of performing the action itself. The practitioner may be able to perform an action, but find it difficult to consciously articulate the knowledge that supported that action. Schon's conception of reflective activity is that it is a way of reconstructing understandings within the context of practice (Grimmett, 1989). The practitioner is seen by Schon as "engaged in a kind of reflective transformation of experience" (Schon, 1990, p. 25) during which prior understandings of practice are reconstructed. It is reflection in this sense—the "reconstruction of experience" (Grimmett, P.P., MacKinnon, A.M., Erickson, G.L. & Reicken, T.J., 1987)—that the program developed in this study is intended to promote.

In "Reflection: The Heart of Clinical Supervision", Garman (1986) outlines a rationale for educational practice which links clinical supervision and knowledge-generation to the professional orientation of teachers. She sees the function of the clinical supervisor as "providing the teacher with collaborative help that encourages the teacher to become the primary knowledge generator" (p.18). This is done by reflecting carefully on "stable versions of the experience" such as written, audio or video recordings of classroom action. In this way, the teacher may be able to articulate and understand the rationale which he or she holds for action and, thereby, gain an improved understanding of the
practice. Garman does, however, recognize that her conception of the way to foster reflection requires time and trained supervisors. She concedes that,

For the present it may also be important to encourage colleagues to engage in the process, for one colleague to take on the role of clinical supervisor, with both colleagues agreeing to muddle through together at first (p. 23).

The intent of the program developed in this study is to offer teachers an activity which uses stable recordings of classroom action to foster reflection on that action, but which doesn't require the support of supervisory personnel. Instead, as alluded to by Garman, a teacher may be able to effectively support the reflection of another by questioning the meaning, motives and consequences of observed action. Polanyi (1958) suggests that the way to come to an understanding of other people's actions is to participate in the life of the person we want to know. We have to "identify" with the person by observing his or her actions in context and consulting with him or her as to what happened and why. It is this process of observation and consultation in order to make professional knowledge about teaching explicit and communicable that this investigator hoped to foster and to document in this study.
The Research Questions

1. Can elements of the participant teachers' knowledge base be identified from dialogue which occurred during the Peer Study Program? More specifically, can classroom events, issues or themes be identified which seem to be of importance to the teachers? What is the nature of these issues (if any), and how do the participants talk about them? Can inferences be made about the teachers' personal images of teaching and learning?

2. Can one observe evidence of 'reflection-on-action' as the teachers attempt to make sense of observed practice? More specifically, when teachers reflect upon classroom action, will there be evidence of new and fresh appreciations (understandings) of the phenomena? Will the teachers indicate an awareness that prior understandings may be inconsistent with their present practice (and, consequently, need modification)? Over the period of the study, will there be evidence of the activity of reframing phenomena?

3. Did the Peer Study Program provide teachers with an opportunity to examine their practice in a way which they, themselves, consider to be of value? More specifically, can classroom actions be recorded and reflected upon by teachers within a normal school setting in such a way that they find the experience interesting and useful? At the conclusion of the study...
will they express the opinion that the program influenced the ways in which they perceive their practice? Will they want to participant in this program (or a similar one) again?

As part of the process of documentation, this study is written in a contextually rich fashion so that what might emerge is a story in which the teacher "characters" can be understood by the reader well enough to be "identified with" and, potentially, to have value as exemplars (or generative metaphors) which could be used to add to the readers' repertoire. Erickson (1988) describes the potential value of a research program which uncovers and makes explicit the preferred language and exemplars used by teachers to describe and make sense out of classroom phenomena as:

...legitimizing or "giving reason" to teachers' knowledge and contributing to the knowledge base upon which many teachers stand... (p. 205).

Theoretical Perspectives of the Study

There has been a shift in view among many investigators in education from a positivist, theory-into-practice perspective to a constructivist, practice-into-theory point of view (Roberts, 1982). Rubin (1985) and Schon (1983) suggest that much of the artistry of teaching lies in the connection between tacit professional knowledge, expert action in the practice setting,
and reflection on that action. Knowledge is constructed when the learner ascribes personal meaning to observed events by finding relationships which integrate the new and the known. This is accomplished by reflecting on the phenomena so as to see the new situation in the light of a learner's repertoire of prior knowledge and previous experience (exemplars) (Kuhn, 1970). In fact, it is the opinion of constructivists that much educational theory must arise from, rather than precede, educational practice.

There are, however, a variety of conceptions of the process of reflection, and of the role which it plays in the construction of knowledge (Grimmett, P. et. al. 1987). This study and its analysis will be guided by Schon's conception of reflection which is characterized by Grimmett (1988):

Clearly, the context of Schon's conceptions of reflection is constituted by action settings which precipitate puzzles or surprises for the professional practitioner. His focus is on how practitioners generate professional knowledge in and appreciate problematic features of action settings (P. 24).

Grimmett labels this perspective as "Reflection as Reconstructing Experience" (Grimmett, 1989) that leads to new understandings of action situations, self-as-teacher, and taken-for-granted assumptions about teaching:

For each of these aspects, the source of knowledge
for reflection is the context of the action setting and the practical application of personal knowledge. Puzzlement and subsequent reflection about a practice situation lead to a mode of knowing that could be described dialectical. Practitioners become knowing when they engage in a conversation with either the situation or the presuppositions that guide action in a practice setting. In this view of the reflective process, knowledge is emergent and often depicted as metaphorical...In this perspective, knowledge, including personal understandings of practice situations, transforms practice (P.22).

The conception of the reflective process as the building of personal understandings within the context of practice has implications for the professional development of teachers. It suggests that an effective professional development program should involve teachers in observation of their own practice, reflection upon the meaning of their actions within the context of their practice, the sharing of perceptions with other teachers, and the formulation of new conceptual relationships which can guide future actions in the classroom. Schon (1983) expresses the concern that the practitioner who does not have the benefit of the sense-making of others may become trapped by habitualized routines:

A practitioner might break into a circle of self-limiting reflection by attending to his role frame, his interpersonal theory-in-use, or the organizational learning system in which he functions. Whatever his starting point, however, he is unlikely to get far unless he wants to extend and deepen his reflection-in-action, and unless others help him see what he has worked to avoid seeing. (p. 283)
A number of researchers offer clinical supervisory programs as viable opportunities to promote the reflective practice of teachers (Garman, 1986a; Costa and Garmston, 1985; Turner-Muecke et al., 1986). In these programs, the reflective activity of teachers is seen to be facilitated by the clinical supervisor (who is generally an administrator). As presented in Chapter Two in more detail, many of these programs give evidence of success. Unfortunately, they are labour-intensive and are not broadly used (Goldsberry, 1985).

Peer supervision or peer coaching programs provide an opportunity to observe and to share student and teacher actions which may otherwise be hard to perceive during the actual lesson and offer the alternate perspective of the observer. However, they generally do not address the meaning of the classroom action in terms of the reasons behind them, nor the need to integrate new information with that already held by the teacher involved (Costa and Garmston, 1985; Goldsberry, L., 1988). In order to build new knowledge, the teacher must make the connections between what he or she wanted to do, what was actually done, what might have been done, and what could be done in the future.

Many researchers now suggest that teacher professional development may be supported by teacher interaction. Leiberman (1986), in describing teacher collaboration teams for research
and development, reports that team membership unites teachers and encourages collegial interaction in a way which facilitates reflection and action. Teacher members of such teams tend to feel a greater sense of empowerment in terms of their ability to understand and to influence their professional environment. Turner-Muecke, L., Russell, T. & Bowyer, J. (1986) offer the notion of "reciprocally reflective" interactions between teachers (p. 49) as a way of approaching a "truthful reality" with respect to the meaning of observed classroom actions. "Reciprocally reflective" interactions are "sequences of observations and conferences, coupled with reflection by both parties" (p.48) which decrease the likelihood of misunderstandings between observers and those observed.

Taken together, the work of Leiberman and Turner-Muecke et al. provide an argument for a professional development program which places teachers together in teams for the purpose of observing and reflecting upon each other's practice. This is the intention of the "Peer Study Program" which is the basis of this thesis.

Methods of the Study

Two secondary teachers who had participated in a peer supervision workshop prior to this study were invited to participate in this project. The Peer Study Program itself involved both teachers watching a videotaped lesson which was taught by the one of them. There was no "pre-conference", 
agreement or expectation regarding what the observer would be attending to during the lesson. The observer simply observed with the goal of coming to as accurate and comprehensive an understanding as possible of the 'reasons' which underlay the teaching episodes which were observed. The observer asked questions, ventured guesses and compared personal views of the circumstances with those of the observed teacher during the viewing of the videotape. The teachers' roles were alternated each successive week so that each teacher was observed at least three times over a two month period, and the resulting discussions between the two teachers were audiotaped by the investigator for later transcription, documentation and analysis.

The documentation of teacher knowledge was approached by conducting an informal search of the dialogue transcripts for issues or themes which seemed to be important to the participants. These themes were subsequently considered in light of an analysis of the teachers' use of metaphorical words and phrases (Munby, 1986, 1987). The attempt was then made to infer something of the participant teachers' personal images of teaching and learning. The kind of knowledge referred to as images were similar in kind to those conceptualized by Connelly and Clandinin (1985) and Elbaz (1981).

Analysis of the data for reflection which reconstructs understandings used an approach offered by Roberts and Russell (1975) in An Alternative Approach to Science Education Research: Drawing from Philosophical Analysis to Examine Practice. The
theoretical perspectives of "constructivism" and "reflection as reconstruction of experience" were applied to the transcriptions of teacher dialogue. This was done by means of a clue structure which was designed to detect teacher reflection as characterized by these perspectives.

Overview of The Thesis

This document is presented in five chapters. In the remainder of Chapter One, the choice of approach and conceptual orientation are justified and the data collection and analysis procedures are briefly described. Chapter two consists of a review of the literature dealing with constructivism, Schon's notion of reflective practice, and recent educational literature on promoting the kind of reflection which Schon describes. Chapter three discusses the methods of the study. Chapters four and five document the results as case-study analyses of each of the two participant practitioners by documenting teacher knowledge in the forms of exemplars, metaphors and images. These chapters, each of which deals with a single teacher, identify instances which are claimed to represent a form of reflection where the teachers are reconstructing their pedagogical understandings. Finally, in Chapter Six, the conclusions are presented, the limitations of the study are discussed, and recommendations are made for further research.
Summary

If credence is given to the world view that knowledge is actively constructed by the learner in the context of its use, it follows that teachers must interact with learners in ways which support such construction. Furthermore, the teacher will construct (and reconstruct) his or her own knowledge during these interactions. A scheme has been proposed which may provide teachers with opportunities to reflect upon their actions and interactions in the classroom. This study allows two participant practitioners opportunities to "give reason" (Schon, 1983) to each other and, in the process, make explicit some of their practical knowledge and reflective activity. In Chapter Two, a review of the literature dealing with the notions of constructivism and teacher reflection is undertaken.
Chapter 2

REVIEW OF RELATED LITERATURE

The purpose of this chapter is to review the literature pertaining to the two main theoretical perspectives which underpin this study, "constructivism" and Schon's notion of "reflective practice", and then to draw together recent literature on promoting reflective practice in education.

Constructivism

Constructivism is a theoretical perspective, or "world view" (Pepper, 1942), which conceives of learning as a process by which knowledge is constructed by learners who actively "seek meaning" in the phenomena before them. To do so, they integrate or link a new piece of information with elements from their prior knowledge structure (Ausubel, 1968) to construct new understandings. These new constructions are tested against experience and, if necessary, modified. Kegan (1982) argues that it can be conceived of as a type of developmental process in
the construction of personal knowledge—as a progressive construction of increasingly viable descriptions of phenomena that we come into contact with in our own unique physical and social world. The "result" of learning (as seen by this perspective) is described by Driver & Oldham (1986):

Put simply this perspective acknowledges that individuals construct 'models' or 'schemes' which are used to interpret their experiences...These 'models' or 'schemes' are seen to be structured entities (of varying complexity). An individual's knowledge, therefore, is not considered as a set of discrete 'bits' but as a series of structures and learning involves the development and change of such structures (p 107).

Novak (1984) suggests that "construction of new knowledge begins with our observations of events or objects through the concepts we already possess" (p.4). and that,

By the time children begin school they have acquired a network of concepts and language rules that play crucial roles in subsequent school learning. Children also learn methods for organizing events or objects that enable them to see new regularities and in turn to recognize the labels that represent those regularities (p. 5).

He is suggesting that learning entails the constructing of new relationships between what we already know and what we wish to learn by recognizing regularities which connect or unify the new with the old in some way. Kuhn (1970), in an account of how scientists address and solve problems, provides us with a notion of how this might be done. He argues that their knowledge of their practice comes from learning to see new, problematic situations as resembling others in their experience. A previous
problem solution, or "exemplar" is used to generate an appreciation of similarities and differences between the new situation and the old so as to provide an approach toward the solution of the new one. In the process, the practitioner's previous understandings may be modified or "reconstructed".

Schon's Notion of Reflective Practice

In The Reflective Practitioner: How Professionals Think in Action, Donald Schon (1983) puts forth an epistemology of professional practice which intimately ties professional knowledge to the context of the professional action itself. Like Kuhn, Schon rejects the technical rationalist view that professional action is a matter of the technical application of theory to practice. According to Schon, much of what people do which requires such activities as recognition, judgment and physical skill is done in a spontaneous and intuitive fashion. This is particularly true of the practitioners of a profession. He suggests that for such practitioners, there is a kind of knowledge which is manifested in their actions within the context of practice or, as described by Kilbourn (1987), "embedded in the act of doing". This knowledge is considered to be largely tacit, and is called, "knowledge-in-action".

To help him describe it, Schon refers to Chester Barnard's (1938) discussion of the "non-logical thinking processes which
are not capable of being expressed in words or as reasoning, and which are only made known by a judgement, decision or action" (p.51). He also relates Birdwhistell's (1970) observations that "in some cases we were once again aware of the understandings which were subsequently internalized in our feeling for the stuff of action. In other cases, we may never have been aware of them. In both cases, however, we are usually unable to describe the knowing which our action reveals" (p. 54).

If "knowing-in-action" is subconscious performance which can be referred to as being "in the groove", how does one "find the groove"? Schon describes baseball players who adjust their performance while they are performing:

(You get) a special feel for the ball, a kind of command that lets you repeat the exact same thing you did before that proved successful. Finding your groove has to do with studying those winning habits and trying to repeat them every time you perform (p. 54).

Schon calls this performance adjustment while performing, "reflection-in-action" and uses metaphor to help him describe it. Phrases like "thinking on your feet", "keeping your wits about you", "learning by doing", and using a "feeling for the situation" all suggest that reflection-in-action is a way of modifying one's knowing-in-action without separating thinking from doing. He argues that it is a kind of "change of knowing" (p. 59) which can occur quickly or slowly (depending on the rate of action), involves reflection on "the phenomena before (one),
and on the prior understandings which have been implicit in (one's) behavior", and requires experimentation to "generate both a new understanding of the phenomena and a change in the situation" (p. 68).

Additionally, a practitioner may also "reflect-on-action" and "reflect on reflection-in-action." In these cases, the practitioner surfaces the tacit understandings that were built from previous experiences (surfacing, criticizing and restructuring the thinking spontaneously used). This can happen in the "action present" in a brief "stop and think", or it can occur after the action is over as postmortem or debriefing session.

Using the processes of reflection in and on action, the practitioner builds a "repertoire of examples, images understandings, and actions." This repertoire, in a manner similar to that described by Kuhn, supports the approach of new situations by providing a "precedent, or a metaphor, or an exemplar for the unfamiliar one" (p. 138). The practitioner sees elements of the unfamiliar as elements of the repertoire and "derive (by seeing as) a way of framing the present, unique situation." He tries, then, to "shape the situation to the frame" (p. 141). This leads to the production of unintended changes which give the situation new meaning. The practitioner then reframes the situation and conducts an experiment which tests the
usefulness of the frame in terms of its ability to structure the practitioner's understanding of the situation in such a way as to solve associated problems.

At some point in the framing and reframing of a new situation, a practitioner may "have constructed an interpretive synthesis which accounts for and ties together the several stories he has elicited. He has made something coherent, congruent with his overarching theory, and susceptible to test by intervention (p. 152)."

Schon, therefore, offers a constructivist epistemology of practice in which practical knowledge is both manifested and constructed in the context of practice. This occurs by appreciating phenomena in the light of a conceptual repertoire of exemplars, images and actions, constructing appreciative frames which structure the new information, experimenting within the context of the practice, and, ultimately, reconstructing the practitioner's appreciative system (way of seeing).

Reflection as Reconstruction of Experience

The remainder of Chapter Two serves to review recent literature which deals with reflective practice and how it might be promoted. This section of the chapter approaches the literature using an organizational scheme proposed by Grimmett, MacKinnon, Erickson & Riecken (1987) to categorize conceptions of
reflection. In this scheme, studies involving teacher education are grouped according to the "perspectives" which they appear to adopt with respect to the roles and purposes assigned to a knowledge base in the reflective process. The first category is "reflection as instrumental mediation of action" within which are grouped studies which represent a concept of reflection as being a process that directs conscious, deliberate action. In this conception, reflection provides for the "application" of theory to practice in a positivistic sense.

The second category is "Reflection as Deliberating Among Competing Views of Teaching". This category includes studies which propose conceptions of reflection as the means by which the practitioner chooses from among options for action. The reflective process, then, allows for theory to inform practice.

The third category of literature on reflection in teacher education includes conceptions of "Reflection as the Reconstruction of Experience". In this category are conceptions of reflection as reconstructing (1) understandings of action situations, (2) understandings of self-as-teacher or the cultural milieu of teaching, or (3) understandings of taken-for-granted assumptions.

Grimmett (1989) describes this third category of conceptions of reflection as being consistent with Schon's:

(Schon's) view of reflection is not concerned with a
conscious thoughtfulness designed to mediate (if not sometimes impede) action: he is not specifically encouraging practicing teachers to deliberate among competing views of what research suggests constitutes effective teaching. Rather, he regards reflection as the reconstruction of experience—not primarily for purposes of explicating the cultural milieu of the teacher's world or taken-for-granted assumptions and humanly constructed distortions embedded within the social, political, and moral context of schools—but for purposes of apprehending practice settings in problematic ways (p. 24).

Schon, himself, (1988) describes an exemplary instance of reflective activity in which:

In my terms, they were engaged in a kind of reflective transformation of experience. They were engaged in a kind of "seeing" and "doing" as—seeing their own situation as a version of the one they had observed, doing in their own situation as they had seen the PDP people do. In the original sense of the word metaphor—from the Greek meapherein, to carry across—they were engaged in a process of metaphor, carrying a familiar experience over to a new context, transforming in that process both the experience and the new situation (p. 25).

It is clear that Schon conceives of reflection as a way of reconstructing understandings within the context of practice. Consequently, for the purpose of this study, which uses the two perspectives of constructivism and Schon's conception of reflection as it's twin platforms, literature which express a view of "reflection as reconstructing experience"—particularly with respect to promoting reflective activity in experienced teachers—will be examined more closely.
Artistry in Teaching Reports

An area of the literature which is consistent with the notion of reflection as "reconstructing experience" includes those articles which frame teaching as an artful and creative endeavour (see Rubin, 1883, 1885; Eisner, 1983; Shulman, 1987; Trumble, 1986a; Zahorik, 1987). For example, in "Artistry in Teaching" (1983, 1985), Louis Rubin presents a view of professional knowledge which complements Schon's and which emphasizes the artistry of the act of teaching. He describes artistry as "blending attitudes, intentions, knowledge and discernment into an integral force" (Rubin, 1987, p. 47) and recommends professional development activities which foster artistry in the classroom. He believes that such activities must involve: accurate perception of instructional phenomena, intuitive decision-making, spontaneous adjustments in procedure, and the invention of tactics to fit special needs. Eisner (1983) states that the art and craft of teaching are such that there can be no rules other than "rules of thumb." He defines these "rules of thumb" as schematics that support interpretation and judgment.

Trumble (1986a) examined how experienced teachers worked through a microcomputer simulation of classroom problem situations and recorded the teachers thoughts on audiotape. Her focus was on two aspects of Rubin's (1985) conception of teaching
artistry: perception and intuition. She found that her two participant teachers had very different ways of looking at students and that she was able to document facets of exemplars and a "clear indication of some of the personal constructs of the teachers" (p. 120). She also suggested that the use of videotape might provide a more effective means of eliciting these exemplar facets. Her conclusion was that the responses of the teachers illustrated that perception, as a meaning-making process, is influenced by the theories-in-use, experiences, and tacit knowings the perceiver holds, and that the teachers' responses could be viewed as concrete expressions of their existing knowledge.

Reflection and Clinical Supervision Reports

A number of theorists view clinical supervision as a device for promoting reflective activity which reconstructs experience. These authors conceive of the role of the clinical supervisor as generating awarenesses that the teacher did not have before so as to promote metacognition in teaching (See Joyce and Shovers, 1982; Costa and Garmston, 1985; Cruickshank & Applegate, 1981; Goldsberry, 1986, 1988; Goldsberry and Nolan, 1982; Zimpher & Howey, 1987).

Garman, in Reflection, the Heart of Clinical Supervision: A Modern Rationale for Professional Practice (1986a) exemplifies this group of papers. It outlines a rationale for educational
practice which links clinical supervision and knowledge-generation to the professional orientation of teachers. Her reference to "clinical supervision" stems from the work of Cogan (1975) who coined the term in reference to a supervisory practice which models that of the medical profession. Her conception of reflection is as a "search for the underlying rationale inherent in the experience as well as for the meaning, motives, and consequences of the action..." (p. 14). She believes personal empowerment to be the "essential ingredient" for a professional orientation (Garman, 1986b) and suggests that "it may be important to encourage colleagues to engage in the process, for one colleague to take on the role of clinical supervisor, with both colleagues agreeing to muddle through together at first."

Reporting an analysis of a series of conferences between a teacher and her supervisor, Turner-Muecke, Russell & Bowyer (1986) apply Schon's conception of reflection-on-action to the processes of clinical supervision. They conclude that,

In an interpersonal activity such as supervision, in which the data for discussion are obtained by one party observing the other, it is only too easy for the supervisor, trying to reframe and resolve a puzzle, to connect items in a causal sequence and be wrong. Sequences of observations and conferences, coupled with reflection by both parties, seem to be one good way to approach some kind of truthful reality (p. 48).

Turner-Muecke et. al. call these sequences of observations and conferences, "reciprocally reflective" interactions.
Costa and Garmston (1985) view reflective activity as the third of four stages of decision-making in teaching: Planning (the preactive stage), Teaching (the interactive stage), Analyzing and Evaluating (the reflective stage), and Applying (the projective stage). They describe the reflective stage of supervision as consisting of reflecting upon, analyzing and judging teaching acts performed in the immediate past. In their view, it is the role of the supervisor to facilitate the performance of all of these phases.

As can be seen by these preceding studies, clinical supervisory models appear to hold some promise for promoting the kind of reflective practice that is conceived by Schon. Unfortunately, most supervisory practice appears not to have adopted this perspective. Goldsberry (1988) holds the opinion that clinical supervision has only minimally influenced supervisory practice. Most supervision is summative, as judged by a once-a-year observation, and does not promote the reflective activity of teachers. Consequently, there is a body of literature which views the promotion of reflective practice from the perspective of cooperation and collaboration among teachers themselves.

Reflection and Teacher Collaboration Reports

In this, the final area of literature to be examined in this
chapter, reflective activity in teaching is separated from supervisory practice. Teachers are encouraged to collaborate so as to promote each other's reflection—without the facilitation of someone in a supervisory capacity. Indeed, Smyth (1988) suggests that clinical supervision, as originally conceived by Cogan (1973) and Goldhammer (1969), has been distorted from a way for teachers to improve practice to a way for others to evaluate teachers. Smyth states that,

Clinical supervision, as originally conceived, is a process that enables teachers to question taken-for-granted assumptions about their own teaching... through collaboration and non-evaluative dialogue, teachers can employ clinical supervision as an educative way of uncovering the historical antecedents of actions that live on in the present as contemporary contradictions that impede and frustrate change" (p. 156).

Glickman (1985) sees the role of the supervisor as creating the professional environment for teachers to reflect on their work, "To improve instruction, we must reshape the work environment of teachers into one that is conducive to reflective and collective dialogue among staff members who are given power to act upon their decisions" (p. 40). He, along with others (see Eisner, 1983; Leiberman, 1986, 1988; Sergiovanni, 1985;) see the need to develop a culture within schools which values and promotes reflection.

Wildman and Niles (1987), suggest there are seven needs which must be met in order to foster reflective activity in teachers. According to them, teachers must have observational
descriptions of classroom events to reflect upon, the skills to obtain and express classroom descriptions, control of the reflexive process, administrative support, a "safe environment for disclosing one's beliefs, time for reflection and collegial support and respect for teacher's knowledge. With respect to the need to have "observational descriptions of classroom events to reflect upon", videotape was considered a "stable version of experience" by Garmon (1986) and, as such, an appropriate method by which to observe and record classroom events.

As an example of a way for teachers to promote one-anothers' reflective activity, Showers (1985) states that peer coaching facilitates the transfer of training for classroom application, and develops norms of collegiality and experimentation. She encourages the restructuring of schools to support the development of peer coaching teams to: 1) build communities of teachers who continuously engage in the study of their craft, 2) develop the shared language and set of common understandings necessary for the collegial study of new knowledge and skills, and 3) follow-up training. Her work is supported by that of Little (1982) who found that when teachers engage in frequent, continuous, concrete, and precise talk about teaching practice, they build a shared language that can adequately describe the complexity of teaching (p. 331).

With the goal of developing reflective teachers, Pugach and
Johnson (1987) created a four-step, "Peer Collaboration Project". This project required teachers to: 1) engage in self-questioning and responding to clarify a problematic situation, 2) summarize the situation in a specified fashion, 3) develop alternatives for action and select one for implementation, and 4) develop a plan to evaluate the selected action. The results of the project indicate that teachers gained a greater understanding of classroom situations in terms of the student's view and the teachers' range of alternatives for action.

MacKinnon (1987) developed a systematic technique for detecting "reflection-in-action" among preservice teachers in a clinical supervisory context. He combined Schon's conception of reflection-in-action with Fuller and Brown's (1975) developmental conception of teacher concerns to construct a "cycle of reflection" as an analytic scheme. With this scheme, a clue structure was developed to identify instances of the teachers' reflective activity:

Clue 1: Can the phases of the reflective cycle be "seen" in the dialogue? Is there a period of reframing?

Clue 2: Is there evidence of a change in the perspective from which the classroom phenomenon is viewed? Specifically, does the teacher make a shift from using teacher-centered to using student-centered interpretations of the classroom event?
Clue 3: Does reframing result in a change in the conclusions about the problematic phenomenon or in the implications that are derived for practice? That is, is there a change in the "I should have's?"

Clue 4: In the course of reframing, does the teacher draw from his or her personal experience as a student to make sense of the pupil's position?

MacKinnon concluded that preservice teachers can reflect under those circumstances, and that the clue structure effectively detected reflection-in-action.

In similar studies, Grimmett (1984, 1987) and Grimmett and Crehan (1987) found that only when both the teacher and the supervisor are functioning at a high conceptual level do they engage in reflective activity which leads to new insights with respect to the teacher's lesson.

In Classroom Practice: Teacher Images in Action, by D. Jean Clandinin, (1983) notions of a personal understanding of the practice of teaching are examined. This is done by encouraging teachers to articulate the private images they have when engaged in practice. These images are seen as complex metaphors which are aggregations of self-understanding. In Clandinin's conception of
reflection, these images are made explicit and available for examination by reflective activity. In effect, reflection makes the practitioner's experiential history available for use in practice.

Elbaz (1981) reports a case study of one teacher's practical knowledge in which she argued that contextual circumstances influence the teachers' practice. She described the decision-making of the teacher in terms of deliberation using "rules of practice" and "images". She conceives of images as, "brief metaphoric statements of how teaching should be", and which, "marshals experience, theoretical knowledge, and school folklore to... guide the teacher's thinking and to organize knowledge in the relevant area" (p. 61).

Drawing from a similar conception of practical knowledge, Sanders & McCutcheon's (1986) paper presents the notion of "practical theories of teaching" which are developed by teachers and which are the conceptual structures that guide teachers' action. They suggest that these practical theories of teaching, as with Oberg's (1986) conception of images, can be examined through reflecting on practice.

Using Schon's (1983) notion of the "generative metaphor" as a device for understanding teachers' knowledge, Munby (1985, 1986, 1987) examined teachers' use of metaphor and "figures of
speech". He reports that teachers' language is full of metaphor, and that their recurrence in teachers' speech represents a "typical, constant, and coherent way of speaking about professional concerns" (Munby, 1987, p.378). According to him, a teacher's use of metaphor "gives tacit knowledge voice" (Munby, 1986, p. 198), and the "unpacking of the metaphorical content of her speech seems to point directly to how she 'sees' teaching" (Munby, 1986, p. 206). This work builds on that of Lakoff and Johnson (1980) who argue that, "the human conceptual system is metaphorically structured and defined. Metaphors as linguistic expressions are possible precisely because there are metaphors in a person's conceptual system" (p. 6).

In a program of research involving teacher's use of metaphor, Russell, Munby, Spafford and Johnston (1990) suggest that metaphors which teachers use in discussions of practice seem to express their theoretical perspectives and, in the case of more experienced teachers, may act as guidelines for practice. They also state that, "the presence of an interested, nonevaluative colleague appears to stimulate many teachers to reframe their interpretations of classroom events and to become more aware of how they learn from their experiences" (p. 88).

Summary

The related literature reviewed in this chapter has served to demonstrate the breadth of conceptions of reflection and of
how reflective activity might be promoted. It has demonstrated the plausibility of developing and implementing collaborative, professional development programs which purport to foster reflection which reconstructs experience. It has given evidence of the value of documenting case studies of teachers' interactive dialogue and offers strategies for the analysis of such dialogue to detect examples of practical teacher knowledge and instances of reflective activity. Furthermore, it reveals the uniqueness of the problem which this study pursues: to develop, implement and analyze a professional development program which provides teachers with the opportunity to "reciprocally reflect" (Turner-Muecke, 1986) with each other, in a safe and supportive environment, on stable versions of their own classroom action.
Chapter 3

METHODS OF THE STUDY

INTRODUCTION

The purpose of this chapter is to explain the methods used to conduct the study and the rationale for choosing them. In addition, by providing background information about the methodology and about the participants themselves, this chapter provides a context within which the results of the study, presented in chapters four and five, may be better understood.

CONTEXT OF THE STUDY

The Subjects

This investigator was fortunate to find two volunteer teachers who had already participated in a voluntary, 50 hour, peer-supervision training program which was sponsored by the school district administration. This training program developed
interpersonal skills to support collegiality, communication skills to improve the ability to develop shared understandings and classroom observation, descriptive and analytical skills to support sense-making with respect to professional practice in the classroom. Conveniently, then, the participants of this study began it with some clinical supervisory skills already in place, a collegial relationship which was warm and supportive, and an interest in the reflective process as a way to improve their teaching.

The following is a brief description of the participants' backgrounds:

Laura is a veteran secondary school teacher of eighteen years experience. She has taught a variety of subjects, from science to home economics, in a variety of schools and districts, and has received complimentary teaching reports throughout her career. In the last four years she has assumed counselling responsibilities as well. Her assignment at the time of this study was as a three-quarter time counsellor with two classes of grade eight french (which she has taught for many years). It was one of her grade eight french classes which was involved in this study.

Paul is an experienced teacher, but with a background which is very different from Laura's. He taught for three years in the school district's "alternate school" which provides a minimally-
structured and psychologically supportive environment for students whom were having difficulty in the regular classroom. He received a very complimentary report on his work at that time and subsequently moved to the adjacent high school to teach English and social studies to "average" junior high school students. As of the time of this investigation, Paul was teaching junior English full time, had six years experience, and was considered to be a competent teacher by his principal. The class which was involved in this investigation was grade nine English.

The School

The school which was the site of this study had an enrolment of approximately 500 students in grades eight to twelve, and a staff of about 35 teachers. At the time of the study, it had been recently accredited by the Ministry of Education and was under the guidance of a new principal.

The school is located in a rural community which is largely supported by a pulp mill, logging, fishing and tourism. An unusual characteristic of this community is that it is within a short ferry ride from a major city. Students, staff and other community members have, consequently, an unusual blend of small town inter-personal familiarity along with big city cultural and educational experience. A manifestation of this characteristic is the apparent existence of a relatively warm, supportive and familiar relationship between staff and students as well as what
appears to be a broadly-held low esteem for the social, cultural and educational opportunities which exist in the community (compared to those perceived to exist in the city). In this environment, then, neither staff nor students tend to be strongly committed to the pursuit of excellence within the school. A common major goal of students is just to "get out" of the town upon graduation.

In informal discussions with staff members, this investigator has formed the opinion that the majority of staff in this school were somewhat dissatisfied with the general level of professional activity and development in the district, and yet were reluctant to take initiative in the development or implementation of new curricula or teaching methodologies. The administration (both at the school and district levels), however, seemed to be very progressive in terms of the opportunities which they offered staff for professional development. The Peer Supervision Training Program mentioned above is an example.

**ESTABLISHING THE TEACHER STUDY PROGRAMME**

In view of the research questions outlined in chapter one and the cultural milieu of the school briefly discussed above, this investigator chose to develop a professional development program which would involve teachers who had some clinical supervisory skills already in place, a collegial relationship
which had been previously developed, and an interest in taking the initiative to construct and reconstruct personal, pedagogical understandings.

The first two parameters were met by the choice of teachers who had participated in the peer supervisory training program mentioned earlier in this chapter. The third parameter required the participant teachers to articulate and reflect upon their pedagogical beliefs. To meet two of Wildman and Niles' (1987) needs for fostering reflective activity, "control of the reflexive process" and "a 'safe' environment for disclosing one's beliefs", the program was designed to be as non-directive as possible. In this study, the participants were not asked to specifically identify or to address problematic situations nor were they expected to evaluate what they saw in the recordings of classroom activity. They were asked only to observe, ask questions and make comments with the goal of coming to an understanding of what the other teacher was attempting to accomplish in that particular lesson. The teacher's comments and questions were not constrained by the investigator in any way.

The intention of establishing a non-directive program was to lessen evaluative concerns of the participants and to respect their knowledge while providing opportunities for the teachers to gain a shared understanding of what was observed. Furthermore, it was the intent of the investigator that the program would provide opportunities for the teachers, during the questioning and comparing of personal pedagogical views over the period of the
program, to alter or reconstruct aspects of their individual understandings (Hopefully, the reconstructed knowledge would lead to an improvement of practice which would be of benefit to students. This study, however, does not attempt to demonstrate improved pedagogical practice as a result of this program).

With respect to the recruitment of the study participants, the sole inducement was the offer of a potential opportunity to apply the skills learned in the peer-supervision program. They both knew the investigator and (the investigator believes) respected him as an educator. To the knowledge of the investigator, there was no other basis for involvement in the study from the point of view of the participants. At the time, the investigator was a full-time teacher, such as themselves, who taught in the same school, but in a different department (science). There was no hierarchical power relationship or coercive inducement of any kind.

**DATA COLLECTION**

**Videotaping Teachers' Lessons**

To obtain a recording of classroom activity upon which the two participants teachers could reflect, their classes were videotaped alternately, four times each, over a three-month period. Videotape was chosen as a recording medium because its use alleviates the need for teachers to invest time into sitting
in the back of classrooms. Videotape is more reliable than human recall and it can be replayed as often as desired. Furthermore, videocameras tend to present a less obtrusive presence in the classroom than do human observers. People get used to the presence of a camera quickly because it does not respond or interact in any way—it soon becomes another piece of classroom furniture.

In addition, it was discovered during the progress of the study that the use of videotape had the unexpected advantage that the time lag between conducting the lesson and watching it on television introduced an element of "emotional distance" from the classroom action, making it easier to discuss critically. Laura, one of the participant teachers commented, "...to be able to look at that in a neutral and objective way, still somewhat connected to the emotion, but not in the same way as just having had it go by one. I felt it from the position of the teacher...what it was like...and now I can sit in the back of the room and watch the video with you and it's like you and I are watching this teacher teach and we can comment on the situation. Where I'm slightly emotionally involved, most of that has disappeared and I can look at it with much objectivity."

**Audiotaping Teachers' Discussions**

As soon as possible after each taping the teachers viewed the tape (in the absence of the investigator) and discussed what they saw. These (eight) discussions were audiotaped and the
dialogue transcribed into written form for analysis by the investigator. The transcriptions comprise 108 double-spaced pages of dialogue.

At the end of the program, the participants were brought together again and asked their impressions in a "debriefing". They were asked the single question, "What are your impressions of the Peer Study Program?" The investigator then left and the participants were free to discuss the program in any way and for as long as they wished. Their responses were audiotaped (for later transcription) in the absence of the investigator in the hope that they would feel more able to be candid.

ANALYSIS OF THE DATA

The purpose of the analysis of the discussion transcripts is twofold. First, it is to document the interactions between the teacher participants by identifying, recording and categorizing common themes and preferred metaphors and images used. The potential value of this work is that it creates a richly detailed description of teachers' understandings of classroom phenomena. Furthermore, it provides a basis for developing the "clue structure" (Russell & Roberts, 1975) for detecting reflective activity on the part of the teachers.
Constructs to Describe Teachers' Knowledge

The investigator recognizes the fact that the discovery and explication of what seems important to the participant teachers will involve a certain amount of inference and conjecture on his part. In view of this fact, the investigator has approached the data from three different directions. The transcripts were initially read in an attempt to gain informal impressions of what seemed to be important to each teacher—as indicated by an emphasis and recurrence of specific themes, issues or events. These impressions were submitted to further scrutiny by an analysis of metaphor usage. Each teacher's contribution to the dialogue was examined for metaphorical terms and phrases which were categorized as preferred "figures of speech" (Munby, 1985, 1986, 1987; Lakoff & Johnson, 1980). And, in an attempt to approach the data from a third angle for the purpose of corroboration by "triangulation" (Denzin, 1978), explanatory comments which the teachers made in the final debriefing were examined. Finally, the results of these approaches were used to infer something of the participant teachers' personal "images" of teaching as conceptualized by Clandinin (Clandinin, 1986; Connelly & Clandinin, 1985) and Elbaz (Elbaz, 1981).

Clue Structure to Identify Teachers' Reflective Activity

The second purpose of the analysis of the study transcripts is to attempt to identify the reflective activity which the program was designed to promote. The identification of reflective
activity was approached using a scheme developed by Roberts and Russell (1975). Their position is that research in science education has not produced clear results which can be readily applied to practice. Instead, teaching may be examined by developing "theoretical perspectives" which allow researchers to analyze important events in practice by means of a "clue structure". This structure translates the perspectives into a set of contextually-relevant criteria for the purpose of identifying and categorizing the practice phenomena.

As discussed in chapter one, and expanded upon in chapter two, the theoretical perspectives which are used to frame this study are those of "constructivism" and "reflection as reconstruction of experience".

Development of the Clue Structure

Upon inspection of the data, it became clear that, as the program intended, the participant teachers focussed on a variety of issues, many of which seemed to be non-problematic. However, in doing so, they articulated elements of their personal, practical knowledge which they used to frame their understandings of the observed classroom action.

To detect reflection-on-action which contributes to the reconstruction of experience, one must look for instances of new and fresh appreciations of phenomena in practice. When experience doesn't correspond with past understandings, the practitioner
will experience surprise or puzzlement. The surprise arises from a new awareness that things may not be as they seem and it suggests a need to reconstruct understandings. To do so, the practitioner attempts to frame and reframe the phenomenon and, thereby, transform his or her understandings in ways which guide or transform practice. A Clue structure was constructed as a set of criteria for the detection of such activity:

The Clue Structure

Clue 1: Can an opportunity for a reconstruction of understandings be identified? Are there instances of surprise or puzzlement?

Clue 2: Is there evidence of reframing activity? Specifically, are there instances of the expression of "I should have's", or "I could have's"?

Clue 3: Is there evidence of new appreciations of phenomena in practice? Over the period of the study, are there changes in the way in which phenomena are described which suggest a new understanding of that phenomena? Over the period of the study, are there changes in metaphorical figures of speech?

These three clues were developed by repeatedly applying the study's fundamental theoretical perspectives to the teachers'
dialogue. As they are considered elements of reflective activity, they are not expected to be found in each transcript or in any specified order. They were not designed to detect "cycles" of reflection (MacKinnon, 1986), but to act as criteria to use to detect instances of activity which appear to contribute to the reconstruction of understandings.

Summary

The program developed for this study builds on the notion of Turner-Muecke et.al. (1986) of "reciprocally-reflective dialogue". It provided two teachers with the opportunity to view and discuss videotaped events in their classrooms. This purpose of this chapter was to elaborate on the development and implementation of the program, and the recruitment of the participants. As the intent of the program is to give the participants a sense of personal "empowerment" as well as opportunities to reflect on their professional practice, the investigator did not take an active part in the dialogue between teachers. This fact has both positive and negative implications for the study, and these were explored in this chapter as well.
Chapter 4

RESULTS OF THE STUDY:
LAURA'S CONTRIBUTION TO THE DIALOGUE

Introduction

This chapter, together with chapter five, comprise the results of the study. Both chapters use the transcribed dialogue to create a tentative understanding of elements of the knowledge base of the teachers. This is done with the use of three different analytical frames for the purpose of corroboration by "triangulation" (Denzin, 1978).

With the first analytical frame, the dialogue is approached by searching for classroom events, issues or themes which are recurrently raised and discussed by the teachers. The second frame considers these themes in light of an analysis of the teachers' use of metaphor in their speech. Their metaphorical words and phrases are categorized as their preferred "figures of speech" which, along with the recurrent themes, are used to infer something of the teachers' personal
images of teaching and learning. The third frame examines the teachers' comments in the "debriefing" session at the end of the program for further evidence of the teachers' knowledge.

These three analytical methods provide a rich data base for the introduction and refinement of a clue structure which is used to detect reflective activity as conceived by Schon. They also provide a context which the reader can use to "give the teacher reason" (Schon, 1983) and to make sense of the identified reflective activity. The clue structure was developed to recognize elements of "reflection as reconstruction of experience" (Grimmett et. al., 1987) within the transcribed dialogue and in the context of the teachers' inferred images of teaching.

As discussed in chapter three, "The Methods of the Study", the analysis of the transcripts require a good deal of inference and conjecture on the part of the investigator. The decision was made to not discuss transcribed statements (neither the statements nor any inferences or conjectures that the investigator made about the statements) with the participants and, consequently, the accuracy of interpreted meanings is uncertain. For that reason, this chapter, which addresses Laura's transcripts (as well as chapter five, which addresses Paul's transcripts), is written in a contextually rich fashion so that the reader can examine direct quotations from the original transcripts. By doing so, the reader will be offered much contextual detail within which to place the analysis and with
which to judge its verity.

Analysis of the Data for Elements of Teacher Knowledge

Issues and Themes of Importance to Laura

Initial reading of the transcripts of Laura's dialogue gave the impression that she was very concerned with the issue of discipline in her classroom. It is the first issue to which she attends in the dialogue with her colleague. In the first discussion session, for example, she immediately refers to the amount of time that it takes the kids to get their books out, their tendency to break into chatter, and the difficulty of "making them be quiet". She goes on to refer to her use of the overhead projector, her physical movement in class, and her use of a class tutor in terms of classroom discipline. Each of these will be examined in turn.

The Overhead Projector

"I prefer it because I don't like turning my back to them because if I turn my back to them they'll start to talk. And, as it is, some of them are not, you know, with me in what I'm doing. Now Dan is looking at his book, Art is trying to get his homework done quickly because he didn't finish it. Most of the rest of them that you can see are generally keeping an eye on things, but if I had my back to them they'd be talking".
Her Physical Movement in Class

"I have to get close to them and I find by moving around I keep their attention much better...if I stand at the front, people who are far away can drift much more easily...I try to move in a bit, raise the pressure a little bit on the kids who don't want to be involved or who are backing off or who are scared".

Her Use of a Tutor in the Class

"In the past that's what I've used a tutor to help with and, you know, had Donna a couple of years ago and we used her largely for remedial work. She had an extremely forceful personality and was very, very good at it and she really would take those kids and just drill them in the concept until they had it...I'm tempted to have Kim (another tutor) work with the enriched or with the better ones...but it would require a greater level of control and Kim doesn't have quite as forceful a personality..."

The theme of classroom discipline is probably not a surprising one to encounter when discussing grade eight French students, but it pervades and dominates Laura's conversation (in the first few transcripts, especially). Furthermore, she seems to frame her view of this issue in terms of the need or desire to control or restrain the students despite the fact that she
recognizes that being quiet doesn't necessarily relate to learning, "And I find even if I can make them look at me or make them be quiet, they're not always absorbing... you know, they're sitting there, they appear to be paying attention but it's not necessarily being absorbed. You have to call on each one of them. You might call on that kid... who learns that thing. The strong ones learn it from each other easily." It may be that her use of the word "absorbing" as a metaphor for learning is instructive. If she believes that knowledge is passively absorbed, then it makes sense that the students must be kept "still" in order to "receive" their knowledge.

Laura suggests several reasons for her concern with issues of classroom discipline. One is the general lesson structure of French eight:

"I'm trying—it's not successful, although I'm trying to make them basically concentrate almost without pause for sixty minutes. There is work time in the period but the bulk of it is lesson time and practice of one sort or another and I'm asking them to be engaged and it gets very boring and monotonous to them. One person just stands at the front and drones on...and that's one reason that it's somewhat loose, like there's a lot of talking and then you get them, you have to get them energized and willing to talk and then you gotta shut them down and then get them to concentrate and write and then get them to listen and get
them energized to talk at the right time and then get them to shut down again."

She also suggests that her efficacy as a disciplinarian is associated with her dual role as a teacher and counsellor:

"I find allot has to do with the amount of energy that I have...whether I'm into it or not has very little to do about the lesson preparation. That's always done...what it has to do with is what I've been doing immediately before that and if I've been in a counselling session that day, sitting back listening to someone's problems, being receptive, I find that I can't change from a receptive mode to a more active, it's not aggressive, it's more an active mode, really quickly. I can get active. I go on and I do my lesson, but I'm not engaged in it or anything on an emotional level."

A second, possibly related theme which recurs in Laura's dialogue, is that of the difficulty of the course, especially in terms of meeting the learning needs of all of the students in the class:

"This is a difficult thing for them to learn because they have to learn to change person and they find that very difficult."
"That's a difficult distinction for them to understand the difference between to listen and to hear."

"Some of the students could go a little faster but there are students in this class that have no French so it's very tricky. Particularly since I have to deliver the lesson and then work with them and review it orally."

"Something that's hard for them too; they've been very good today, but it's hard when they're energized in oral, because they need a certain amount of thinking time...I don't usually call on kids who need time to think until about the second passthrough or the third passthrough so that they have a chance to be a little more clear on it, if they think."

A third theme (which is also related to student discipline) is that passive students are considered to be receptive and learning, while active (restless, jittery) students are considered to be in need of a change of activity. If they are not quietly attentive, they are not considered to be engaged and learning. The following two examples occurred in separate lesson transcripts:

**Example One**

Paul: "How do you know they're getting it right now? Just
Laura: "Well, I'm asking various ones as we go along, like what would this be? And some of them are volunteering and they're looking like they understand. There aren't kids sitting there just going uhhh, or putting their head down on the desk.

Paul: "And that's what happens when they don't, they shut down?"

Laura: "Yeah. They just shut down when they don't understand or they start getting jittery. And they're not particularly jittery yet. And then, when we started doing the examples, kids I didn't expect would have gotten it actually volunteered. They don't all have it perfectly by any means, because..."

Paul: "But they're well on the road."

Laura: "But they're well on the road."

**Example Two**

Laura: "Somewhere in here I'll be calling on people who don't have their hands up. I should probably...I'm always a little uncertain, too, about how long to continue in one excercise. I wonder if it's even long enough that everyone who wants to answer gets a chance to. That you repeat it enough that
they'll start to get it, but not go to the point of..."

Paul: "Saturation?"

Laura: "Saturation. Yes, I try to be sensitive to that. Today it was very easy because they were receptive and, then, when they would start to get restless, I would change to the next activity. But when they are so very restless..."

Paul: "It's hard to know what they..."

Laura: "It's hard to know whether they've even the basic grasp of it."

From these dialogue samples, one gets the impression that Laura views the classroom activity as something of a struggle between the teacher and the learners. She seems to feel that she must cause learning to happen and that the role of the learner is to passively receive instruction while the teacher actively dispenses it. It might be tentatively inferred that this "struggle" represents an element of Laura's personal image of the teacher/student relationship and that her image of teaching is that it is a process by which information is transferred or transmitted from the teacher to the student. These inferences are supported by an analysis of Laura's use of metaphor.
Analysis of Metaphorical Terms and Phrases

One hundred and forty-two metaphorical terms and phrases were identified in Laura's contribution to the dialogue and were categorized into "figures of speech" (Munby, 1987). All but 29 of these could be placed into the following three figures of speech:

1) Lesson as Moving Object

...with the flow..., ...they're there..., ...drift..., ...this point..., ...ready to go..., ...point getting to..., ...end of class..., ...going over..., ...at this point..., ...go with it..., ...off she goes..., ...Mike's coming..., ...get caught up..., ...going over..., ...go faster..., ...going back..., ...go full bore..., ...go on..., ...go back...

2) Students as Passive Objects

...take kids..., ...drill them..., ...work on them..., ...absorbing (information)..., ...get them..., ...make them..., ...raise pressure..., ...focus them..., ...let them..., ...force her..., ...shut them down..., ...keep an eye on them..., ...contain them..., ...they have to...

3) Proximity to the Teacher Correlates to Learning:
...with me..., ...draw in..., ...come back to him..., ...tune out..., ...break off..., ...slide away..., ...wandering..., ...engaged..., ...with you...

It would seem that it could be tentatively inferred that, in this French class, Laura has a "transmissive" view of the nature of learning and teaching. In this view, the active, directive teacher "transfers" information to the passive, receptive learner. In these figures of speech, the curriculum seems to be perceived and described as something which moves along from one "point" to "another". In this circumstance, the teacher might feel that she has to "drag" her students along with motion of the course. This is an interpretation which is consistent with Laura's frequent use of metaphorical terms and phrases which suggest that the students must be kept physically close to her ("proximity to the teacher") for learning to occur.

Laura's Comments in the Debriefing

An examination of Laura's comments at the end of the study during the debriefing provide some corroboration for the conjecture that her understanding of pedagogy is largely based on the "transmissive" view.
"...as we talked before, your kids are grade nines and its a different subject but they were just so peaceful. What struck me immediately was their peace, their quiet, the relaxedness, their ability to get on with the work and interact with it and with you, their ability to listen to one another... I felt that that contrasted allot with my grade eights who are tending to be very hyper, very buzzy, very non-focussed allot of the time. Certainly a group of them, they're just very busy. And, you know, where I felt that I was really directing them..."

Laura goes on to express a desire to be less "teacher-directive", but does it in terms of making the students participate in a more "learner-centered" approach. She seems to wish to give up her need to control the students, but perceives that she can't:

"That's something that I still am not satisfied with in my grade eight French and that's that in order to maintain a tone where learning takes place that everything is so teacher-directive. I would like to be more learner-centered. And I think it probably is possible, but I have not been able to make it possible in my classes. If I stand there and am the authority and basically, make the class do these things they will do them. But I've not been able to get them to spontaneously do those things, willingly, on their own."
It might be inferred, then, that Laura's understanding of a "student-centered" approach to teaching is colored by her conception of the role of a teacher as a "controller". It is very difficult to be sure of this, however, as she does seem to recognize Peter's teaching style as being facilitative (this is discussed in detail in chapter five) rather than directive. It may be that she feels trapped in her "authoritative role" by the nature of this particular class and, possibly, by the subject matter itself. It is beyond the scope of this study to discover if that view of her role as a teacher can be generalized to all of her classes or if it varies with the course, grade level, or some other parameter. However it does appear to be present in this set of transcripts and may influence the way in which she reflects on her action in the classroom.

Analysis for Reflective Activity

The clue structure which was developed in chapter three was applied to the transcribed data as criteria for the identification of reconstructive reflective activity, and the following excerpts were identified for each clue.

Clue 1: Are there instances of surprise or puzzlement?

In this first excerpt, Laura's past understanding of student
behavior in her classroom appeared not to connect the need for students to be active to their lack of on-task behavior. Paul suggests this connection and it seems to surprise her.

Excerpt One:

Laura: "We're just going over the verbs. I'm showing them to them all again using flash cards. That focuses their attention again."

Paul: "And it's the same thing, you know, they're listening right now, but they have to have their hands up with voluntary answers. They're acquiring more focus too. Seems that they have to have something to do.

Laura: "Yeah, in order to listen well. That's very perceptive, something to do."

The second excerpt is similar in that surprise arises from Laura's recognition that she had previously overlooked something which might influence student classroom behavior. In this excerpt, she and Paul are discussing how much more cooperative the French class appears to be during this lesson (when compared to the previous lesson). She hadn't considered the influence that a recent evaluation may have had on the students.
Excerpt Two:

Paul: "You're not having to do that. You're much more focussed on what you're teaching rather than having to get these guys to settle down."

Laura: "Settle down, that's right. They're just... I don't think I asked them to quiet down any more often. It's just..."

Paul: "Maybe when they help you produce a copy of that first report card process and some of them had a shock."

Laura: "I think so, because six people in this class failed and six people in the other class failed. That's twenty-five percent. And I decided not to give any grace. If they were below the marks, they were below the marks. That's right, I hadn't considered the report card but that seems to have made quite a major difference... We've had transition after transition, and they've just been able to go from one thing to the next. I think you're right, the report card has had alot to do with it.

Expressions of surprise such as these, during which a practitioner gains new awarenesses of phenomena in practice, are elements of reflective activity which support and encourage further reflection (Schon, 1983). The practitioner may, subsequently, ask herself or her colleague related questions, or
engage in a process of generating additional explanations or options for action. It is these "should have's" and "could have's" which are addressed by the second clue.

Clue 2: Are there instances of the expressions "I should have" and "I could have"?

In excerpt 3, Laura responds to Paul's description of a writing assignment which he uses to begin his classes. Laura engages in an attempt to match the idea to the circumstances of her classroom by considering the present ability of her students, and by generating task options which might be educationally appropriate for French eight.

Excerpt Three:

Laura: "That's something that could be very useful starting at about the point we're getting to now where they've got enough vocabulary that I can make them... they could write a very short dialogue or write a short scene or even just write five sentences or... create five questions or maybe two questions plus their answers, that kind of thing. That could be very useful."

In excerpt 4, experimenting with the type of tasks given to students at particular times of the day is considered.
Laura: "I was thinking of this class, too, of doing more of the upper classroom written type exercises in the afternoon where they have to sit down and focus on a piece of paper. Doing less oral work in the afternoon, and less...fewer things that require that group."

Paul: "You should try an eight day cycle. Just go from day one to day eight. Just keep a little journal of how it went."

Laura: "Yes, to day eight. I might do that. I can tell compared to the last one, I've much more energy, my voice has more vibrance to it."

It appears in these excerpts that Laura is, indeed, reflecting on phenomena in her practice in a way which has the potential to change her understanding of it and her behavior in it. The next clue is designed to detect evidence of such reconstructed understandings. If a phenomenon is "re-understood", the learner's descriptions of it are likely to change.

Clue 3: Over the period of the study, are there changes in the way in which phenomena are described which suggest a new understanding of that phenomena? Over the period of the study,
are there changes in the use of metaphorical figures of speech?

There appears to be a single occurrence of Laura's description and redescription of a specific phenomena in which her understanding of it seemed to change. As described earlier in this chapter, Laura initially framed her use of the overhead projector in terms of classroom discipline. Neither teacher referred to it again until Paul did so three months later, in the eighth and final transcript. This time Laura describes her use of the overhead in educational terms rather than those involving the issue of classroom discipline.

Laura: "I use it (the projector) all the time, yes. I never use the board, or hardly ever. I use this because I can keep an eye on them. Not just to keep them busy, but I can see who's understanding, who's not...I also find that they write so slowly that if I'm writing on the board that I could fill up the space and then I can't start over...some things I'll put on there and leave on there and go back and use it for the next class...and I find it focusses their attention in one specific area. I also just find it brighter."

It would be entirely conjectural as to how and if participation in this program influenced Laura's appreciation of the use of the overhead projector, but it is clear that a reconsideration of its use did occur. This reconsideration
seems to have occurred during the time interval between the two descriptions and is considered by this investigator to give evidence of a new understanding.

As noted above, Laura's preferred metaphorical figures of speech appeared to be those of "Lesson as Moving Object", "Students as Passive Objects", and "Proximity to the Teacher Correlates to Learning". A review of the eight transcripts suggests that these preferred figures are retained throughout the study. However, in the last two transcripts, Laura's speech begins to include the figures: "Communication as Sending/Receiving" and "Lesson/course/unit/marks as Objects" (to be given or taken). The inclusion of new figures of speech may represent a reconsideration and reconstruction of some elements of Laura's pedagogical understandings. While the notion of "sending/receiving" information as "objects" is still consistent with a transmissive image of teaching and learning, it may represent a shift in Laura's perception of what is important in her classroom interactions. Rather than focusing on the controlling issues which are implied in the figures "students as passive objects" and "proximity to the teacher correlates to learning", Laura appears to have refocussed (somewhat) on the process of giving and receiving information. A tentative speculation might be that she has shifted her image of learning
and teaching from a predominantly transmissive image to one which reflects the notion of "transactions" between learners and their teacher.

If the speculation is correct, it is a significant change of perspective for a teacher to make over a period of a few months and might be considered an endorsement of the Peer Study Program. However, it must be recognized that Laura may have simply become familiar with Paul's use of these metaphors and had, herself, adopted them. It may also be chance that she used such metaphors more frequently in the latter part of the program. The study would have to be conducted over a longer period of time to verify this speculation.

Summary

In this chapter, the data were examined for elements of Laura's pedagogical knowledge base and for evidence of reflective activity. With respect to teacher knowledge, the (related) classroom issues of discipline, course difficulty, and student behavior as a cue to assessing student understanding were identified as recurrent themes. These themes appeared to be of some importance to Laura and were used to infer that she has a somewhat "transmissive" image of learning and teaching. Her use of metaphorical figures of speech as well as statements which she made in the "debriefing" tended to confirm this inference.

With respect to reflective activity, the data were analyzed using a clue structure which was designed to detect evidence of
reflection as "reconstruction of experience". The application of the three clues detected instances of the kind of puzzlement which is considered to precede or initiate reflective activity. The clues also identified evidence of the reconsideration of prior understandings. This was done by examining "I should have/could have" statements. Finally, the clues tentatively identified an instance of a change in the use of metaphorical figures of speech. This was taken as suggestive of a change of Laura's personal image of teaching and learning, and as evidence of the kind of reflective activity which this study sought to discern.
Chapter 5

RESULTS OF THE STUDY:

PAUL'S CONTRIBUTION TO THE DIALOGUE

In this chapter, the analytical procedures used in the previous chapter are repeated for Laura's co-participant, Paul. The reader is, thereby, offered a second documentation of a teacher's interests, concerns and ways of describing classroom phenomena as well as a tentatively-constructed view of some images of teaching and learning which he seems to hold. Furthermore, the application of the clue structure to this second set of transcripts can be expected to provide some corroborating evidence with respect to the clue structure's validity as an analytic tool, and the validity of conclusions with respect to the value of the program as a way to foster reflective activity.
Analysis of the Data for Elements of Teacher Knowledge

Issues and Themes of Importance to Paul

Initial reading of the transcripts of Peter's dialogue gave the impression that, like Laura, Paul is concerned with the issue of classroom discipline. While discussing the behavior of the students in one of Laura's classes, Paul states,

"I... keep on thinking that when I see these tapes we talk a lot about management, sort of thing...But, it's really important, isn't it? I mean, it's really important of how you're teaching and what they're learning. It means hearing it, what's going on."

However, unlike Laura, who seemed to frame the issue in terms of the control or restraint of students so that they might passively absorb knowledge, Paul seems to frame the issue in terms of the value of placing some of the responsibility for learning on the students themselves so that they can actively "engage" with the material to be learned. For example, as mentioned in Chapter Four, Paul uses a writing assignment to eliminate the need to direct the students to engage in a learning activity at the start of each period. That responsibility is given to them:

"You know that what I've been doing this year for English, and I find it really works well is the idea - I've been doing the
idea books. A ten minute writing time right at the beginning of the class and you know you may only get about five to eight minutes of writing in by the time they get organized but it focusses them in... in that first ten minutes it focusses them and I've really found it's worked well in that "put away their idea books now" and they're ready to go and I don't have to spend as much time as I used to getting them organized and getting their work out and all that stuff. They know now just to come in and get their ideas out and start working on them, they focus themselves. Works well."

Paul appears to connect student activity with appropriate behaviour and learning. In this excerpt, they are viewing one of Laura's classes:

Paul: "They're definitely a lot more restless than the last class. I wonder why that is... Are you having to waste a lot of time?"

Laura: "A lot of time. It's like this all of the time. They really do have to focus in on the detail to learn this...It's very specific and they just, it's very hard to contain them."

Paul: "So they have a lot more trouble when you're doing a stand-up lesson than when you're doing..."
Laura: "When they're doing exercises?"

Paul: "Yes. The last one we watched I noticed there was a lot more activities like..."

Laura: "Yes. This time I didn't do as much" (They continue to discuss the off-task behavior of the students until the following point in the same transcript).

Laura: "We're just going over the verbs. I'm showing them to them all again using flash cards. That focuses their attention again" (Laura appears to have recognized the effect that the flash cards had on the task-oriented behavior of the students, but it is Paul who articulates the significance of the situation in a way which seemed to surprise her).

Paul: "And it's the same thing, you know, they're listening right now, but they have to have their hands up with voluntary answers. They're acquiring more focus, too. Seems that they have to have something to do.

Laura: "Yeah, in order to listen well. That's very perceptive, something to do."

From these dialogue samples, one gets the impression that
Paul views classroom activity as a process of fostering student learning by giving students the opportunity and the responsibility to interact with the material to be learned. It might be inferred from this that an element of Paul's personal image of teaching is the notion of "interaction" (or "transaction") in which learning occurs as the teacher and the learner interact with each other and with the material to be learned. Indeed, this notion appears to be of such importance to Paul that it might be considered a recurrent theme of its own.

"I gave them the option, I'm giving them the option right now of... there's one class that really likes to do well on their own. Starting to give them the option whether they want me to read that day... You get three or four who just are reading on their own and then I'll read to the rest of them. I'm hoping to wean them off that to the point where they're reading the whole book. Like it would be the last time. I would like them to read something on their own."

"You know the attitude, you've got to have the attitude that, as soon as possible, they'll get themselves caught up (on work missed due to absence)... If (taking a test outside of classtime) is not a penalty, they don't seem to think they have to get themselves caught up. Just puts the responsibility on them, I don't think it's a penalty."
"I like teaching English because there is never right or wrong answers. I'm noticing that, just watching myself here. I'm thinking about what they're saying, you know. And wondering, well, is that right or not?, you know. And it ends up that they're not looking at me for the right answer. They're trying to make an argument for it and I'm not sure whether they're right or wrong...I think that contributes to them listening to each other, too. Because they're not...some kid could say something and I'm not going to say that's right or wrong, you know. I can throw it back at them alot."

The conjecture that Paul has an image of pedagogy which is based in a "transaction" view is corroborated by a statement that Laura makes in one of the transcripts:

"And your role, it seems to me... in this situation, is you're the facilitator and you're directing the action. Not so much you're directing, you're co-ordinating the action and the responses, so that everyone gets the information."

It is clear from these statements that Laura perceives Paul to be influencing the action (which this investigator infers to mean the learning activities of the students) as opposed to being the central "actor" who performs in such a way as to "cause" learning to occur in the students who are passively listening.
Paul's response to Laura's assessment was a simple, "Uh huh."

Analysis of Metaphorical Terms and Phrases

For further corroboration, Paul's use of metaphor is examined. Two hundred and twelve metaphorical terms and phrases were identified in Paul's speech and were categorized into "figures of speech" (Munby, 1987). Two major findings emerged from an informal examination of these figures of speech. The first is that Paul consistently used more identifiable figures of speech than did Laura. Approximately twice as many figures of speech could be identified for Paul than could for Laura. The significance of this fact is unclear to this investigator. It could suggest differences in the conceptual complexity with which the two teachers view their practice or it could relate to previous exposure to figures of speech and/or habitualized ways of describing events.

The second of the findings which emerged was that Paul's preferred figures of speech seemed to be "Proximity to the Teacher Correlates to Learning", "Communication as Sending and Receiving", and "Lesson, Course, Marks as Objects" (to be given or taken).
1) Proximity to the Teacher Correlates to Learning:

...worked with them..., ...had them..., ...get some back..., ...get around..., ...work with..., ...coming up..., ...coming from a different place..., ...getting back from them..., ...get them..., pull them back...

2) Communication as Sending/Receiving:

...pick it up..., ...out of my own head..., ...gave lesson..., ...getting ideas..., ...give information..., ...grasping..., ...come across...

3) Lesson/Course/Unit/Marks/Time as Objects:

...give two periods..., ...give mark..., ...give a detention..., ...give an assignment..., ...give credit..., ...gave option..., ...give a question..., ...give a test..., ...give time..., ...giving quizzes...

What might be inferred from these figures in light of the preceding discussion is that Paul has a "transaction" view of the nature of learning and teaching in which the teacher interacts with the students in a role which facilitates their understanding of the material to be learned. Paul seems to view elements of
classroom activity as well as information as commodities which can be manipulated with the active participation of the learner. This is in considerable contrast to the image which Laura appears to hold.

Paul's Comments in the Debriefing

An examination of Paul's comments at the end of the study during the debriefing provide some corroboration for the conjecture that his understanding of pedagogy is largely based on the "transaction" view.

"...I realized that the kids were quite self-directing and able to do that. I find myself giving them more of that responsibility to take on for their very own".

"...that's why this whole accent on critical thinking skills and things. I think that's a tone that we have to set in the school by setting them in every one of our classrooms. But it's something very foreign to the kids, too. They're very used to teacher-directive things happening..."

Analysis for Reflective Activity

The detection of Paul's reflective activity uses the same clue structure as was put forth in Chapter Three and applied to Laura's speech in Chapter Four. In addition to the detection of
evidence of reflection in Paul's speech, the application of the clue structure to this second set of transcripts can be expected to provide some corroborating evidence with respect to the clue structure's validity as an analytic tool, as well as the verity of conclusions with respect to the value of the program as a way to foster reflective activity.

The three clues are applied to the transcribed data as criteria for the identification of reconstructive reflective activity and the following excerpts are identified for each:

Clue 1: Are there instances of surprise or puzzlement?

In this first excerpt, Paul recognizes that the misbehavior of the students in Laura's class not only results in wasted time, but the students appear to use their misbehavior to avoid having to do classwork.

Excerpt One:

Laura: "Oh, it's terrible. At this stage, he never stops wriggling. He wriggles for sixty minutes every hour, literally cannot sit still. Most of those ones are (never) quite quiet. It's like they have bees in some of their bonnets."
Paul: "Yeah. You're having to spend alot of time waiting for them."

Laura: "Yeah."

Paul: "They like that!"

Laura: "Yeah."

In the second excerpt, Paul describes a situation in which the students are responding differently than expected. The incident gives rise to an expression of surprise and results in reframing activity (the second clue to reflective activity) by way of the use of "should haves" and "could haves".

Excerpt Two:

Paul: "Hmmm. See, they're afraid of this one, they're not volunteering. See, wasn't really what I was looking for and I just tended to overlook that and let's try the next one."

Laura: "Go on to the next one."

Paul: "I think I should have just stayed on that one cause I ended up wasting some time. We were just having some
(indecipherable) there. It wasn't very organized. I could have just dropped the whole thing, I think. These guys tend to surprise you sometimes. It's almost like, "Huh uh, I'm not going to let him see that".

Laura: "In terms of their behavior - or their engagement."

Paul: "Yeah, they're just down to earth.

In addition to the excerpt examined above, several others contained these phrases.

Clue 2: Are there instances of the expression of "I should have's" or "I could have's"?

Excerpt Three:

Laura: "Were they able to do things like make the subordinate clauses and things that were necessary?"

Paul: "At the end. They really had trouble with it to begin with."

Laura: "It's difficult, isn't it? I taught much of this work at grade ten level. There were some students that..."
Paul: "Where I noticed it was in the first examples that they gave. I see the ideas. But they came out, weren't... the dinner party, how many guests, so they were still sentence combining. I'm looking at it just now and thinking that I could have probably done it on the board to begin with, the first time, like I had done with some..."

Laura: "To show them the possibilities.

Paul: "the possibilities. I didn't 'cause I really didn't pick it up until after quite a few examples."

In this next excerpt, Paul recognizes that the students in his two English nine classes have different abilities. He almost admonishes himself in this regard:

Excerpt 4:

Paul: "Sometime I have to change hats, you know. I gave the same lesson with a group this morning and they were, they are my top group, and, bang on, I was getting really creative sentences right off the bat. I have to realize that these guys (are) coming from a different place and it's going to be a little more difficult. So, the group this morning didn't need it and this group this afternoon did."
Clue 3: Over the period of the study, are there changes in way in which phenomena are described which suggest a reappreciation of that phenomena? Over the period of the study, are there changes in the use of metaphorical figures of speech?

As with Laura, there is again a single, convincing occurrence of the description and redescription of a specific phenomena in which its appreciation seemed to change over the period of the program. In this instance, Paul indicates a concern with respect to his marking load. He is finding it an onerous task and has attempted to have his students do some of the marking in class. However, it seems that he is feeling unsure of the appropriateness of this approach:

Excerpt 5:

Paul: "They're just answering their questions right now. Kind of difficult, I find, to mark English as a group. You know, I try to do this as much as possible, particularly (to take) the marking rate off me, but I still have to say, Oh well, okay, I'll take a look at it because there's so many."
Laura: "Are they marking their own or each others?"

Paul: "They are (marking) each others. It's so interpretive, you know, one pupil will kind of have the answer, according to his track record give him half marks or something. I just can't seem to push alot of my working load onto them. You know, to mark my other subjects... I find it frustrating. I've got a problem-marking every weekend that high."

At this point, Laura offers an observation which supports the marking of student work in class:

Laura: "But I noticed there were a few students that were really listening carefully to the other kids. It's really been impressive with this group."

Paul: "Yeah, it seems that they're very good listeners when they listen to each others answers..."

Paul reevaluates his view:

Paul: "I'm not sure about this. Kind of a necessary evil, I guess, so much easier now. I've got marked papers and I can just replay this."
Laura: "Yes, and you've got two of the questions...not so bad."

Paul: "Well, you know, the other class that I did I took them in and I marked them. It was a prep. period for me to go through them and mark them, whereas we have done this in ten minutes as a group. So, you know, and you're right, there are...

Laura: "Plus they've had the benefit of the discussion and gearing how their answers compared with other answers. A repetition of their answers."

Paul: "Approximately, at least."

Laura: "Is that repetition of ideas, where other people might have looked at other vocabulary than they have used be really beneficial in their own worlds?"

Paul: "Yes. It's interesting watching it on the video. I see alot going on that I'm doing right. Always feel like I'm...(using this approach which is a)...necessary evil so I don't have to mark so much."

Laura: "It could be that it has...value for the students, their level of interest."
Paul: Oh yeah, that's it."

In this excerpt, Paul's concern with his marking load and the appropriateness of asking his students to do some of the marking are not entirely alleviated, but, with Laura's help, he seems to reassess the situation in terms of the potential benefit for his students. This is inferred by the investigator as an example of a reappreciation of a classroom phenomenon. Paul has reframed the situation and is willing to accept it on the strength of a reassessment of the value to his students. In essence, this reappreciation involves a change of appreciation from that of being problematic and worrisome to being acceptable and with potential value.

Paul makes a number of statements in the post-program discussion which support this conjecture:

"I'm leaving my big pile of homework over there now but at one point you suggested to me that it really is not necessary to mark everything and it's really not necessary to... it's alright just to take work in and just to check it off as homework done, you know, and I've started to do that... so that was a suggestion that you gave me. I guess I knew, but you gave me the suggestion and then told me it was alright and I think that I needed that. That's a help to me with my marking."
It seems that Paul's reappreciation of a phenomenon of practice has taken the form of a validation of what he was already doing. Until the more experienced teacher indicated that it was "OK", he assumed it wasn't and described it in those terms.

As noted above, Paul used a variety of figures of speech. Within each transcript, he used metaphorical terms and phrases which this investigator could categorize into twelve to fourteen figures of speech. However, no changes in the use of these figures could be identified with any confidence. It may be a consequence of the richness of Paul's use of metaphor that there seems to be insufficient data to draw any inferences regarding changes in their use over time. It may also be that the time period of the study was insufficient to expect changes or that Paul did not perceive a need to change.

Summary

In this chapter, the data were examined for elements of Paul's pedagogical knowledge base and for evidence of reflective activity. With respect to teacher knowledge, the issues of classroom discipline and active, student-centered learning were identified as recurrent themes. These themes appeared to be of some importance to Paul and were used to infer that he has a somewhat "transactive" image of learning and teaching. His use of
metaphorical figures of speech as well as statements which he made in the debriefing tended to confirm this inference.

With respect to reflective activity, the data were analyzed using a clue structure which was designed to detect evidence of reflection as "reconstruction of experience". The application of the three clues detected instances of the kind of puzzlement which is considered to precede or initiate reflective activity. The clues also identified evidence of the reconsideration of prior understandings. This was done by examining "I should have/could have" statements. The clue structure did not, however, identify an instance of a change in Paul's use of metaphorical figures of speech.
Chapter 6

CONCLUSIONS, LIMITATIONS AND IMPLICATIONS

Chapter Six begins with a review of the theoretical perspectives which underpin the study. This is followed by reviews of the development of the program which the study documents and the analysis of its results. Then, the conclusions and limitations of the study are put forth.

Review of the Theoretical Perspectives

The study began with a consideration of the nature of professional practice. Taking the world view that knowledge is actively constructed by the learner, the practitioner is considered to develop or construct knowledge in the context of the practice setting. This is done by reflecting-in-action during the "action present" (Schon, 1983) and reflecting-on-action in a brief "stop and think" or after the action is over. The practitioner is seen to reconsider practical phenomena in
response to surprise or puzzlement which arises from a practice situation. During that reconsideration, the situation is framed and reframed in the light of previous experience (exemplars) so as to come to a new understanding of the situation.

The purpose of this study was to develop, implement, and analyze a program which was designed to foster such reflective activity in professional educators. It was suggested that participation in a program which pairs teachers, gives them recorded classroom action to observe and discuss, and directs them to attempt to make sense of what they see and to "give reason" to the observed teacher behavior, will promote reflective activity which may lead to the reconstruction of their practical, professional understandings. It is the development and implementation of such a program which served as the basis for this study.

The investigator reviewed relevant literature which dealt with the constructivist notion of learning, reflection as a way of reconstructing practical understandings, and professional development programs which purport to blend the two. Most of the literature dealing with reflective practice does so in the context of pre-service education despite the fact that a number of theorists suggest that the experienced teacher, with a repertoire of experiential knowledge in place, has most to gain from reflective activity. Schon (1987), for example, states,
"...a reflective practicum of the sort we tried to create may most appropriately occur, not at the beginning of a student's professional career, but in the midst of it, as a form of continuing education." Clinical and Peer supervisory models were found to be helpful in conceptualizing the necessary characteristics of the program envisioned by the investigator.

Various approaches to the analysis of clinical and peer supervisory data were explored in the review of the literature. The approach adopted in this study was twofold. Firstly, the results were informally documented in a contextually rich fashion which entailed the identification of some themes which seemed to be important to the participants, and a consideration of their preferred figures of speech. The result of this analytical activity is a rich data base which assists the reader to "give reason" to the participant teachers and which provides a contextual background for the second analytical component—the systematic analysis of the program for evidence of reflective activity.

In the second component of the analysis, the transcripts were analyzed for reflective activity. This was done by matching the theoretical perspectives of "constructivism" and "reflection as reconstructing understandings" to the phenomena in context using a method proposed by Roberts and Russell (1975). The theoretical perspectives are matched to the transcribed data by means of the development of a clue structure as a set of
criteria. The reader was shown how the clue structure was put to use to identify elements of the reflective activity that was seen to occur over a period of dialogue between the participants. The clue structure consists of the following four questions:

Clue 1: Can an opportunity for a reconstruction of understandings be identified? Are there instances of surprise or puzzlement?

Clue 2: Is there evidence of reframing activity? Specifically, are there instances of the expression of "I should have's", "I could have's"?

Clue 3: Is there evidence of new appreciations of phenomena in practice? Over the period of the study, are there changes in the way in which phenomena are described which suggest a reappreciation of that phenomena? Over the period of the study, are there changes in metaphorical figures of speech?

The Research Questions

The following are the research questions which were put forth in chapter one. These are the questions which the conclusions are intended to answer.

1. Can elements of the participant teachers' knowledge base be identified during the program? More specifically, can classroom
events, issues or themes be identified which seem to be of importance to the teachers? What is the nature of these issues (if any), and how do the participants talk about them? Can inferences be made about the teachers' personal images of teaching and learning?

2. Can one observe evidence of 'reflection-on-action' as the teachers attempt to make sense of observed practice? More specifically, when teachers reflect upon classroom action, will there be evidence of new and fresh appreciations (understandings) of the phenomena? Will the teachers indicate an awareness that prior understandings may be inconsistent with present phenomena (and, consequently, need modification)? Over the period of the study, will there be evidence of the activity of reframing phenomena?

3. Did the Peer Study Program provide teachers with an opportunity to examine their practice in a way which they, themselves, consider to be of value? More specifically, can classroom actions be recorded and reflected upon by teachers within a normal school setting in such a way that they find the experience interesting and useful? At the conclusion of the study will they express the opinion that the program influenced the
ways in which they perceive their practice? Will they want to participate in this program (or a similar one) again?

Conclusions of the Study

The documentation and analysis presented in chapters four and five have led to a number of conclusions. These conclusions were drawn from the analysis of the data in an attempt to answer the research questions.

Research question 1. Can elements of the participant teachers' knowledge base be identified from dialogue which occurred during the Peer Study Program?

The participant practitioners did seem to be interested in particular themes or issues of practice. It was found that their "reciprocally reflective" attempts to make sense of each other's classroom action resulted in descriptive and metaphoric articulations of experience and understandings with respect to these issues. Consequently, it is concluded that experienced teachers are able to identify and articulate practical issues of importance to them while discussing their classroom practice.

The dominant themes which were expressed by Laura were discipline, course difficulty, and the use of student behavior as a clue to assess student understanding. The language which she
used to discuss these themes was rich in metaphor. She frequently used metaphorical terms and phrases which seemed to view lessons as 'moving objects', students as 'passive objects' and the relationship between 'student learning and physical proximity to the teacher'. Her personal image of the nature of learning and teaching inferred to be "transmissive". She seemed to view learning as the passive reception of knowledge that the teacher has to "transmit" as lessons move along.

There seemed to be a single dominant theme for Paul. Like Laura, he was concerned with student discipline, but his focus was on the desirability of making the students responsible for their own learning. He used terms such as "student-centered" versus "teacher-controlled" learning and teaching. His language contained the following figures of speech: proximity to the teacher correlated to learning, communication as sending/receiving, and lesson/course/unit/marks/time as objects. He discussed teaching in such a way that it appeared that he viewed it as a process involving "transactions" between the learner and the teacher (as well as between the learner and the material to be learned).

Research question 2. If 'reflection-on-action' is framed as a process of reconstructing knowledge by attempting to make sense of observed phenomena of practice, will there be evidence of this
The second conclusion arises from the successful development and use of the clue structure for identification of elements of reflective activity. The analysis of the data shows that puzzlement, reframing activity and reappreciation of classroom phenomena can be seen in the dialogue between the participants. This suggests that the program does foster reflective activity which leads to the reconstruction of practical understandings in experienced teachers.

This conclusion is bolstered by statements made by the participants after the program concluded. Approximately a week after the final observation of a videotaped lesson, the participants were brought together and asked the single question, "What are your impressions of the series of events we've gone through in the last couple of months?" Their responses were audiotaped in the absence of the investigator and these data provided some corroborating evidence for the conclusion that the teachers reconstructed some previous understandings.

For example, Laura stated that her grasp of how the students perceived her was changed, "I saw more clearly with the camera being at the back of the room how I appeared to kids and that helped me alter some of the ways I presented myself", and perhaps more importantly, she stated that the program experience caused a reappreciation of the potential merit of a teaching strategy; for example:
"Your idea book that you use in English I don't use that in French but I've started creating more activities right at the beginning of the class to settle them in the way that your idea book does. And I found that that has been helpful. That's something that I learned from you that I knew about in theory and had done in English, but never looked at and tried in this French class. It really, really helps."

In this instance, Paul's idea book was described as a way to start the class on task and appears to have acted as a generative metaphor for Laura. Using it, she was subsequently able to reframe the issue of starting her French class productively in light of her experience as an English teacher by "seeing (it) as" a situation in previous experience (which involved having more activities right at the start of the period). She did not actually adopt the use of an idea book, but used it to reconstruct her understanding of how French lessons might begin. As a third conclusion of this study, then, it seems that regarding reflection as reconstruction of experience is a useful way to interpret how experienced teachers make sense of observed phenomena of practice.

Research question 3. Did the Peer Study Program provide teachers with an opportunity to examine their practice in a way which they, themselves, consider to be of value?

With respect to the participants' perceptions of the
overall value of the program, it is evident that the teachers considered the program to be of personal value. For example, Laura stated in the debriefing, "For me it was a very valuable experience...Your idea book that you use in English, I don't use in French, but I've started creating more activities right at the beginning of the class to settle them in the way that your idea book does. That's something that I learned from you that I knew about in theory and had done in English, but never looked at and tried in this French class. It really, really helps". In the same discussion, Peter states that, "It was good for me to explain myself to you. Beyond the tape and things, to actually sit down with somebody else and have you, being a more experienced teacher than me, having you being able to say, 'Well, English is always like that, and I know what that feels like.' That made a difference to me because some times I think that I'm the only person being overwhelmed with it all. You know what I mean, it's nice to hear it sometimes, that's quite normal. It also helped me to come up with some strategies". Both of the teachers seemed pleased with the process and with the influence that it had on their work.

A final conclusion arises from frequent participant comments regarding the advantages of the use of videotape as a means of observing classroom practice. During the transcribed dialogue and in the post-program discussion, the participants stated that video allowed the them to see themselves as the
students see them, that it gave them the opportunity to observe each other with less inhibition and nervousness, and that it provided for an "emotional distance" by allowing some time to pass between the action and its observation and discussion. From this, it can be concluded that videotape is an appropriate means of providing material upon and with which teachers can reflect.

Limitations of the Study

Any program which involves the observation of a practicing teacher requires very delicate and sensitive handling. A trusting relationship must be built between the two participants and the investigator. If the level of teacher discomfort is too great, recall and reflection will be diminished and the value of both the program and the study will be compromised. The possibility of obtaining little information or of obtaining information which is strongly tainted by defensiveness or attempts to "look good" must be borne in mind. It is fortunate that the two participants in this study had already participated in a peer-supervisory training program and had already developed a collegial relationship. Furthermore, the use of videotape as discussed above and the non-directive nature of this program as discussed in Chapter Three, contributed to minimizing this limitation.

Unfortunately, the non-directive nature of the program is itself a limiting factor for this study. Without the direction
and support of a facilitator, the participants may not recognize and analyze problematic areas or they may choose to avoid the discomfort of facing situations where their beliefs are inconsistent with their actions or are themselves promoting dysfunctional behavior in the classroom. In sum, it may be that the participants will not do the "work" of reconstructing their understandings. This limitation was discussed in chapter three and is addressed again later in this chapter.

Another limitation to this study lies in the very fact that there were only two teacher participants. This means that the results are highly contextually bound and may be of limited value to other teachers or researchers. However, every attempt was made to document this study in a contextually rich fashion so that some examples of ways of seeing, ways of communicating such insight, and ways of thinking could be identified and made explicit.

The analysis of the transcripts identified and categorized themes or issues which seem important to the participants. It also determined their use of metaphorical figures of speech, the images they seemed to hold about their practice, and instances of their reflective activity. However, there are two factors which complicate these analyses. The first is that the non-directive nature of the study also precluded the investigator from testing his understanding of the meaning and significance of transcribed
statements by asking the participants directly. This means that a good deal of this information must be inferred. However, as discussed above, post-program discussion provided some corroboration for these inferences. The second factor which complicates the analysis of the data is the fact that the investigator must, himself, use past understandings of professional teaching practice and a process of reflective activity in order to make sense of the transcripts. The result was necessarily a "way of seeing" the actions and discussion which was dependent upon the knowledge base of the investigator. This is likely an insurmountable problem but it does not negate the potential value of an exploratory study which looks for specific examples vs general laws.

Implications for Further Research

In the judgment of this investigator, the professional development program which is developed in this study has merit as a way to promote reflective activity for experienced teachers. However, a number of questions arise from this study which have implications for further research: Is peer-supervisory training the most appropriate preparation for this program? Could there be an advantage to placing teachers in groups larger than two? How would the results be influenced by conducting the program over a longer period of time—particularly with respect to the detection of changes in metaphor use? Should an investigator participate in the dialogue so as to facilitate reflective activity? Should
the program take a more problematic approach? What might be an appropriate subsequent program?

These questions, as well as the results of this study, have led the investigator to envisage a professional development program that would be designed to promote and to study reflection in experienced teachers. The program might involve three phases: The first phase might be a peer-supervisory training program to give the participants interpersonal, communication and classroom observational skills. Additionally, this phase might generate a "pool" of teachers whom are interested in reflective activity and have developed supportive, collegial relationships with one another. The second phase might be a program similar to the one put forth in this study. Its purpose would be to provide opportunities for the participants to further develop their collegiality, to develop a shared language used to discuss professional practice as well as a shared understanding of each other's work, and to promote their own reflective activity in an environment that is safe. The third phase might have a problematic focus. For example, it might be a program similar to the Peer Collaboration Process developed by Pugach & Johnson, (1990) in which teachers participate in a structured, interactive process by which they clarify problems, summarize problems, generation solutions and evaluate options.
BIBLIOGRAPHY


