

Robert A. Martin
University of Toronto

Field-Based Preservice Teacher Education: Reflections on an experiment

A recent, major review of teacher education in Ontario (Fullan & Connelly, 1987) identified a problem with the quantity and quality of research and publication in faculties of education “. . . [I]t is abysmal in the lack of published descriptions, evaluations, and theoretical explanations of experimental teacher education programs” (p. 74). This article aims to relate the experience of a group of Faculty of Education staff at the University of Toronto who have worked together for ten years to increase the meaningfulness of the elementary preservice teacher education program for themselves, teacher candidates, and associate teachers involved in field placements. It is intended that the problems and strategies discussed along with the framework employed may inform and assist all those engaged in refining and improving preservice teacher education.

Ten years is a long time in the careers of those involved in the Toronto experiment. In order to select and discuss significant features, it is necessary to have some criteria for doing so. In this paper, ideas about “Reflective Practitioners,” abstracted from recent work by Donald A. Schon (1987, p. 332), are used to consider the development of the field-based program at the University of Toronto. It will facilitate matters if Schon’s position is outlined briefly.

The reflective practitioner

Schon (1987, pp. 78-79) distinguishes between **technical rationality** and **reflection-in-action**: names given to two models for analyzing what it is that practitioners do. In the technical-rational model, the problems faced by practitioners are solved through the application of research-based theories whose objectivity and generality derive from the method of controlled experiment. Theory is developed by one group of people (the researchers) and it is

applied to solve problems of another group (the practitioners). In this model, knowing is separated from doing and, in Schon's words, action is only an implementation and test of a technical decision. What practitioners do is driven by the theories of those who are non-practitioners. Schon thinks that this is a poor model for thinking about professional preparation and growth. He turns, therefore, to the reflection-in-action model.

The starting point for the reflection-in-action model is a practical problem encountered by the practitioner. An elementary school teacher, for example, may ask the question: "How should I teach reading to the grade one children in my classroom this year?" To this problem the teacher brings a number of resources, including: (a) his/her repertoire of past experiences of teaching reading, (b) a set of criteria that constitutes, in Schon's words, a "design domain" that is used to construct, describe, and judge the teacher's problem-solving moves in teaching reading, and (c) a process of designing solutions to practical problems. The repertoire constitutes the teacher's personal theory or discipline for teaching reading: an accumulation of all the things the teacher has done in the past to teach reading along with the remembered consequences and implications of those moves.

The design domain is the second resource that practitioners bring to bear on problems. It contains criteria that serve constructive, descriptive, and normative functions in creating solutions. The grade one reading teacher, for example, might use a normative criterion such as, "A wide choice of print materials is more likely to help youngsters become fluent readers than basal readers alone." Design domain criteria are used to judge strategies for dealing with practical problems.

Experiential repertoires and design domains are inputs to practical problem solving: (a) devising possible courses of action or moves toward a solution, (b) estimating the consequences of a move, (c) appreciating or judging the implications in a series of moves toward a problem solution, and (d) repeating the previous steps until a full and satisfactory solution is found. To devise moves, a practitioner draws upon his/her repertoire of past experience with similar problems. By comparing the past with the present, the practitioner identifies previously effective strategies that may be applied to the present situation. The consequences of a series of moves is appreciated in terms of criteria from the problem solver's design domain. In making moves and appreciating consequences and implications, the practitioner conducts experiments. Schon suggests that practitioners are more likely to conduct "exploratory and move-testing experiments" than hypothesis-testing ones. In the case of reading, for example, a teacher might devise a move-testing

experiment such as, "Placing comic books in a reading center will increase the fluency of some children's reading." He/she would then go on to judge the implications of this move in light of his/her repertoire of past experience and appreciation of the present situation.

As a practitioner recycles the problem-solving or solution-designing process many times, a web of actions and implications is "spun out." The web constitutes the practitioner's theory for dealing with the present situation. All of this is done in what Schon describes as the practitioner's "virtual world": a world of the drawing or planning board. Eventually commitment is made to a newly spun-out theory that guides the practitioner's practice. However, the theory's application is always tentative. The practical situation continuously "talks back" to the practitioner who is ever open to changing the theory in its application. Ultimately, the current theory-in-use is incorporated into and enriches the practitioner's repertoire of past experience. In the model of reflection-in-action, theory and its development are never separated from practice. The two intermingle and evolve together through practical action.

The reflection-in-action model describes a natural disposition in practitioners. When applied to education in schools (Peterson & Comeaux, 1989), the model evokes an image of teachers who: (a) think regularly about the impact of classroom programs and activities on children and their learning, (b) incorporate into their thinking educational ideas from many sources, and (c) develop out of their reflections increasingly sophisticated and personal frameworks to increase the effectiveness of their work with children. Throughout what follows, it is assumed that one goal of preservice teacher education is to assist new teachers to be reflective, sensitive, and deliberative and that a field-based program is a valid means for achieving that end.

When discussing the Toronto experiment, some points should be kept in mind. First, the purpose of telling the story is not to construct in a technical-rational fashion a theory for other practitioners to apply elsewhere – that would seem to violate what Schon is saying. Rather, the intent is that the paper will enrich the repertoires of others who are interested in designing their own solutions to their own practical problems. Second, where the word "experiment" appears, it denotes the move-testing or exploratory experiment described by Schon. Finally, although the field-based experiment was aimed to promote reflection-in-action, the account itself is a reflection on the faculty team's action over the past ten years. The telling of it is part of the team's efforts to make sense of what has happened to date so that its reflection-in-action will be more discerning as future challenges arise.

The Development of Field-based Programs: An historical sketch

Before 1977, the elementary program at the Faculty consisted of four main courses: Curriculum and Instruction, Foundations (three courses), Complementary Studies (a half course), and Practice Teaching (forty days). The Curriculum and Instruction course was made up of several subcourses: (a) mathematics, (b) social studies, (c) language arts, and so forth. Usually the courses and subcourses were taught by different instructors with little overall coordination as to assignment loads and methods of delivery. One count indicated that candidates undertook thirty five different assignments in all during the eight months of the program.

Prior to 1977, problems related to the size of the elementary program arose. The majority of candidates at the Faculty were preparing for secondary school teaching. This meant that the Faculty's organizational structure, especially the practice-teaching schedule, was arranged to meet the needs of secondary schools, some of which had semestered programs. In this context, integration and coordination in the elementary program proved to be very difficult.

Between 1977 and 1979, a number of small-scale projects were mounted by the Elementary Education Department at the Faculty to achieve some coordination between the practice teaching sessions and the content of certain courses (Martin, 1978). The results of the projects suggested that many opportunities for improving the elementary program could be realized by increasing the amount of time that candidates worked in classroom – if such time were coordinated with course work. Early in 1979, the Council of the Faculty approved the establishment of a field-based pilot project. One section of thirty candidates was to be based in a local elementary school (Roden Public School, Toronto Board of Education). A team of Faculty instructors was designated to design and deliver the program.

Between 1979 and 1982, the small field-based program operated in the one pilot school only. Candidates took most of their course work and some of their practice teaching in the pilot school. Faculty staff visited and taught in the school every day of the program. Between 1983 and 1987, the field-based program was comprised of ninety candidates – thirty of whom continued to be based in the pilot school while the remaining sixty were located at the faculty building for classes and went out two days per week (plus four two-week sessions of practice teaching) to a group of classrooms selected from the Faculty's practice-teaching roster. From the fall of 1987 to the present, the entire program has been organized along the lines of the larger 1983-87 group with much greater emphasis being given to faculty team

planning and to increasing efforts to communicate with and involve all classroom teachers associated with the program.

**Field-based Preservice Elementary-teacher Education:
A ten year experiment**

A team approach to planning and teaching

If a preservice program is to foster reflection-in-action, then the teaching staff should model the process in their own work. To provide a time and place for group reflection, the instructional team of eight (five of whom have been with the program since its inception) meets each week during the year to review the progress of the program and to plan the following week's schedule of classes. Three areas of discussion emerge regularly: (a) problems arising in the working relationships between individual candidates and their associate teachers, (b) the progress of the various projects currently underway and the implications for the content and scheduling of classes to come, and (c) possible changes in program content and organization for the next year. In the weekly meetings, program events talk back to staff members as individuals and as a group. Time and time again, discussions at team meetings have been critical in recognizing and responding to potential difficulties and problems. Without these opportunities for reflection, the field-based program would likely have faltered in its first few years.

Designing the practicum

If teacher candidates are to become alert to and solve practical problems, they must have sufficient, continuous time in classrooms to do so. Gradually over the ten years of the field-based experiment, the total number of days of practicum has more than doubled while the number of different classrooms experienced has been reduced from three to four. Before 1979, there were forty days of practicum (ten days of practice teaching in each of four different classrooms). By 1989, the academic year had been divided into trimesters: each trimester consisting of approximately two days per week for six weeks in one classroom followed by either ten or fifteen consecutive days of practice teaching in the same classroom.

The first year in the pilot school began with the clear aim of increasing the candidates' classroom experience. The prime motive of this came from past evaluations of the traditional program in which students recommended that "more time should be spent in schools." The main reason given was that the real action of teaching took place in schools and not in lectures or course work at the Faculty. In hindsight it seems that candidates wanted to spend a

large part of their preservice in school situations that would, in Schon's terms, add significantly to their experiential repertoires. In consultation with the staff of the pilot school, a new form of nonevaluated practicum was created. Candidates would spend approximately one and one-half days per week observing and teaching in the classrooms under the supervision of the associate teachers. This new form of practicum, known as the Student Teacher Experience Program (STEP), was spread across the week in half-day packets necessitated by the team's commitment to the traditional configuration of course titles and hours of instruction per course. How the candidates' experiences in STEP might be staged in a developmental sequence was not given much thought at the time, partially because of the attachment to the traditional pattern and partially because the first year was to be a move-testing experiment. Over the ten years of development, as the program shifted to a more problem-solving mode, the amount of STEP increased and was linked to practice-teaching sessions to provide the continuous classroom experience necessary for reflection-in-action.

Designing the program content

Which types of practical problems should make up the core of a field-based preservice program that aims to promote reflection-in-action? How and by whom should such problems and the related design domains be identified? In the third year of the experiment, these two questions emerged and began to play an increasingly central role in the planning of the faculty team. Before that time, the central problems were more of an organizational and administrative nature, related to increasing the total amount of practicum time. Early practical problems for candidates were related to the teaching tasks assigned to them by the associate teachers. Some observational tasks were assigned by faculty staff (e.g., watching individual children and plotting classroom routines). However, in the early years of the experiment, the team did not capitalize fully on the increased classroom experience as a means for helping candidates identify problems and design solutions.

By 1983, the team knew that it had to find a way into the classroom teachers' planning process so as to identify appropriate practical problems. Informal discussions with associates in the pilot school indicated that the planning and utilizing of work stations or activity centres was one such problem. Associates could identify the type of centre, faculty and candidates could collaborate on the design, and candidates and associates could field-test and evaluate the centres in the classroom. The centre project was successful in that some faculty classes and workshops were tied directly to a practical problem. It also provided a reason for faculty staff to consult regularly with associates. Similar "problem projects" were soon developed (e.g., challenges

for children in visual arts and music and concrete-manipulative mathematics activities for children at all grade levels).

The flurry of project activity in the third and fourth years helped the instructional team to describe more clearly the relationship between field and course work. The connection was depicted by a “cycle of investigation” (Figure 1) in which STEP and practice teaching served as the laboratory of the program. Although Schon’s work had not yet appeared, it does seem in retrospect that the team was moving to an increased emphasis on reflection-in-action.

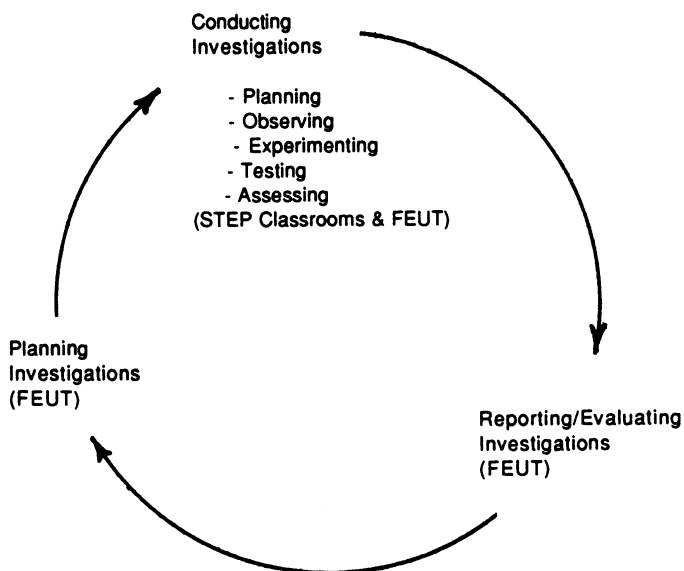
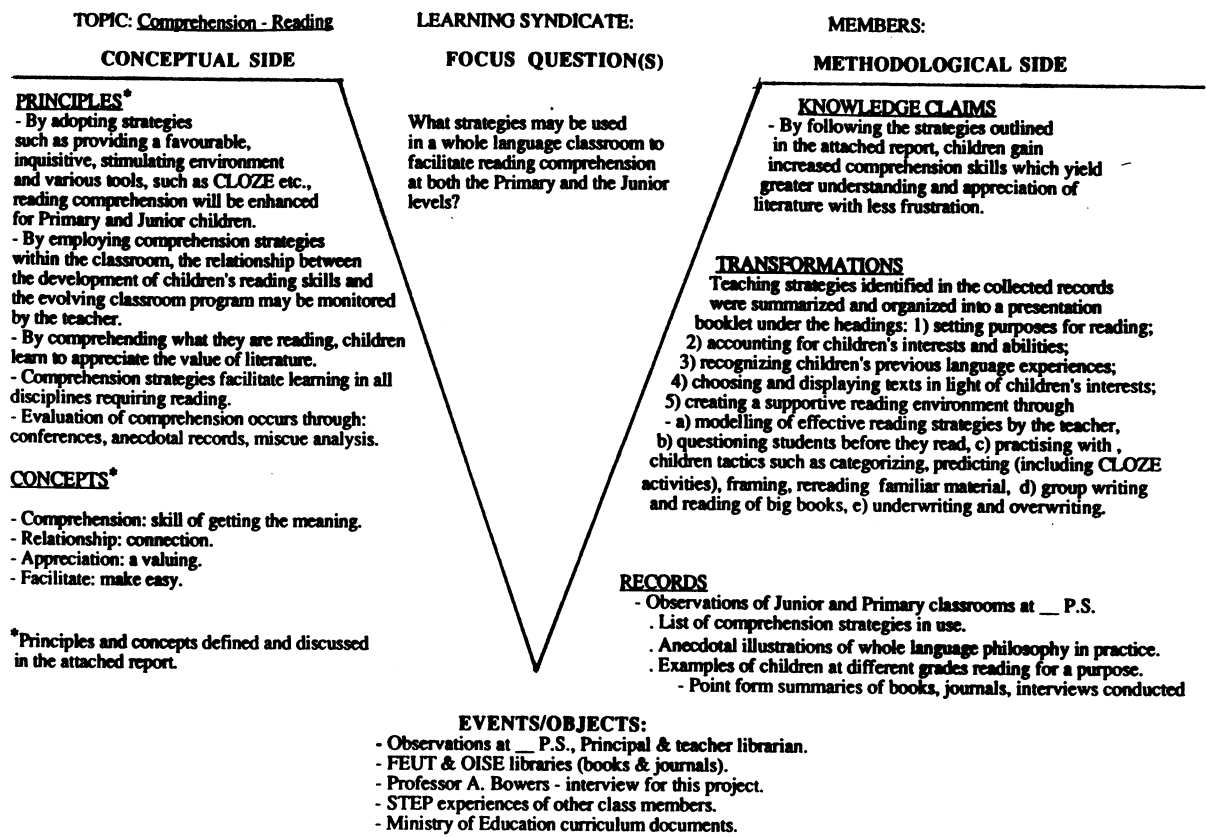


Figure 1

The Field-based Learning Cycle showing the connections between course and field work

The problem projects showed the value of the associate teacher as a source of practical problems for the program. The positive responses of candidates to these projects alerted the team to the fact that the candidates themselves were an equally valid source. Consequently, in 1985, the team began to use the V-format for designing investigations (Novak & Gowan, 1984). This technique requires candidates to plan projects and investigations by considering simultaneously both theory and methodology. The “V” format focuses projects on a question devised by the candidates and highlights the dialectical interplay between theory and practice. An outline of the V-format for a typical investigation is shown in Figure 2.



An example of the V-format for an investigation prepared by candidates
Figure 2

In the past few years, the use of the V-format has grown within the program. At present, it forms the basis for major projects in both mathematics and language arts. In addition, the format provides a schematic overview when investigations of any sort are introduced to candidates. Further benefits accrue when the philosophy instructor on the team assists candidates to design the conceptual side for investigations based on the format. Finally, use of the format promotes a positive attitude toward "learning as investigating," something that candidates may carry later into programs for the children in their own classrooms.

By the mid-1980s, one aspect of the reflection-in-action model, the design domain, had not been outlined in a coherent and succinct manner. The domain contains criteria for describing, constructing, and judging problem-solving moves. The issue of the practitioner's design domain was addressed, however, in a text that the team had adopted and used extensively. In her book, *Change: One Step at a Time*, Napier-Anderson (1981) outlines criteria for judging the effectiveness of elementary school programs. For example, one criterion she puts forward is that "[s]uccessful activity-based programs provide children with opportunities to make responsible choices." This and the other criteria she presents may provide the basis for a teacher's design domain.

One development within the past two years has given candidates perhaps their most challenging opportunity to develop design domains for problem-solving: devising and field-testing an environmental studies unit in their STEP classrooms. This project arose in relation to a shifting emphasis in unit design from integrated units to investigative units. Four years ago, candidates were taught to design integrated units in which the challenge was to select themes of interest to children and then to insert the selected content into all subject matter areas of the curriculum. While this may have been of some academic interest to candidates, the effect on children was dubious. Why, for example, if one has read a story about apples to children, must they then count apples in arithmetic, paint pictures of orchards for visual art, plant apple seeds for science, and so on? If there is a meaningful plan behind this type of curriculum design, it is often lost on the children. More recently, as provincial guidelines (Ministry of Education: Ontario, 1985) changed emphasis, the team shifted its approach to unit design by emphasizing investigation over integration.

The present approach to unit design focuses on both content and investigative skills. It runs from the exploration of a theme by children to the evaluation of answers to questions formulated by children. The various disciplines such as mathematics, language, and all aspects of the expressive

arts serve as modes of communication within the investigative process. Designing a curriculum unit in these terms presents candidates with the ultimate challenge in practical problem-solving. Not only must they make and judge design moves in light of children's emerging interests and questions, but they also must bring to bear the criteria of their design domains when assessing the implications of each move.

Relationships with the field

How may associate teachers be selected for a field-based program? How should the faculty team relate to the field? The experiment at the Faculty began with the intention of working in a limited number of schools. In the first two years, the entire project was located in one school. Over the years, as the project expanded, the instructional team moved more and more to recruiting exemplary teachers wherever they could be found. Originally the team thought that, by working in a few schools, it could provide workshops for associates to develop their mentoring skills and involve them fully in planning and delivering the program. This proved difficult owing to the full-time teaching commitment of some of the team members to the field-based program. In addition, some team members taught in other Faculty programs and were involved in research activities elsewhere. Unfortunately, some associates and principals held unrealistic expectations for Faculty input. The team could never fully meet the thirst of all associates for information and involvement.

In the past few years, the team increasingly sought out and recruited for the program teachers whose classroom programs are excellent examples of the philosophy espoused in Ministry of Education guidelines. In this way, the team knows, at the outset of STEP, that candidates will have opportunities to build up repertoires of experience that are consistent with the intents of the program. Some specific strategies developed by the team for relating to the field are described next.

School visitations and STEP logs. Several times each year, each member of the team visits, in their STEP classrooms, the candidates that he/she advises. The purpose of the visits is to make direct contact with the associate teacher to answer questions and obtain suggestions.

In addition to school visits, each member of the team reads and responds to a weekly reflective log on STEP prepared by advisees. The log entries are shared between advisor and advisee only, but general issues and problems arising in the logs are discussed in the weekly team meetings. The dialogue between advisor and advisee may encourage reflection on the advisee's part. By responding to a problem raised by a candidate, the advisor

may: (a) convey something of his/her own experiential repertoire, (b) propose design moves that could be made in the problem situation, and (c) reveal aspects of the advisor's design domain.

Printed information to associates. A description of the program is prepared each year in the form of a handbook for use by both associates and candidates. It contains information on the goals of the program, the organization of STEP, and the various projects undertaken by the candidates. In addition, associate teachers receive regularly, by way of the candidates, copies of the assignments, projects, and investigations that require observation or field-testing in the STEP classroom.

STEP liaison. Three years ago, one member of the teaching team took on the additional role of STEP liaison. She is responsible, with the team coordinator, for (a) organizing the STEP and practice teaching placements, (b) responding to requests for information and assistance for associates and principals, (c) counselling their candidates with respect to STEP, and (d) organizing, from time to time, meetings of associates and principals. Through the "STEP hotline" (a telephone answering service that associates may call at any time), the STEP liaison has the most frequent and continuing contacts with associates.

Additional qualification course. Three times in the past ten years, the team has provided opportunities for its associates to enroll in an additional teaching-qualification course entitled "Associate Teacher." Completion of the course results in the qualification being added to the associate's teaching certificate and, in some instances, may increase his/her salary category. Course content has focused on topics such as: (a) the methods and intents of the preservice program, (b) clinical supervision, and (c) evaluation of candidates' learning. Projects in the course draw upon the associates' work with candidates in STEP. Over eighty associates have received the Associate Teacher qualification under the auspices of the team. Team members undertook this project without remuneration or teacher-hour credit so that associates could enroll without paying a course fee.

Special field-related team meetings. Annually, in May and June, the team reviews the effectiveness of the various program components and prepares an outline for the following year. Important input to the review comes from two types of special meetings held during the year: one with associates and one with school principals. At least twice during the year, the team offers an evening informational session at the Faculty for associates. Usually, one or more of the team makes a presentation of interest to associates, and their suggestions and advice are solicited for consideration at the annual review.

The program outline, produced in the annual review, is vetted by school principals or their representatives at a meeting held in late May. Two years ago the principals urged the team to prepare a clear statement of its philosophy for inclusion in the program handbook. This was done and recent feedback indicates that principals have found the statement useful in recruiting associates.

The STEP planner. A development worthy of special mention is the "STEP planner." It is a day-book for STEP that each candidate maintains throughout the year. In the planner, each candidate keeps a record of: (a) the teaching task assigned by the associate, and (b) the Faculty projects completed each week in STEP. At the end of each week, the associate signs the planner. The candidate submits a completed planner for a project credit at the end of the year. The planner was instituted three years ago at the suggestion of several associates. It provides a good illustration of their contribution to organizing the program.

Evaluation of the candidates' learning

The main trend over the past decade has been away from evaluation within a traditional structure of courses toward evaluation that focuses on investigative projects. In more traditional programs consisting of a set of discrete courses, an individual instructor selects aims and activities for a course and assesses the assignments for that course only. In the experience of the team, the traditional arrangements for evaluation do not facilitate field-based programs; far too many different and unconnected assignments are generated. If the majority of a large number of assignments require field work, then the task of coordinating the work of candidates and communicating intents to associates becomes unmanageable. Opportunities for reflection-in-action are missed. To overcome such difficulties, the team has revised substantially the way it organizes the evaluation of candidates' work.

Each year, the team as a whole decides what the projects are to be for the following year. The basic question is: "What are the essential activities that we want our candidates to experience and reflect upon?" A list of projects is negotiated. Next, the elements of each of the projects are allocated across the various course titles in the Faculty calendar. For example, the project that involves the designing and testing of an environmental studies unit is divided into three parts. The final grades for the parts are allocated to course titles as follows: (a) the description of the unit to the basic curriculum course, (b) the assessment of what children learned to the psychology course, (c) the assessment of the implementation of the unit to the course in educational administration. A candidate's final grade in a particular Faculty course is compiled

across the assessments for the projects or parts of projects allocated to that course.

The benefits in this approach to evaluation are several. First, the total number of assignments is reduced dramatically (from thirty-five in 1980 to ten in 1989). Second, members of the team together must consider carefully the value of each proposed project in promoting reflection-in-action. Third, each member of the team has a stake in the program as a whole. The philosophy instructor, for example, may become involved in assessing part of a project allocated to a foundation-course title other than philosophy. Fourth, the total program may be described to candidates as an integrated set of learning experiences (viz., the projects) thereby obviating the fragmentation and chaos that a collection of courses taught by independent instructors so often seems to engender. Finally, the evaluation scheme provides flexibility in planning while preserving the team's ability to report to the Faculty administration in terms of the traditional structure of courses.

Ongoing assessment of the program

Over the years of development, the evaluation of the program has been more informal and formative than formal and summative. However, two summative evaluations were conducted in the first two years of the project. The first evaluation was organized by the team. Associates, candidates, and team members were interviewed by independent interviewers who prepared a descriptive report. This report was reviewed by a second group consisting of two representatives from the Ministry of Education and one from the Ontario Federation of Teachers, which then conducted its own interviews and prepared a list of recommendations. The gist of the recommendations was that there should be: (a) greater involvement of associates in planning and delivering the program, (b) greater consolidation and focusing of the STEP experience, (c) greater articulation of global purposes, and (d) a continuation of the project. The second formal evaluation of the experiment was part of a Ministry of Education review of the entire Faculty program. The ensuing report recommended that the field-based program be expanded. Thus, in its third year the experimental program was increased from one to three sections.

The main factor causing the assessments of the field-based program to be informal and formative rather than formal and summative lies in the time and effort required to conduct the latter type of evaluation. As events transpired, all formal evaluation had to be planned and mounted by the team itself. In any case, the informal assessments conducted by the team seemed to provide all the information necessary for analyzing and improving the experiment. In sum, the major mechanisms for the team's evaluation of its own work are as follows:

- 1) Weekly staff meetings and an advisor system in which each team member acts as a counsellor to approximately fifteen candidates,
- 2) The STEP liaison role that serves to collect information regarding STEP from associates and candidates,
- 3) The annual review of the program conducted by the team, and
- 4) An oral examination that all candidates take at the end of the program. (Part of the oral is devoted to discussing the program in general with each candidate.)

In the past decade, the team has made a considerable number of improvements with respect to both the use of STEP and the specification of global purposes. The issue of fully engaging the associate continues to be a major challenge.

Implications and Future Directions

This paper has reflected upon an ongoing experiment that aims to develop reflection-in-action at the centre of preservice teacher education. The team believes that it should continue to build in that direction. The belief is rooted not only in the experiences of the past ten years but also in the realization that teachers spend most of their professional lives in classrooms separated from their colleagues. In such circumstances, it is essential that they become skillful in reflection if schools are to be good places for children to learn. The implications for future development in the field-based experiment are many in number. Three areas are considered briefly: (a) organization and design, (b) psychology of learning to reflect, and (c) relationships with the field.

An immediate implication is that field-based programs should be organized around small instructional teams responsible for the entire program of approximately 30 to 60 candidates. If reflection-in-action is to be promoted, all teams must attend to three important questions of organization:

1. **Which types of field experience are to be designed for candidates?** The present sequence of experiences in the Toronto project focuses first on the individual child (his/her interests and abilities to express those interests), second on curriculum activities and materials that pick up on and extend those interests, and finally on strategies for organizing whole classroom programs. The sequence of experiences builds up the experiential repertoires of candidates in a way that reflects the team's view of important milestones on the journey to becoming a teacher. All field-based teams need to work out similar sequences of experiences, and each member of a team needs to appreciate how his/her efforts contribute to that sequence.

2. Which norms are to be fostered in the design domains of candidates? The Toronto team's design domain consists of a set of norms gradually culled over the years from a variety of sources, such as the Napier-Anderson book mentioned earlier, the curriculum guidelines of the Ministry of Education, and a body of recent literature known as "whole language" (Cochrane *et al.*, 1985; Froese *et al.*, 1989). A field-based team needs to articulate fully its design domain – doing so yields the clearest and most readily communicated statement of its goals and philosophy.

3. How should problem-solving and design be conceptualized and presented to candidates? During the first three days of classes in the Toronto program, candidates are challenged with the question: "What do you want to find out about the Faculty of Education?" Small, problem solving-groups are formed to brainstorm specific questions, design and conduct investigations using the V-format, and share their resulting "knowledge claims" with other groups. The purpose of this challenge is to establish a spirit of inquiry, not just about the Faculty but about schooling in general. At the conclusion of this initiating event, the team debriefs the experience with the candidates to make the point that a wide range of problems related to educational practice will be encountered in STEP and Faculty classes and that their learnings this year will accumulate as a consequence of the solutions they construct. The team's challenge is to maintain and enhance the spirit of investigation created by the initial challenge. Field-based teams everywhere need to address carefully the problem of establishing a climate of inquiry where reflection-in-action may flourish.

While it is one thing to talk about experiential repertoires, design domains, and problem-solving, it is another thing to bring them all together as a whole in the psyche of a teacher candidate. The Toronto team has become increasingly aware of the psychological pitfalls in developing a reflective approach to educational practice. One such pitfall requires the "unbinding" of conflict situations between instructors and candidates (Schon, 1987, p. 137). Binding may occur when candidates: (a) initially possess very thin experiential repertoires and are overwhelmed by the mystery of the instructor's expertise, or (b) enter the program with substantial and strongly held experiential repertoires and design domains that prevent them from being open to other possibilities. Instructors may aggravate the situation through their insensitivity to the nature of the binding taking place.

That binding occurs is certainly within the team's experience. For example, a candidate may come into the program with a substantial background in special education, having worked for a number of years in a treatment centre for children with "learning disabilities." The person may

have a firmly entrenched and quite specific orientation to children and their learning that is not entirely consistent with the intents of the program. In such situations, binding of the second type (above) can occur with a vengeance. In general it is not easy to say what the instructional team should do about binding and other psychological pitfalls. The main point is that all field-based teams regularly need to reflect and problem-solve on this crucial topic.

Knowledgeable, supportive associate teachers are essential to the success of a field-based program. Recruiting and involving them is a real and continuing problem. As described earlier, the Toronto team has developed numerous strategies for relating to the field, but thinks that the situation is still far from ideal. One promising strategy that has been tried elsewhere (Copeland & Jamgochian, 1985) involves the instruction of the candidates themselves in the processes of clinical supervision. Such instruction would be based on the assumption that clinical supervision is a "two-way street" and that all the parties involved need to become skillful in mentoring. Of all the practical problems faced by a field-based team, those of its relationships with the field are most fundamental to a program's very survival.

Conclusions

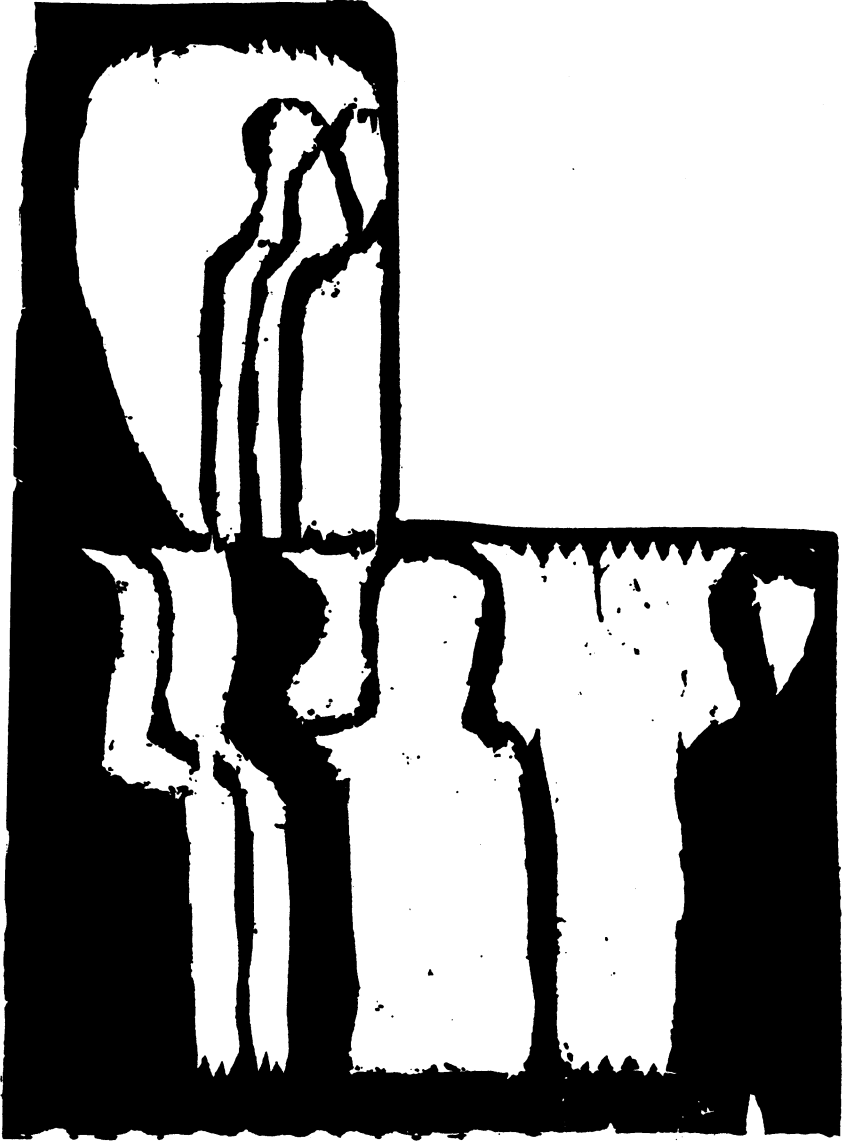
This paper has discussed a ten-year experiment in field-based preservice teacher education within a framework provided by some current thinking about reflective professional practice. The elements of reflection-in-action helped to draw together some of the significant aspects of the project from among the many events, decisions, and judgements that could be reported. Reflecting upon the enterprise brings home with force two fundamental and recurring questions that underlie all preservice programs: (a) what kind of teacher is to be prepared, and (b) how is the preparation to be organized and effected? The answer from the present instructional team is: "A reflective professional within a field-based program." In line with the spirit of reflection-in-action, the team continues to think of its work as experimental and looks forward to solving new challenges to the benefit of our ultimate clients: children in schools.

REFERENCES

- Cochrane, O. *et al.* (1984). *Reading, Writing and Caring*. Winnipeg: Whole Language Consultants.
- Copeland, W. & Jamgochian, R. (1985). Colleague training and peer review. *Teacher Education*, 36 (2), 18-21.
- Froese, V. *et al.* (1989). *Whole language: Theory and practice*. Englewood Cliffs, NJ: Prentice Hall.
- Fullan, M. & Connelly, F.M. (1987). *Teacher education in Ontario: Current practice and options for the future*. Toronto: Ministry of Education.
- Martin, R.A. (1978, June) *Practice teaching centers: An assessment of a one-year project*. Paper presented at the meeting of the Canadian Society for the Study of Education, London, Ontario.
- Ministry of Education, Ontario. (1985). *Shared discovery: Teaching and learning in the primary years*. Toronto: Ministry of Education.
- Napier-Anderson, L. (1981). *Change: One step at a time*. Toronto: Guidance Centre Press.
- Novak, J.D. & Gowan, D.B. (1984). *Learning how to learn*. Cambridge: Cambridge University Press.
- Peterson, L.P. & Comeaux, M.A. (1989). Assessing the teachers as a reflective professional: New perspectives on teacher evaluation. In A.E. Woolfolk (Ed.), *Research perspectives on the graduate preparation of teachers* (pp. 132-152). Englewood Cliffs, NJ, Prentice Hall.
- Schon, D.A. (1987). *Educating the reflective practitioner*. San Francisco: Jossey Bass.

Robert A. Martin is associate professor in the Department of Elementary Education, Faculty of Education, University of Toronto. He has been involved in planning and coordinating field-based, preservice teacher education programs since 1975 as well as teaching courses in program organization, educational psychology, visual arts, and school law.

Robert A. Martin est professeur agrégé au département d'enseignement primaire de la faculté des sciences de l'éducation de l'Université de Toronto. Il participe depuis 1975 à la planification et à la coordination de programmes pratiques de formation préalable des enseignants. Il donne également des cours d'organisation de programmes, de psychopédagogie, d'arts visuels et de droit scolaire.



Detail of "The Family"

Research Reports from the Field

The articles in this section are reports of research conducted in the field. Professor Martin describes the findings of an experiment with field-based preservice teacher education, and Professor Ritchie reports on the findings of a study conducted on methods administrators use in their supervision.

Robert A. Martin, *University of Toronto*
**Field-Based Preservice
Teacher Education:
Reflections on an experiment**

Abstract

The article describes the experience of a team of Faculty of Education staff at the University of Toronto who have worked together for ten years to develop a field-based, preservice, elementary teacher-education program that aims to prepare reflective practitioners. The developmental experience is described from several points of view: planning by an instructional team, designing the practicum, developing program content, establishing relationships with the field, evaluating the work of candidates, and assessing the program. The concept of reflective practitioner (Schon, 1987) is outlined first and then is used to assist in focussing the discussion. The point of giving this account is to inform and perhaps assist others engaged in refining and improving preservice teacher education.

Résumé

Cet article décrit l'expérience vécu par une équipe de professeurs de la faculté des sciences de l'éducation de l'Université de Toronto. Ces professeurs ont travaillé pendant dix ans à la mise sur pied d'un programme pratique de formation préalable des enseignants du primaire, afin de former des enseignants réfléchis. Ce travail de mise au point est décrit selon plusieurs points de vue: planification par une équipe d'enseignants, conception de stages pratiques, formulation des éléments du programme, établissement des liens avec le milieu, évaluation du travail des candidats et du programme. La notion d'enseignant réfléchi (Schon, 1987), décrite au début de l'article, sert de point de convergence au débat. Ce compte rendu vise à informer et peut-être même à aider d'autres enseignants qui s'occupent de parfaire et d'améliorer les programmes de formation préalable des enseignants.

Thomas J. Ritchie, *University of Winnipeg*

Creating Educational Change: Reports on Administrators' Methods

Abstract

Educational administrators are assigned the job of improving education by improving the quality of instruction. The purpose of this paper is to describe and analyse supervisors' methods. This study explores how they think they can have some effect. Eleven methods administrators report they use to effect change in subordinates are discussed. The methods are: option creating, focusing, modelling, persuading, direct ordering, threatening, and propagating. Supervisors are assessed as placing a high emphasis, medium emphasis, low emphasis, or no emphasis on a particular method. The analysis and comparison of supervisors' methods illuminate the organizational change process.